

DRAFT LAKE COLAC FORESHORE MASTER PLAN

INCLUDING LOWER BARONGAROOK CREEK PARKLANDS AND MEREDITH PARK

2016







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Our Vision for the Lake Colac Foreshore

The Lake Colac Foreshore will be:

- a place to meet, greet, play and relax
- a place of activity, vitality, tranquility, and a place to restore the soul
- an expression of who we are and what we aspire to be
- a place to explore, find new and different things to do
- an expression of beauty, and a place to embrace and nurture the natural world
- a place of celebration, creativity, imagination, and fun
- a place where **memories** are created and celebrated
- a place of inspiration
- a place where we want to be.

Acknowledgement

The development of the Lake Colac Foreshore Master Plan was funded through a grant provided to Colac Otway Shire by the Australian Government.

GLOSSARY OF TERMS			
Term	Definition	Term	Definition
Council	Colac Otway Council	Lake Colac	The Lake Colac water body
High water level	High water level prior to the drought / 2008	Shared pathway	Pathway that is designed to accommodate a number of uses e.g. walking, cycling, significant numbers
Lake Colac Foreshore	The Foreshore as defined by the 10 zones in the master plan		

Executive Summary

The Lake Colac Foreshore Master Plan provides a framework to guide planning and development of the area of the foreshore that extends east-west between Rifle Butt Rd. and Clark St; and north-south from the foreshore along the Barongarook Ck. corridor to Murray St. It also includes Meredith Park on the northern shores of the lake.

The Victorian State Government¹ owns the major component of the project area, including the lower reaches of the Barongarook Ck. and Meredith Park. The Colac Otway Shire Council is responsible for the day-to-day planning and management of the Lake Colac Foreshore under agreement with the state government.

Lake Colac is the largest freshwater lake in Victoria and one of the defining geographic features of the Colac Otway Shire. The lake is valued for the recreational, environmental and economic opportunities that it provides.

However, drought conditions between 1997 and 2009 saw water levels decline so dramatically that all significant water- based activities, and many associated land based activities, ceased. Forecasts are for a continuation of the climatic conditions that have severely impacted on water levels, and in turn use of the associated Foreshore.

In view of these conditions, and findings from community consultation and research undertaken for the project, the master plan recommends a focus on land-based activities as a priority over water based activities. This can be reviewed if climatic conditions change significantly over the life of the plan.

The estimate for completing works proposed for years 1-5 of the master plan is \$1,658,063. A summary of works proposed for each zone in years 1-5 is provided in the following table 1.

Table 1 – Cost estimates for works proposed for years 1-5 of the master plan	
PROPOSED WORKS FOR YEARS 1-5	ESTIMATE COST
Zone 1: Rifle Butt Rd. to Stodart St. West	\$7,500
Ensure relevant changes / notations are made to the planning scheme to include:	
 amenity and vegetation / habitat buffers between the high water level and residential infrastructure. Ensure public access to the lake surrounds are in line with CEPTED / safe design principles² 	
 appropriate space for extension of a shared pathway 	
Signage – Distance / direction signage	
Zone 2: Stodart St. West to Stodart St. East	
Formalise car park including replacement of old bollards and maintenance access gates	
Construction of an all abilities access ramp at the end of Balnagowan Av.	
Plant shade trees in the vicinity of new installations at end of Stodart St.	
Reinforcement works to stabilise Ash Trees / prevent further erosion around root system	
Extend foreshore planting	
Risk and needs assessment in relation to the toilet at the end of Balnagowan Av.	
Plant Eucalypt species along foreshore and remove weed species	
Signage – Distance / direction signage	
Zone 3: Stodart St. East to Armstrong St.	\$179,500
Install bins in the Sea Scouts / Yachting precinct and Western Bay Park	

¹ Department of Environment, Land, Water and Planning

² Crime Prevention Through Environmental Design; Safer Design Guidelines for Victoria, Department of Land Water Environment and Planning; Bealthy ByeDesign AltRougheEn Guide to Environments for Active Living, Victorian Heart Foundation

Table 1 – Cost estimates for works proposed for years 1-5 of the master plan		
PROPOSED WORKS FOR YEARS 1-5	ESTIMATED COST	
Plant shade trees and seating and drink stations (Western Bay Park)		
Install youth activity precinct equipment e.g. Parkour (Western Bay Park)		
Landscape and clean up environs in the vicinity of the buildings used by the yachting and sea scouts buildings		
Prepare a business case, for the consolidation of existing buildings when they reach the end of their life. Any new facility will need to accommodate a number of community uses including yachting, angling, sea scout, band, and other community activities as required		
Assess aged / inappropriate trees and plan for replacement		
Signage – Distance / direction signage, Precinct, Walking circuit, Compliance signage		
Zone 4: Armstrong St. to Gellibrand St.	\$42,650	
Landscape / ground works to address compaction of tree roots and mulching (triangle) and planting of 3 advanced Cook Pines	Y 1/200	
Seating		
Ongoing / selective removal of trees / vegetation on the embankment as it reaches end of practical life		
Signage – Distance / direction, Precinct, Walking circuit signage		
Zone 5: The Foreshore / Commons	\$934,338	
Formalise and seal car park to the west of the common		
Create gently undulating grassed area on the common to integrate with Botanic gardens embankment and plant feature trees		
Additional seating, picnic tables, and BBQs etc.		
Seating in bandstand shelter		
Investigate options for a fully accessible play space at the eastern end of the common. Design to be sympathetic to the surrounding environments and features. Play elements to consider - Hammock swing; Basket Swing; Sandpit with deck; Climbing nets; Natural play landscaping; Shelters; Sound / sensory elements; Various type under surfacing; Access pathways; Feature walls / rockery		
Enhance existing play space in line with a 'Children's Garden' theme		
Install security / safety lighting in the car park and along the foreshore pathway		
Signage – Distance / direction signage; Precinct; Walking circuit signage		
Zone 6: The Esplanade and Wetlands to Bruce St.	\$98,370	
Environmental themed public art sculptural features alongside the boardwalk ('The dell')		
Upgrade to the boardwalk		
Seating Cluster plantings of mature River Red Gums or similar throughout Esplanade Park		
Signage – Distance / direction, Precinct; Walking circuit, Compliance signage		
Zone 7: Bruce St. to Clark St.	\$17,415	
Seal off vehicle access immediately past last property in McGonigal, Bruce Sts.	ψ17,413	
Cluster plantings of River Red Gums or similar every 50 mts alongside landfill / maintenance track		
Signage – Distance / direction, Walking circuit signage, signage		
Zone 8: Lower Barongarook Ck. to Chapel Street Bridge	\$120,550	
Remove aged timber structures including the 'Woolshed, timber arbours and derelict arbours		
Remove 7 aged steel arbours in line with 'Safe Design Guidelines'3		
Mature tree planting along Fyans St., and Chapel St.		
Habitat and screen plantings (adjoining properties)		

³ Crime Prevention Through Environmental Design; Safer Design Guidelines for Victoria, Department of Land Water Environment and Planning; Healthy By Design: A Planners' Guide to Environments for Active Living, Victorian Heart Foundation

Table 1 – Cost estimates for works proposed for years 1-5 of the master plan	
PROPOSED WORKS FOR YEARS 1-5	ESTIMATED COST
Replace 1 bridge over Barongarook Ck.	
Seating	
Signage – Distance / direction, Precinct signage	
Zone 9: Upper Barongarook Ck. from Chapel St. to Murray St. Bridge	\$50,700
Maintenance of existing stands of trees to the south of Chapel Street (west side of Baroongarook Ck.	
Continue exposed aggregate concrete pathway from toilet block to existing creek path	
Vegetation / general tidying – rear of motel, and pathway to the east of the toilet block and bollards	
Relocation or removal of sculptures	
Mature tree planting in Foreshore to the east of Barongarook Ck.	
Signage – Distance / direction signage; Precinct signage	
Zone 10: Meredith Park Foreshore	
Complete a feasibility / viability assessment of (free) camping at Meredith Par	\$40,800
Clear rubbish, old / unkempt vegetation and fill depressions	
Signage – Distance / direction, Precinct, Compliance signage	

Lake Colac Foreshore Master Plan

1.1 The Purpose and Scope of the Master Plan

The Lake Colac Foreshore Master Plan provides a framework to guide planning and development of the area of the foreshore that extends east-west between Rifle Butt Rd. and Clark St; and north-south from the foreshore along the Barongarook Ck. corridor to Murray St. It also includes Meredith Park on the northern shores of the lake.

The master plan does not include the lake water body and associated waterways. Matters relating to these assets are addressed in separate council and agency planning documents.

The purpose of the master plan is to:

- Identify a vision for the foreshore, and establish the demand for different opportunities, and the parameters that will guide how they will be addressed
- Consider current open space research, planning and design practices and how it should be applied to enhance Foreshore amenity and visitor experience
- Establish short, medium, and long term actions to address the findings of the project and associated cost estimates
- Provide a framework for monitoring the implementation of the actions.

There are four technical papers that contain detailed information and research undertaken for the master plan:

Technical Paper 1 - Zone Action Plans and Cost Estimates

Technical Paper 2 – Community Consultation Summary

Technical Paper 3 – Review of Previous Master Plan

Technical Paper 4 – Technical and Product Information

1.2 The Project Zones

The project area extends along the south bank of Lake Colac foreshore from Rifle Butt Road in the west to Clark St. in the east. It also includes the Barongarook Ck. parkland corridor from the foreshore to Murray St. and Meredith Park, which is located on the north side of the lake.

The following summarises the 10 zones that make up the project area (Reference plans on pages 40-51):

Zone 1: Rifle Butt Rd. to Stodart St. West

Zone 2: Stodart St. West to Stodart St. East

Zone 3: Stodart St. East to Armstrong St.

Zone 4: Armstrong St. to Gellibrand St.

Zone 5: The Foreshore / Commons

Zone 6: The Esplanade and Wetlands to Bruce St.

Zone 7: Bruce St. to Clark St.

Zone 8: Lower Barongarrok Ck. to Chapel St.

Zone 9: Chapel St. to Murray St.

Zone 10: Meredith Park.Background Information

2 Ownership and Management of Lake Colac Foreshore

The Victorian State Government⁴ owns the major component of the project area, including the lower reaches of the Barongarook Ck. and Meredith Park.

⁴ Department of Environment, Land, Water and Planning

The Colac Otway Shire Council is responsible for the day-to-day planning and management of the Lake Colac Foreshore under agreement with the state government.

Council owns and manages the foreshore along the Barongarook Ck. corridor, including the waterway and embankments.

The state government also owns the land on which the adjoining Colac Botanic Gardens and the Colac Caravan Park is located. Council is responsible for the day-to-day management of these areas. The caravan park is leased to a private operator.

The 'Botanic Gardens Friends Group' and the 'Lake Colac Coordinating Committee' provide advice to council on matters relating to the lake, foreshore, and the Botanic Gardens.

Council's annual maintenance budget for the Lake Colac Foreshore over the last three years has been approximately \$135,000.

2.1 Use of Lake Colac Foreshore Areas

Until 2007/8 Lake Colac was a popular fishing, boating, rowing, and swimming destination and hosted water based events including sailing and rowing regattas and fishing competitions. Since this time the low water levels means recreation activities are largely restricted to land based activities associated with walking and cycling trails, the Botanic Gardens, and nature observation, and picnicking.

The community survey indicates that the foreshore area in front of the Botanic Gardens⁵, and the pathways of the foreshore are their most popular feature. Feedback and observation shows that the sealed sections of the foreshore pathway are most frequently used followed by the pathways through the Barongarook Ck. corridor⁶. While not as extensively used, the unsealed track from the wetlands to Clark St. is popular, especially for dog walkers. Residents use the foreshore for a variety of activities with trail related activities the most popular.

Table 2 - Who people visit the with	ne Foreshore
	% / No.
My family	33.3% / 49
I generally go on my own	22.5% / 29
Friend/s or neighbour/s	10.1% / 13
My partner	7.0% / 9

Table 3 – The areas people use most		
	% / No.	
Botanic Gardens / cafe	70% / 91	
Foreshore area	64% / 82	
Foreshore pathway	50% / 65	
Barongarook Ck. pathway	35% / 45	
Bird sanctuary / wetlands	31% / 40	
Playground	28% / 36	
Barongarook Ck. Foreshore	21% / 27	

However, nearly half of residents involved in the project, including 45% of survey respondents, use the foreshore for 'taking in the views', reflecting and relaxing, and 'taking in the fresh air'. A similar number of residents, approximately 30%, enjoy the lake to observe nature and play with children.

Observation and feedback through the project identified a number of sites that are popular stop-off points for travellers and for locals taking time out at lunchtime or after work. These include the foreshore area / car park, the Gillibrand St. car park, Queens Av. and the adjoining Botanic Gardens.

The community survey and onsite discussion indicates that people visit the foreshore primarily with members of their family, however there is a significant number of people who visit on their own.

Young people who visit the foreshore are more likely to visit with their family but more young people are likely to cycle to the foreshore than the general community. Similarly, young people are far less likely to go the foreshore on their own.

^{5 63%} of survey respondents

 $^{6\,50\%}$ of survey respondents / 35% of survey respondents

3 Lake Colac⁷

Lake Colac is the largest freshwater lake in Victoria and one of the defining geographic features of the Colac Otway Shire. The lake is valued for the recreational, environmental and economic opportunities that it attracts. However, drought conditions between 1997 and 2009 saw water levels decline so dramatically that all significant water- based activities, and many associated land based activities, ceased.

Over the summer of 2008-2009, Lake Colac dried out completely. With increased rainfalls post 2009 the lake partially refilled however, it is forecast that the lake will dry out again by the end of this summer.⁸⁹

The Western Victorian lakes have long been the focus of scientific and conservation work, because of the important ecological communities they support. Many of the lakes are showing significant signs of stress due to extended drought and climate change. Over the past two decades in particular, the lakes and wetlands of this region have undergone significant, climate-driven changes in hydrology and ecology, and some have experienced dramatic increases in salinity and decline in water levels.

Lake Colac is a large, shallow, eutrophic, brackish-freshwater lake, primarily fed by localised rainfall and was formed by early volcanic activity and is a partially closed system. The Lake is fed by Deans Ck. and Barongarook Ck. but relies heavily on direct rainfall over the Lake. In most years more water evaporates from the Lake than is captured by rain. Flood frequency has a 25 year recurrence interval and last occurred in 1998.

The lake has always been shallow. It is one of the more than 1,000 shallow lakes in the Corangamite Basin formed by early volcanic activity. Sediment washed from Deans Creek and Barongarook Ck. has added to the level of the lakebed over time decreasing the depth of the lake.

In recorded memory the Lake has receded a number of times and recovered. In 1862 and again in 1946 it became a series of pools, the largest in 1946 covering 15 acres at a depth of 15cm. The Lake reached the similar low levels as today in 1962, 1969, 1983 and 1989, 2009.

The lake levels have been steadily declining since 2000, and historical lake level measurements going back to 1990 also reflect the same trend.

The key climatic predictions and projections for South Western Victoria predict a generally drier and hotter climate with a higher frequency of extreme weather events; higher average temperatures; less rainfall in the cool seasons; and increased intensity of extreme rainfall events.

Of particular relevance for Lake Colac are the following climate change observations for the Western District lakes of Victoria:

- lakes, including Lake Colac, have become or are becoming more saline and many are drying out due to both recent drought & longer term climate change
- biodiversity has decreased and will continue to decrease as a result of this increased salinity and drying out
- climate change will accelerate this trend and is likely to drive the lakes into a drier and saltier state than has existed for thousands of years
- the character of many lakes has changed and the trend is likely to continue with impacts of climate change, which warrants a reassessment of conservation strategies and management of the lakes.

⁷ CSIRO; Bureau of Meteorology; DELWP; Grose, M et al., 2015; Leahy, P et al., 2010 - Refer references Appendix 1 8 2015/16

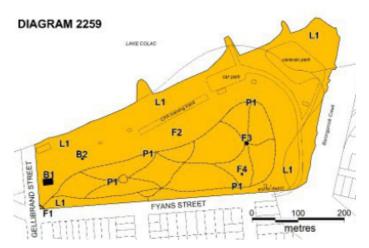
⁹ Recreational Use of Waterways, Victorian Waterway Management Strategy

4 Colac Botanic Gardens

The Colac Botanic Gardens were gazetted in 1865 and comprise 12 hectares 10. The gardens are bounded by the southern shore of Lake Colac, Gellibrand St., Fyans St. and Barongarook Ck

In 1868 Daniel Bunce, the Director of the Geelong Botanic Gardens prepared the original plan. In 1910 William Guilfoyle, Director of the Melbourne Botanic Gardens prepared an updated plan in which he incorporated a vision for the area, he named 'The Dell', to the east of Barongarook Ck.

The gardens are listed on the Victorian Heritage Register because of their



Ref: Victorian Heritage Database Report 29/2/16

'historical, aesthetic, and scientific (botanical) significance to the State of Victoria.¹¹

The National Trust classified the gardens in 1990 as one of Victoria's largest regional botanic gardens. Five of the gardens' trees have been placed on the National Trust of Victoria's Significant Tree Register.

In 1992 council established the 'Friends of the Colac Botanic Gardens' to provide advice and support in relation to the planning, development and management of the gardens. The friend's group has been instrumental in providing technical and practical advice about the gardens and fund-raising for projects.

The Botanic Gardens Master Plan¹² guides the management and development of the gardens. The gardens are not part of the project, however they are particularly important to the Lake Colac Foreshore Master Plan because:

- of their botanic, and historic significance
- their impressive backdrop and aesthetic amenity the provide
- the need to integrate adjoining foreshore environments sensitively with the Foreshore
- of the opportunity to incorporate features and themes associated with the gardens into other foreshore environments

5 A Historical Snapshot

The Gulidjan¹³ are the indigenous Australian tribe whose traditional lands occupied the grasslands, woodlands, volcanic plains and lakes region east. This includes the Lake Colac region. The town's name is thought to have derived from a Gulidjan word referring to the 'fresh water'.

It is understood that families of the Gulidjan (Gulidjan Balug clan) had their own portion of Lake Colac frontage. Large areas of the plains were ephemeral wetlands interspersed with lakes, which supplied game, fish, and edible aquatic plants, wildflowers, herbs, and edible tuberous roots.¹⁴

The history of white occupation of the Colac district dates back to 1837, making it one of the oldest inland settlements in the colony and as a result, one that experienced the major waves of immigration.

¹⁰ Australian National Botanic Gardens Directory, https://www.anbg.gov.au/chabg/bg-dir/028.html

¹¹ Victorian Heritage Database Report, Report generated 29/02/16; Victorian Heritage Registration Number H2259

¹² Colac Botanic Gardens Master Plan – Reviewed in 2012

¹³ Alternative names / spellings Colijan, Kolac Gnat, Colagdians

¹⁴ http://www.speakingoftheotways.net/people/gulidjan.php

The first European to settle in the area was the pastoralist Hugh Murray, who settled near Barongarook Ck. at the southern end of Lake Colac and built his first homestead in 1840 in what is now Chapel St. Colac's main street, now part of the Princes Highway, and the Hugh Murray Reserve within the Foreshore were named in recognition of Murray.¹⁵

6 The Vision for Lake Colac Foreshore and How It Will be Achieved

6.1 Our Vision for the Lake Colac Foreshore

The vision for the Lake Colac Foreshore expresses the aspirations for the foreshore as reflected by the people involved in the consultation for the master plan.

The Lake Colac Foreshore will be:

- a place to meet, greet, play and relax
- a place of activity, vitality, tranquility, and a place to restore the soul
- an expression of who we are and what we aspire to be
- a place to explore, find new and different things to do
- an expression of beauty, and a place to embrace and nurture the natural world
- a place of celebration, creativity, imagination, and fun
- a place where memories are created and celebrated
- a place of inspiration
- a place where we want to be.

6.2 How will We Achieve the Vision?

The Colac Otway Open Space Strategy¹⁶ articulates the principles that guide the planning and development of open space. Table 4 lists the open space planning principles and Key Direction Statements that underpin the master plan.

The Key Direction Statements:

- articulate the key themes that emerged from the research for the project
- respond to the planning, management, and environmental context that will have an impact on the development of the foreshore over the next 10 to 20 years
- take into account previous research, planning documents, information from technical working groups, and information from community consultation conducted as part of the project.

Table 4: Key Directions proposed for the Lake Colac foreshore and how they respond to the Colac Otway Open Space Planning principles	
Open Space planning principles Open space will be:	KEY DIRECTION STATEMENTS
Environmentally sustainable and developed to respond to the challenges arising from climate change	 The aim is to: Incorporate landscape and vegetation features that are tolerant of local environmental conditions Focus on optimising land based recreation and social opportunities as a priority.
2. Accessible to all members of the community whether they live in urban centres, smaller settlements, coastal towns or rural areas	 The aim is to: Increase the number and range of people who can access foreshore environments and who want to use foreshore areas on a regular basis Plan and enhance foreshore so they provide maximum benefit Plan and design environments so they are safe and encourage use.
3. Provided and improved to offer a balanced and diverse range of opportunities for	The aim is to: Provide and encourage a range of different social, recreation, and natural environments including picnic and BBQ facilities;

¹⁵ http://www.otway.biz/history.html

¹⁶ Colac Otway Open Space Strategy

Table 4: Key Directions proposed for the Lake Colac foreshore and how they respond to the Colac Otway Open Space Planning principles		
Open Space planning principles Open space will be:	KEY DIRECTION STATEMENTS	
passive recreation, children's play, social gatherings, informal active recreation, walking, cycling and organised sport.	play spaces; natural and reflective spaces, artistic features, pathways for walking, cycling and fitness activities; fitness circuits • Enhance the appearance of the foreshore through modern and well-integrated infrastructure and landscape design.	
4. Managed, where appropriate, in partnership with other agencies, service organisations, sports clubs, and other groups	 The aim is to: Identify and investigate / continue partnerships with relevant community organisations (e.g. CMA, DELWP, Parks Victoria) and private enterprise in order to: To activate relevant areas in the Foreshore manage the foreshore effectively and efficiently identify opportunities to enhance environmental, social, and cultural outcomes. Plan for the gradual upgrading and revitalising of buildings / infrastructure used by community groups. 	
5. Managed to protect and enhance areas with significant flora, fauna, geological, heritage, cultural and/or landscape values.	 The aim is to: Enhance, preserve and maintain natural environments in line with defined service levels. These environments include waterways and wetlands; exotic and native plantings, formal and informal activity areas Increase community awareness and understanding of natural and created environments; and social and cultural history through interpretive and educational features Enhance visual links throughout the Foreshore via thematic vegetation plantings i.e. between the different zones of the Foreshore; between the foreshore and the Botanic Gardens; between the foreshore and connector streets Retain / strengthen cultural and heritage plantings (e.g. exotic trees) in relevant areas (e.g. Barongarook Ck. corridor, Foreshore Zone). 	
6. Planned so that it contributes to the economic, health, social wellbeing, and connectivity of the diverse communities.	 The aim is to: Optimise the consolidation / integration of buildings at the end of their life, where they are no longer viable or where there is a need to provide a different or higher level of provision Develop the foreshore as a multiuse fully integrated recreation and social hub with the incorporation of features that support community activities e.g. events and community markets Plan, manage and develop the Foreshore so they attract visitation and contribute to the liveability of the town and region. 	
7. Sufficiently resourced to provide quality development and maintenance at appropriate standards.	 The aim is to: To plan and develop Infrastructure that: has creative and conversational design features is planned and designed to reflect the role the foreshore play in achieving the shire's social, recreation, cultural / historic, and economic / tourism aspirations is designed and maintained to meet all relevant standards and guidelines is planned and designed to optimise integration with natural environments and reflect the aesthetic aspirations for the foreshore is consistent in style and colour. is as low maintenance as possible. Ensure the type and standard of infrastructure reflects the 'regional' status of the foreshore Ensure infrastructure maintenance regimes are in keeping with a 'regional' level facility. 	

Table 4: Key Directions proposed for the Lake Colac foreshore and how they respond to the Colac Otway Open Space Planning principles	
Open Space planning principles Open space will be:	KEY DIRECTION STATEMENTS
8. Expanded as opportunities arise such as in new subdivisions and along waterways.	 The aim is to: Monitor and where relevant preserve opportunities to connect adjoining residential and open space areas with the foreshore e.g. future subdivisions, creek corridors, other parks.
9. Preserved for future generations by ensuring that there is 'no net loss' of open space as land use and environments change over time.	 The aim is to: Optimise provision for current and projected future needs Consider the impact of proposals that have the potential to reduce the amount of open space for environmental or recreation / social uses.

7 Overview of the Project Zones and Key Proposals for the Zone

This section provides a summary of the 10 project zones, the key focus for the zone, and key actions proposed over the life of the plan.

There are a number of considerations that are relevant to all or most of the zones. These are addressed in section 4 and relate to:

- Activation of spaces including in the 'Foreshore Zone'
- Play spaces
- Infrastructure including buildings, structures, park furniture, and pathways
- Landscape and plantings
- Public art
- Maintenance and amenity.

Zone 1: Rifle Butt Rd. to Stodart St. West (Reference Map 1)

Overview of the zone



This zone is at the western end of the project area. The pre drought high water level in this zone is very close to the boundary of adjoining properties.

There is no formal pathway and there are limited opportunities to construct a pathway that would be above the pre drought high water mark. There is evidence (desire lines) of minor bicycle and or foot traffic at the Stodart St. entrance to the zone. However, feedback indicates minimal use of the area at this time, primarily because of its sense of remoteness and distance from the township.

The embankment is primarily grassland and a mix of young native trees that have been planted over the last 3-5 years. The adjoining land in the vicinity of Rifle Butt Rd. is heavily to moderately vegetated, which

provides a bushland and serene amenity to the area as well as significant wildlife habitat.

Subdivisions are proposed in the proximity of Rifle Butt Rd. in the future. Any development of adjoining land should consider opportunities to preserve, and preferably enhance, this amenity and habitat via spatial and vegetation buffers between the lake and residential development.

As part of any subdivision consideration should be given to:

- a significant spatial and vegetation buffer between residential development and the lake boundary in order to preserve the environmental amenity and wildlife habitat
- a shared pathway that links to the foreshore trail that currently terminates at Stodart St.
 West
- shared pathways, including a pathway loop within the subdivision

In the interim, a mown pathway should continue to provide access for people who use the zone for walking and mountain bike riding.

The area to the west of Rifle Butt Rd. is outside the boundary of the project area. However, there is merit in considering options for extending shared pathways through this zone as part of a long term strategy to extend a pathway east and west around the perimeter of the lake. There is some but minimal demand for this at the present time

There is an indication of minor bicycle, motorbike, and or foot traffic to the west of Rifle Butt Rd. The foreshore from this point to Deans Ck. is attractive and serene and encouraging of walking, mountain bike riding, and nature observation activities.



Key focus for the zone:

- Recreation / Lifestyle
 - Walking / cycling
 - Future subdivision Preserving the opportunity for pathway through the subdivision
- Environmental
 - Vegetation buffer between residential development and lake edge – For habitat / vegetation preservation and enhancement



Key Actions for the Zone

- Ensuring relevant changes / notations are made to the planning scheme to include:
- amenity and vegetation / habitat buffers between the high water level and residential infrastructure. Ensure public access to the lake surrounds are in line with CEPTED / safe design principles¹⁷
- appropriate space for extension of a shared pathway
 - Signage Distance / direction signage

Zone 2: Stodart St. West to Stodart St. East (Reference Map 2)

Overview of the zone

Between Stodart St. West and Stodart St. East there is a concrete pathway that runs along the narrow strip of foreshore between the boundaries of adjoining residential properties and the lake's edge. The width of the pathway is approximately 2 metres with the greater part of the lake edge designated by an old blue stone retaining wall.

Vegetation is sparse in the zone but includes a row of Ash trees along the high water line in the area of Stodart St. west. There is an opportunity to enhance the zone with additional plantings of shade trees.

Much of the bluestone retaining wall along part of this pathway has fallen into disrepair. Attempts to reinforce the embankment are indicated by rubble and 'spray concrete', which does not add to the aesthetics of the area.

A significant section of this narrow zone has a foreshore character due to the frequent mowing and maintenance of the area by residents in adjoining properties.

Stodart St. West, Balnagowan Av., and Stodart St. East provide the only access down to the foreshore in this zone. Access to the small park at the end of Stodart St. West is via a small, poorly defined section of gravel road. The park includes fitness equipment which was installed in 2007 as part of a neighbourhood revitalisation project, and is used occasionally by fitness groups and sporting clubs.

¹⁷ Crime Prevention Through Environmental Design; Safer Design Guidelines for Victoria, Department of Land Water Environment and Planning; Healthy By Design: A Planners' Guide to Environments for Active Living, Victorian Heart Foundation



There is an opportunity to create a more significant 'end of trail' destination at this point and to increase local use with the addition of more family friendly features such as seating, shade, natural / landscape play elements. Access to the site is via local streets, which will restrict opportunities to make this a more significant point of access to the foreshore other than for local residents.

The ramped access pathway from Balnagowan Av. is rough as a result of periodic attempts to stabilise and level it, and as a result does not comply with access codes of practice.

Access to the foreshore at Stodart St. East is via local streets and a small carpark. This restricts opportunities to make this a more significant

point of access. Approximately 10 years ago a small 'toilet box' was constructed directly alongside the trail at Stodart St. East to cater for people fishing from the embankment. General community feedback suggests the toilet is not well used and should be removed. However, further enquiry is necessary to ascertain the actual level of use and likley use in the future, particularly if a new toilet facility is provided at the end of Hamilton St.

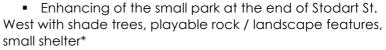
There is an opportunity to enhance the appeal of this zone for walkers and bike riders with the addition of shade trees, however feedback indicates that the desire of adjoining property owners to maintain water views may conflict with this objective.



Key focus for the zone:

- Recreation / lifestyle
 - Walking / jogging / cycling
 - Quiet / reflective environments
- Environmental
 - Views
 - Amenity

Key Actions for the Zone



- Widening of shared pathway where possible
- Seating
- Removal of fitness equipment at the end of its life, and replacement with new equipment at Western Bay Park (recommended) or Hugh Murray Reserve
 - Intermittent plantings of shade trees along the foreshore*
 - Signage Distance / direction signage
- A needs and risk assessment of the 'toilet box' prior to any decision to remove / relocate toilet box from the end of Stodart St.
- Fishing platform. Installation will be dependent on lake water levels and associated fish stock
 - Signage Distance / direction signage.
- * Would be undertaken in consultation with adjoining landowners





Zone 3: Stodart St. East to Armstrong St. (Reference Map 3)

Overview of the zone

The concrete foreshore pathway continues through the Colac Yacht and Colac Sea Scouts precinct. There is significant potential for this area to be an attractive access point to the lake pathway, lake views, and the water body if water levels increase.

If well designed, and inclusive of features that attract families, this precinct provides an opportunity to ease the pressure on the main foreshore area off Fyans St.

However, access to the precinct is via residential roads, which will restrict the level and type of activity that could be encouraged in the precinct.

At former high water levels very little of the grassed area was exposed. During extreme weather events in the past the yacht club and sea scout clubrooms have been inundated, though this has not occurred for some time.

Water views from the pathway have become obstructed by reed growth that has increased significantly while low water levels have endured.

The foreshore on the rise to the south of the precinct provides excellent views of the lake and has the potential to have better landscape and vegetation links to the lake environs. This foreshore is used by the Colac Sea Scouts for weekly activities, and in the past has been used for camping and car parking during yachting regattas.

The yachting club has not conducted any significant yachting activities on the lake for the last 8 years, in which time club activities have been relocated to Lake Purrumbete approximately 50 kms west of Colac. Club membership has dropped from a maximum of 150 (approximately 30 juniors and 120 seniors) when the lake was full to the current 50, largely adult, members 18. The yacht club facilities are occasionally used by the community for events and meetings.

The number of young people involved in the 2nd Colac Scouts (sea scouts) has increased slightly over the last few years to approximately 50. The group caters for ages 6 through to 26 with the 8-11 year olds (cubs) having the strongest membership at this time. Members travel, as they have always done, to different training venues around the region. Low water levels have not impacted on the group's activities, apart from limiting training opportunities associated with their skill development programs (e.g. canoeing and sailing).

Buildings in this precinct are old and near the end of their life. Consideration needs to be given to their consolidation, upgrade, or removal depending on their condition and likely level of use in the future.

Key focus for the zone:

- Recreation / Lifestyle
 - Walking / jogging / cycling
 - Water sports (if water levels are consistently higher than they are now)
 - Play (Western Bay Park)
 - Quiet / reflective environments
- Environmental
 - Views
 - Amenity

Key Actions for the Zone

- Short term Landscape / vegetate and clean up around buildings
- Med to long term Consolidate and upgrade of infrastructure -Only if water based activities are considered viable in the longer term
- Shade trees (Western Bay Park)







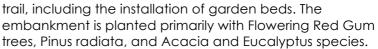
- Seatina
- Consolidating Western Bay Park as a children's and youth hub with installation of parkour / free running circuit and consider as an alternative site for exercise equipment (relocated from Stodart St. East)
- Signage Distance / direction, precinct and compliance signage.

Zone 4: Armstrong St. to Gellibrand St. (Reference Map 4 and Inset 1 – Car Park Precinct) Overview of the zone



In zone 4 the two-metre concrete foreshore pathway is on a narrow strip of Foreshore that is bounded by the old lake bluestone retaining wall and the steep embankment that rises to meet Queens Av. to the south.

Council has undertaken cleanup and re-vegetation works along this section of the



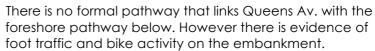
Many of these trees have been removed and others are in poor condition and will need to be replaced.

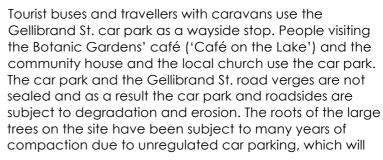
Queens Av. runs parallel with the foreshore pathway and provides excellent views over the lake. It is popular with walkers and bike riders, and is a popular lunch spot for visitors and locals.



Constant car parking on the north side of Queens Av., particularly in the vicinity of the Colac Cricket Ground, has eroded and compacted the soil under trees and exposed tree roots. As a result many trees are in poor condition and need replacing.

The trees are a feature of Queens Av. and make it a very appealing street. A tree replacement and management regime is needed to ensure this amenity is preserved and enhanced.







eventually impact their condition.

There is an opportunity to increase the profile of the junction of Queens Av. and Gellibrand St. It is a main entry point to the lake foreshore precinct that can be enhanced with vegetation plantings and public art as a significant landmark.

The extension of Gellibrand St. to the foreshore car park is narrow. There is no opportunity to incorporate a pathway alongside the road due to the steepness of the terrain. However,

consideration can be given to road markings and signage that indicate a shared vehicle and pedestrian way.

Key focus for the zone:

- Recreation / Lifestyle
 - Walking / jogging / cycling
 - Quiet / reflective environments
- Environmental
 - Amenity tree planting and replacement
 - Views

Key Actions for the Zone

- New shared pathway along Queens Av.
- Formalising indented parking bays along Queens Av
- Formalising parking adjacent to Cricket Oval to protect future tree plantings
- Plantings of flowering gums along Queens Av to replace aged gums on embankment
- Sealing of the end of Gellibrand St. and the car park
- Landscape features (Gellibrand St.) to highlight a main entry to the foreshore environs and protect trees
- Viewing platform at the end of Grant St.
- Tree plantings to stabilise the embankmentreinvigorate old plantingsto enhance environmental amenity and create a stronger link to the Botanic Gardens
- Picnic tables / seating at various points along Queens Av.to take advantage of elevated lake views
- Signage Distance / direction, and precinct signage.



Zone 5: The Foreshore / Commons (Reference Maps: Map 5)

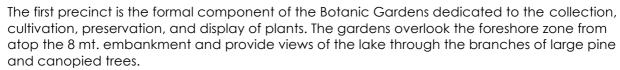
Overview of the zone

In this zone the pathway hugs the side of the Rowing Club building and continues along the top of the blue stone wall until the edge of the grassed 'common' area where it becomes a brick paved pathway.

A second pathway runs along the base of the Colac Botanic Gardens embankment around to picnic facilities and the playground.

Much of the foreshore zone is within the Botanic

Gardens property title boundary, which can be loosely defined in terms of 4 precincts.



This precinct is roughly bounded by Fyans St. on its south and east boundaries, Gellibrand St. on its west boundary and the base of the embankment on its north boundary. The Botanic Gardens playground nestles around the eastern embankment of the gardens with picnic and BBQ facilities adjoining. The playground was installed in 1980 and underwent major redevelopment from 2006 to 2010 with community assistance.

The second precinct is the largely grassed foreshore area to the north of the embankment that includes the CFA training track, tower and pump room; picnic / BBQ facilities and rotunda; the Tachyalossus mosaic, and pathways.











The third precinct includes a large car park, the Colac Anglers pavilion, boat ramp, fishing jetty and part of the Colac Caravan Park.

The fourth precinct includes the Colac Rowing Club and carpark.

Rowing Club members constructed the rowing club buildings in the 1950s. Club membership has dropped from a maximum of 50 (approximately 25 juniors and 25 seniors) when the lake was full to the current 15 adult male members who primarily use the fitness equipment in the pavilion¹⁹.

The Foreshore Zone is the main recreation and activity area on the within the study area. When water levels were higher, this was a busy and often overcrowded precinct with car parking extending along Fyans St. This was the main entry point for motorised boating and associated activities such as skiing. The sandy beach entry to the nearby lake shallows, and open lawn area with large shade trees made it an attractive destination for families.

In recent years the water line has often beenover 80 mts from the lake embankment and as in other zones, screened from the shoreline because of reed and weed growth.

Generally, infrastructure in the zone is dated and there is not a consistent style or colour theme.

Many residents and visitors have strong recollections of childhood, family, and recreation activities focused on this area of the foreshore. Hence conflicting views prevail as to the future use of the zone, and associated infrastructure and landscaping aspirations.

In more recent times the site has hosted a number of community events, including Australia Day in 2015 in the Botanic Gardens²⁰

The foreshore pathway diverges at the main car park. To the left it continues along the foreshore, crossing the boat ramp and then travels to the north of the caravan park and on to the Barongarook Ck. crossing. To the right it

continues around the rear of the angling pavilion to the playground.

There is an opportunity to reinvigorate or reactivate this zone, however given the significantly changed environmental conditions, this means a focus on land-based activities as a priority over water-based activities.

The activation of spaces in foreshore areas, in particular the Foreshore Zone is discussed in greater detail in section 6.2.

The master plan respects the need to ensure developments or enhancements thoughtfully consider a number of sensitive environments associated with the Foreshore Zone. These environments are the adjoining Botanic Gardens environment, history, and outlook; the Tachyglossus mosaic; and the memorial brick pathway.

The master plan proposes enhanced and additional picnic and social facilities, amenities to support community events, and an updated play space on the foreshore. The master plan also builds on the indigenous Australia theme with inclusion of the 'Dreaming' or Infinity Jetty at the end of the Tachyglossus mosaic groyne.

¹⁹ Information provided by Rowing Club President, November 2015

²⁰ Botanic gardens / Foreshore lawn area

Key focus for the zone:

- Recreation / Lifestyle
 - Walking / jogging / cycling
 - Community events and celebrations
 - Family social activities and play
- Environmental
 - Sympathetic integration with the natural / environmental features of the Botanic Gardens including the embankment and vegetation
 - Preserving and enhancing treed lawn features
- Heritage / Culture
 - Sensitive and well integrated celebration of indigenous and non-indigenous culture and history

Key Actions for the Zone

- 'Dreaming' / Infinity jetty at the end of the Tachyglossus mosaic spit
- Relocation of the CFA training tack and associated structures
- Investigating of options for a fully accessible play space at the eastern end of the common that is well integrated into the environment by using appropriate materials, colour themes, and structures
- Enhancing of the existing Botanic Gardens play space as a unique botanic and natural environmental play space
- Foreshore lighting and feature tree lighting
- Power to enable provision for mobile food / coffee vans and cater for events
- Additional picnic and social facilities including shelters, BBQ facilities
- Additional plantings
- Widening of the pathway to meet shared pathway standards
- Signage Distance / direction, precinct and compliance signage
- Sealing of the car park to the west of the common and enhancing the area (long term).

Zone 6: The Esplanade and Wetlands to Bruce St. (Reference Map 6)



The main pathway continues its way along the foreshore to the north of the open grassland area abutting The Esplanade. This area is within the designated flood zone, is low lying, and slow to drain after rain events. After past very high water levels, and particularly when accompanied by northerly winds, this area has flooded.

There is no significant use of the area apart from off leash dog activities even though the area is a designated onleash area²¹, however the area provides a valuable environmental buffer between residential properties and the lake.



There is a small picnic area at the end of Church St. with a serene and attractive view out over the lake. Council's Environmental Services Team run programs in this area with primary and secondary schools, and alternative education institutions. These include environmental awareness and education, and tree planting programs.

The pathway continues along the foreshore where it connects to the dirt / gravel maintenance track. The maintenance track continues along the foreshore to the north of the man made wetlands.

²¹ Refer Colac Otway Local Laws / Responsible Pet Ownership brochure www.colacotway.vic.gov.au/Files/ResponsiblePetOwnershipBrochure.pdf