LAKE COLAC FORESHORE MASTER PLAN



2016-2026



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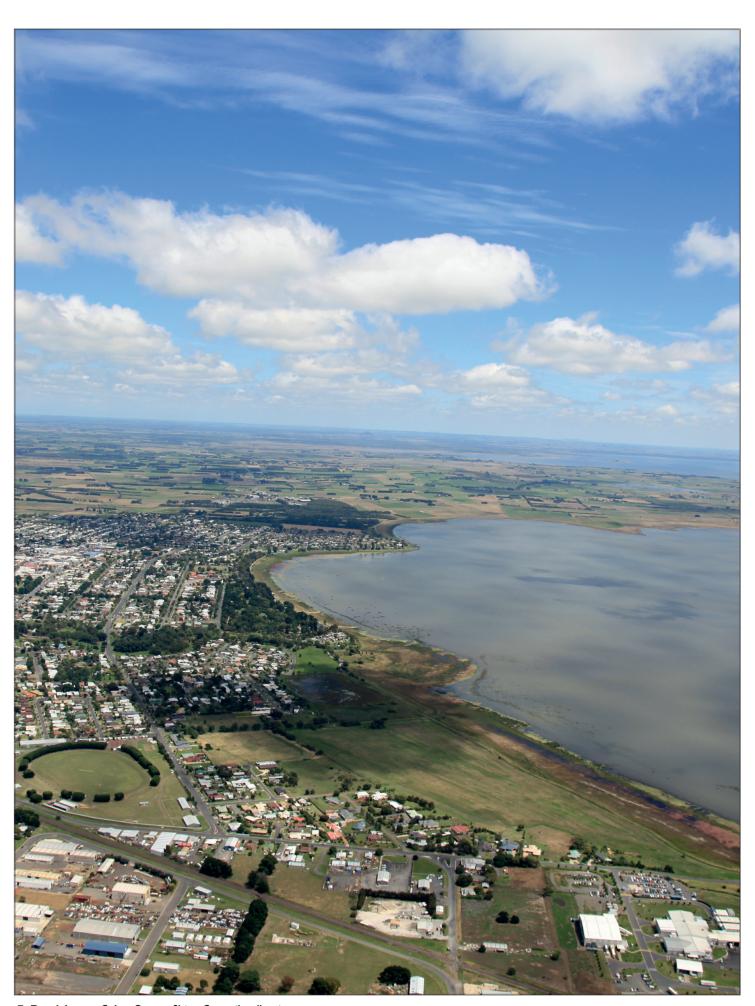




Acknowledgements

Council thanks the individuals, schools, government agencies, and community groups who contributed ideas, submissions, surveys, and thoughtful comment to this project. Your involvement is greatly appreciated. Council also wants to acknowledge the grant provided by the Australian Federal Government for the project.

Cover image: Lake Colac rotunda and foreshore. © Alan Carmichael; Colac Otway Shire Council collection.



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Our Vision

The Lake Colac Foreshore will be:

- a place to meet, greet, play and relax
- a place of activity, vitality, tranquillity, 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.



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Executive Summary



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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 resulted in a dramatic decline in water levels such that 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 estimated cost for implementing the action plan over the next 10 years is approximately \$5.4M as follows: Yrs 1-5 - \$2.6M; Yrs 6-10 - \$2.8M. Table 1 provides a summary of the key actions for each zone over the life of the plan. It also includes a detailed list of the works proposed for each zone in years 1-5 and a cost estimate for completing these elements. The costings for each element are not listed for years 6-10 because they would be unreliable and need to be obtained closer to the time of implementation.

1

¹ Department of Environment, Land, Water and Planning

Table 1 – Key actions for each zone and cost estimates for works proposed for years 1-5 of the master plan

KEY ACTIONS FOR THE ZONE OVERALL	PROPOSED WORKS FOR YEARS 1-5	EST COST Years 1-5
Zone 1: Rifle Butt Rd. to Stodart St. West		
 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 principles² appropriate space for extension of a shared pathway Signage – Distance / direction signage 	 Ensure relevant changes / notations are made to the planning scheme to ensure provision is made for: a recreation, amenity and vegetation / habitat buffers between the high water level and future residential infrastructure e.g. roads and houses. appropriate set backs and buffers to accommodate a sealed shared pathway Signage – distance / direction signage 	\$7,500
Zone 2: Stodart St. West to Stodart St. East		
 Enhancing of the small park at the end of Stodart St. West with shade trees, playable rock / landscape features, and small shelter. Siting of features should preserve the open runabout area currently for family activities. 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 or Hugh Murray Reserve as an alternative but less suitable site Intermittent plantings of shade trees along the foreshore Consider the need to retain the toilet box at the end of Stodart St. when new public toilets are provided in the yachting / sea scout, park precinct at the end of Hamilton St. Fishing platform. Installation will be dependent on lake water levels and associated fish stock Signage – Distance / direction signage. 	3. Formalise car park including replacement of old bollards and maintenance access gates 4. 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. 5. Reinforcement works to stabilise Ash Trees / prevent further erosion around root system 6. Extend foreshore planting 7. Plant Eucalypt species along the foreshore and remove weed species Signage – Distance / direction signage	\$135,640

² 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

Zone 3: Stodart St. East to Armstrong St.		
 11. Short term – Painting and clean up / screen plant around buildings. Longer term if water based activities are considered viable – Renovate in line with council building style guide and investigate options to accommodate angling and rowing activities in a multipurpose facility when buildings reach the end of their life 12. Shade trees (Western Bay Park) 13. Seating 14. 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) 15. Signage – Distance / direction, precinct and compliance signage. 	8. Install of bins (Sea Scouts / Yachting precinct) and Western Bay Park 9. Plant shade trees and seating and drink stations (Western Bay Park) 10. Install youth activity precinct equipment e.g. Parkour (Western Bay Park) 11. Landscape and clean up environs in the vicinity of the buildings used by the yachting and sea scouts buildings 12. 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 13. Assess aged / inappropriate trees and plan for replacement 14. Signage – Distance / direction signage, Precinct, Walking circuit, Compliance signage	\$182,630
Zone 4: Armstrong St. to Gellibrand St.		
 16. New shared pathway along Queens Av. 17. Formalising indented parking bays along Queens Av. including adjacent to Cricket Oval to protect future tree plantings 18. Plantings of flowering gums along Queens Av. to replace aged gums on embankment 19. Sealing of the end of Gellibrand St. and the car park 20. Investigate options for improving street connectivity into the precinct, traffic flow and management, amenity, and precinct arrival/entry statements e.g. public art, feature plantings, signage 	15. Shared pathway along Queens Av. 16. Curb and channel and asphalting of parking bays to formalise indented parking bays along Queens Av. Including near cricket oval 17. Picnic tables / seating at various points along Queens Av. 18. Supplementary tree plantings to stabilise embankment and enhance environmental amenity and create a stronger link to Botanic Garden 19. Signage – Distance / direction signage	\$788,335
 21. Viewing platform at the end of Grant St. 22. Tree plantings to stabilise the embankment, reinvigorate old plantings, enhance environmental amenity and create a stronger link to the Botanic Gardens 23. Picnic tables / seating at various points along Queens Av. to take advantage of elevated lake views 24. Signage – Distance / direction, and precinct signage. 	Zone 4: Inset 1 - Gellibrand St. Entry (and car park) 20. Landscape / ground works to address compaction of tree roots and mulching (triangle) and planting of 3 advanced feature trees 21. Seating 22. Ongoing / selective removal of trees / vegetation on the embankment as it reaches end of practical life 23. Signage – Distance / direction, Precinct, Walking circuit signage	\$22,150

Zone 5: The Foreshore / The Common		
25. 'Infinity jetty' at the end of the	24. Formalise and seal car park to the	\$934,338
Tachyglossus mosaic spit	west of the common	7.01,000
26. Relocation of the CFA training tack and	25. Create gently undulating grassed	
associated structures	area on the common to integrate with	
27. Investigating options for a fully accessible	Botanic gardens embankment and plant	
play space at the eastern end of the	feature trees	
common that is well integrated into the	26. Additional seating, picnic tables, and	
environment by using appropriate	BBQs etc.	
materials, colour themes, and structures,	27. Investigate options for a fully	
and enhancement of existing play space	accessible play space at the eastern end	
in line with a children's garden theme	of the common. Design to be	
28. Enhancing of the existing Botanic Gardens	sympathetic to the surrounding	
play space as a unique botanic and	environments and features.	
natural environmental play space	28. Enhance existing play space in line	
29. Short term – Painting and clean up /	with a 'Children's Garden' theme	
screen plant around buildings. Longer	Install security / safety lighting in the car	
term if water based activities are	park and along the foreshore pathway	
considered viable – Renovate in line with	29. Signage – Distance / direction	
council building style guide and	signage; Precinct; Walking circuit signage	
investigate options to accommodate angling and rowing activities in a multi-		
purpose facility when buildings reach the		
end of their life		
30. Foreshore lighting and feature tree lighting		
31. Power to enable provision for mobile food		
/ coffee vans and cater for events		
32. Additional picnic and social facilities		
including shelters, BBQ facilities		
33. If in the future the caravan park is		
relocated, then consider relocating		
parking areas to the vacated site		
34. Additional plantings		
35. Widening of the pathway to meet shared		
pathway standards		
36. Lighting		
37. Signage – Distance / direction, precinct		
and compliance signage		
38. 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 S	t	
39. Cluster plantings of trees such as River Red	30. Environmental themed public art	\$97,870
Gums around Esplanade Park	sculptural features alongside the	
40. An environmental education / picnic	boardwalk ('The dell')	
shelter	31. Upgrade to the boardwalk	
41. Environmental education stations	32. Seating	
42. Wetlands boardwalk and bird hide	33. Cluster plantings of mature River Red	
43. Extension of the raised boardwalk from the	Gums or similar throughout Esplanade	
vicinity of The Esplanade to meet with the	Park	
shared foreshore pathway near	34. Signage – Distance / direction,	
Barongarook Ck. mouth	Precinct; Walking circuit, Compliance	
44. Public art trail (through 'The Dell') that	signage	
reflect the natural environment,		
Indigenous and non-indigenous history,		
and story telling.		
45. Signage – Distance / direction, precinct		
and compliance signage.		

Sone 7: Bruce St. to Clark St. 16. Cluster plantings of trees such as River Red	35. Seal off vehicle access immediately	\$14,015
Gums along the lake foreshore	past last property in McGonigal, Bruce	ψ17,010
17. Signage – Distance / direction, and	Sts.	
compliance signage.	36. Cluster plantings of River Red Gums or	
	similar every 50 mts alongside landfill /	
	maintenance track 37. Signage – Distance / direction,	
	Walking circuit signage, signage	
	Training circuit signage, signage	
Zone 8: Lower Barongarook Ck. to Chapel Stree		
48. Removing of the 7 old archways and	38. Remove aged timber structures	\$250,050
derelict gazebos 49. Continue the public art trail with	including the 'Woolshed, timber arbours and derelict arbours	
installations that reflect the natural	39. Remove 7 aged steel arbours in line	
environment, Indigenous and non-	with 'Safe Design Guidelines' ³	
indigenous history, and story telling.	40. Mature tree planting along Fyans St.,	
50. Bridge replacement upgrading	and Chapel St.	
51. Enhancing Hugh Murray Reserve as a	41. Habitat and screen plantings	
local community hub with activity spaces	(adjoining properties)	
and recreation features that attract	42. Replace 1 bridge over Barongarook	
families and young people. Features to include land sculpting and large feature	Ck. 43. Seating	
rocks that are 'playable and climbable';	44. Install carp barrier in creek	
enhancing of the BMX track; and social /	45. Signage – Distance / direction,	
picnic facilities	Precinct signage	
52. Mature feature plantings of trees such as	46. Lighting	
Crepe Myrtle along Chapel St. to profile	46. Lighting	
the entry to the parklands and provide seasonal colour to the streetscape		
53. Informal car park off Chapel St. (Hugh		
Murray Reserve)		
54. Lighting		
55. Signage – Distance / direction, and		
precinct signage.		
Zone 9: Upper Barongarook Ck. from Chapel St	 . to Murray St. Bridge	
56. Continue the new public art trail with	47. Maintenance of existing stands of	\$124,330
installations that reflect the natural	trees to the south of Chapel Street (west	
environment, Indigenous and non- indigenous history, and story telling.	side of Barongarook Ck.	
57. Relocating / removing installations from	48. Continue exposed aggregate concrete pathway from toilet block to	
the Sculpture Park	existing creek path	
58. Additional exotic tree plantings to the east	49. Vegetation / general tidying – rear of	
of the pathway to create massed lawn	motel, and pathway to the east of the	
plantings	toilet block and bollards	
59. Screen planting of adjoining properties	50. Relocation or removal of sculptures	
60. Prevent car access from the parklands	51. Environmental themed public art	
61. Upgrading wayside stop car park	sculptural features alongside the shared pathway (as part of ongoing installation	
62. Neatening vegetation along pathway	program)	
	52. Mature tree planting in parklands to	
(eastern side of wayside stop)		
63. Enhancing entry in line with CBD and	The east of Barongarook Ck.	
63. Enhancing entry in line with CBD and Entrances Master Plan	the east of Barongarook Ck. 53. Signage – Distance / direction	
63. Enhancing entry in line with CBD and Entrances Master Plan 64. Lighting		
63. Enhancing entry in line with CBD and Entrances Master Plan	53. Signage – Distance / direction	

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

Zone 10: Meredith Park Foreshore		
66. Cleanup vegetation and increase maintenance to gravel road and road verges	54. Complete a feasibility / viability assessment of (free) camping at Meredith Par	\$40,800
67. A feasibility study to determine the future of camping at Meredith Park	55. Clear rubbish, old / unkempt vegetation and fill depressions	
68. Depending on the outcome of the feasibility study, renew or relocate toilets and renew picnic infrastructure	56. Signage – Distance / direction, Precinct, Compliance signage	
69. Fishing platform. Priority will be dependent on lake water levels and associated fish stock		
70. Signage – Distance / direction, precinct and compliance signage.		

Recommendations for Future Planning of Project Area

Whilst the majority of the actions listed in Table 1 are infrastructure related a number of the recommendations relate to the future planning and management of the project area overall. The following is a list of the key planning actions recommended to be undertaken in order to enable further works to be undertaken if possible:

- 1. Commence discussions and planning for a new all abilities play space in the Foreshore Zone.
- 2. Develop a consistent style guide for new park buildings, structures, signage, and furniture
- 3. Review maintenance provision for the project area.
- 4. Develop a framework that will guide the funding and procurement of public art for the project area and how art installations will be maintained and renewed.
- 5. Design a suite of landmark installations that denote the Lake Colac foreshore and parkland precinct and gradually install.
- 6. Undertake a feasibility study to determine the future of free camping at Meredith Park.
- 7. Investigate opportunities to replace the old inspection pits along the Barongarook Ck.
- 8. Prepare a an infrastructure and detailed landscape plan for the yachting and sea scouts precinct once the future use of the zone has been determined.
- 9. Continue to liaise with relevant land management agencies to identify opportunities to address issues associated with the Lake Colac water body and associated environs.
- 10. Continue to liaise with relevant land management agencies to identify opportunities to identify issues and opportunities associated with creating a pathway around Lake Colac.

The timing of various tasks outlined in the master plan, and council's ability to contribute to them may vary depending on:

- the capacity of the community to raise local funds
- the availability of state and federal government grants
- the availability of council grants and other competing council budget items, and
- changing community priorities and needs.

1. 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 over a ten year period (2016-2026) for 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.

1.3 How We Went About the Project

1.3.1 Consultation

The following summarises the consultation undertaken in the initial stages of the project:

- Project Wall Mural pictured above (Colac Performing Arts & Community Centre)
 - Visitations by 5 schools and 155 students
 - Colac Otway staff (30)
- Colac Community House Project Mural Wall
- 114 community surveys
- 77 surveys from young people
- 14 written submissions
- Interviews Street Interviews;
 Telephone interviews; side Walk intercepts
- 4 on site talking posts / discussion sessions - 54 people
- Workshops Council staff, Colac Lake Committee, Project Steering Committee
- 5 Environmental Services workshops / activity sessions with schools.



Ideas wall inviting community brainstorming that formed part of the first public consultation display at COPACC in 2015.

The project was promoted via:

- The 'promotional wall' at the Colac Performing Arts and Community Centre (COPACC)
- Local papers editorials, interviews and advertisements
- Local radio
- Promotional stand in shopping precinct
- Promotional flyers including 500 delivered to households
- Via council's environmental education programs
- The Colac Neighbourhood House
- Schools
- Council's website.

In March 2016 the final the final draft Lake Colac Foreshore Master Plan was placed on display for six weeks. The invitation to comment on the draft document was promoted on council's website, via the local media, and on social media.

The document was available at council offices in Colac and Apollo Bay, and on council's website, and was sent directly to people who left contact details during the project. In addition, a visual display and invitation to comment was set up at

a visual display and invitation to comment was set up at COPACC.

Thirty-one written submission, 9 surveys, and 48 submissions / comments received from students.

- 'Thanks for helping make our home somewhere to be proud of'
- 'What a great plan. I really look forward to seeing the finished project.'
- 'Think families and young people – our future.'

Reference: Comments on the draft master plan

1.3.2 Council Planning

Council has prepared a number of service planning documents and policies that are relevant to the Lake Colac Foreshore Master Plan.

The Council Plan and the Municipal Strategic Statement articulate the shire's vision and the framework used to guide decision-making to ensure the vision is achieved, in this case via the lake colac foreshore areas.

Documents such as the Open Space Strategy, Lake Colac Management Plan, the Botanic Gardens Management Plan, and the Access, Equity, and Inclusion Plan are documents particularly relevant to the master plan because they provide planning and policy information relevant to the project. Other documents include objectives and aspirations, some of which can be, and have been, addressed by the Lake Colac Foreshore Master Plan.

'A sustainable, vibrant future' Ref: Council Plan 2013-17

Examples of documents reviewed for the plan:

- The Council Plan
- Open Space Strategy
- Botanic Gardens Master Plan
- Physical Activity Strategy
- Access, Equity, and Inclusion Plan
- Colac Structure Plan
- Lake Colac Commercial Development Assessment
- The 50+ Plan
- Re-vegetation and Weed Control Plan
- Lake Colac Management Plan

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.

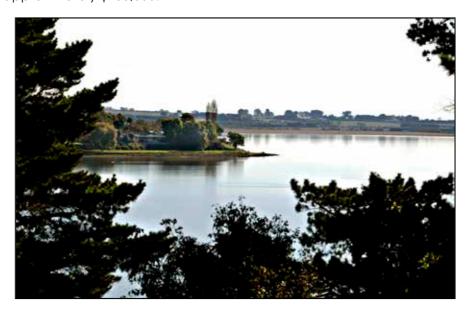
The Colac Otway Shire Council is responsible for the day-to-day planning and management of the Lake Colac Foreshore under agreement with the state government.

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 Lake 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.



View from Botanic Gardens with lake at pre-drought levels. © Michael Rayner; Colac Otway Shire Council collection.

⁴ Department of Environment, Land, Water and Planning

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 - People visit the Foreshore with—	
	% / 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.

3. Lake Colac

3.1 Overview

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.⁷

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

^{5 63%} of survey respondents

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

⁷ Recreational Use of Waterways, Victorian Waterway Management Strategy

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.



© Michael Rayner; Colac Otway Shire Council collection.

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.

3.2 Council Advocacy

The master plan recognises that the foreshore and parkland areas managed by council — and that are the focus of the master plan — are intrinsically linked with the broader lake environs. These include the water body, and adjoining private and public land that is managed by Parks Victoria.

Council does not have control over the activities and development that occurs in these areas. However, council is well placed to facilitate discussions between relevant stakeholders;

including state government, property owners and the community; and advocate in relation issues and opportunities.

The master plan has identified the community's concerns with the overall health of the lake and the need to identify opportunities to address this where possible.

Filling the lake and dredging the lake to improve water level security is not considered viable, but council is actively advocating for more action to be taken to improve the health of the lake in the long term.

Specific actions include work to reduce carp numbers, manage weed infestation and an Integrated Catchment Management Plan for the lake to address issues such as water quality and erosion.

Many of the environmental issues associated with the lake are complex and require a long term plan to address. Council is committed to advocating for action and will continue to facilitate this through the Lake Colac Coordinating Committee.

The master plan also identified the community's interest to investigate opportunities to achieve a pathway around the lake. This would allow people to engage with more of the lake, and would be an iconic regional destination for walkers, bike riders, and nature observers.

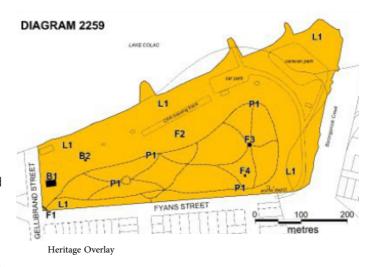
Council will continue to explore the opportunity for a lake circuit pathway and advocate to relevant stakeholders. As with proposals to address issues associated with the water body, the issues are complex and will require state government and private landowner co-operation and involvement. It will require a long-term plan in order to address funding, risk management, and land tenure and access issues.

4. Colac Botanic Gardens

The Colac Botanic Gardens were gazetted in 1865 and comprise 12 hectares⁸. 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



Victorian Heritage Database Report 29/02/2016.

'historical, aesthetic, and scientific (botanical) significance to the State of Victoria.9

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 Plan¹⁰ guides the management and development of the gardens. The formal part of the gardens are not part of the project, however they are particularly important to the Lake Colac Foreshore Master Plan because:

⁸ Australian National Botanic Gardens Directory, https://www.anbg.gov.au/chabg/bg-dir/028.html

⁹ Victorian Heritage Database Report. Report generated 29/02/16; Victorian Heritage Registration Number H2259

- 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 and
- the heritage overlay that covers the gardens also covers a large section of the foreshore as shown in diagram 1.

5. A Historical Snapshot

The Gulidjan¹¹ are the Indigenous Australians 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.¹²

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.

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.¹³

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 Strategy¹⁴ 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 for the project.

¹⁰ Colac Botanic Gardens Master Plan – Reviewed in 2012

¹¹ Alternative names / spellings Colijan, Kolac Gnat, Colagdians

¹² http://www.speakingoftheotways.net/people/gulidjan.php

¹³ http://www.otway.biz/history.html

¹⁴ 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	
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 passive recreation, children's play, social gatherings, informal active recreation, walking, cycling and organised sport.	The aim is to: Provide and encourage a range of different social, recreation, and natural environments including picnic and BBQ facilities; 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 	

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	
	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. 	
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 9 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 on the dried lake bed 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 principles¹⁵
 - appropriate space for extension of a shared pathway
 - Signage Distance/ direction signage

¹⁵ 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

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.

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



Playable landscape features, as they have been incorporated into the Royal Park Nature Playground. Image courtesy & © Mamma Knows West; www.mammaknowswest.com.au

- Enhancing of the small park at the end of Stodart St. West with shade trees, playable rock / landscape features, and small shelter*. Siting of features should preserve the open runabout area currently for family activities.
- 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 or Hugh Murray Reserve as an alternative but less suitable site
- Intermittent plantings of shade trees along the foreshore*
- Consider the need to retain the toilet box at the end of Stodart St. when new public toilets are provided in the yachting / sea scout, park precinct at the end of Hamilton 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 16. 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. If water if water based activities are considered viable in the longer term then buildings should be renovated in line with council building style guide. In addition, options to accommodate yachting and sea scout activities in a multi-purpose facility when buildings reach the end of their life should be investigated.

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 – Painting and clean up / screen plant around buildings

- Longer term if water based activities are considered viable Renovate in line with council building style guide and investigate options to a multi-purpose facility when buildings reach the end of their life
- Shade trees (Western Bay Park)
- Seating
- 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.



Challenging play/exercise features, as they have been incorporated into Valley Reserve Playspace. Image courtesy & © City of Monash.

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 revegetation works along this section of the trail, including the installation of garden beds. The embankment is planted primarily with Flowering Red Gum trees, Pinus Radiata, and Acacia and Eucalyptus species.

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.

There is no formal pathway that links Queens Av. with the foreshore pathway below. However there is evidence of foot traffic and bike activity on the embankment.

Tourist buses and travellers with caravans use the Gellibrand St. car park as a wayside stop. People visiting the Botanic Gardens' café ('Café on the Lake') and the community house and the local church use the car park. The car park and the Gellibrand St. road verges are not sealed and as a result the car park and roadsides are subject to degradation and erosion. The roots of the large trees on the site have been subject to many years of compaction due to unregulated car parking, which will 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. including 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
- Investigate options for improving street connectivity into the precinct, traffic flow and management, amenity, and precinct arrival/entry statements e.g. public art, feature plantings, signage
- Viewing platform at the end of Grant St.
- Tree plantings to stabilise the embankment, reinvigorate old plantings, 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.



Well-integrated public furniture design, as demonstrated in the redevelopment of Burgess Park, London.

Image courtesy & © Davis Landscape Architecture; www.davisla.com



Zone 5: The Foreshore / Commons (Reference Maps: Map 5) Overview of the zone



© Ferne Millen; Colac Otway Shire Council collection.

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.

The first precinct is the formal component of the Botanic Gardens dedicated to the collection, cultivation, preservation, and display of plants. The gardens overlook the foreshore zone from atop the 8 mt. embankment and provide views of the lake through the branches of large pine and canopied trees.



© Ferne Millen; Colac Otway Shire Council

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 Tachyglossus 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 pavilion¹⁷.

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 been over 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. In the short term it is recommended that buildings be painted / cleaned up and screen plantings added. In the longer term, when buildings reach the end of their life and if water based activities are considered viable, buildings should be renovated and / or consolidated to accommodate angling and rowing activities in a modern, multi-purpose facility when buildings reach the end of their life

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 Gardens. 18

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 9.2.1.

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 along with an infinity jetty. Work will be undertaken to ensure all development in this area is undertaken in a manner that is sensitive and respectful to the historic and current usage.

If in the future the caravan park is relocated, consideration should be given to relocating car, bus and trailer parking to the caravan park site and extending the foreshore social and play amenities.

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

 $^{17\ \}text{Information}$ provided by Rowing Club President, November 2015

¹⁸ Botanic gardens / Foreshore lawn area

 Sensitive and well integrated celebration of Indigenous and non-indigenous culture and history

Key Actions for the Zone



Denmark's iconic infinity jetty at Aarhus, created by Gjøde & Povlsgaard Arkitekter.

© Aarhus/Billeder

- 'Infinity jetty' at the end of the Tachyglossus mosaic spit
- Relocation of the CFA training tack and associated structures
- Investigating 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, and enhancement of existing play space in line with a children's garden theme
- Enhancing of the existing Botanic Gardens play space as a unique botanic and natural environmental play space
- Updating, renewal, or consolidation of buildings at the end of their useful life
- 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
- If in the future the caravan park is relocated, then consider relocating parking areas to the vacated site
- Additional plantings
- Widening of the pathway to meet shared pathway standards
- Lighting

- Signage Distance / direction, precinct and compliance signage
 Sealing of the car park to the west of the common and enhancing the area (long term).



The award-winning design of the Valley Reserve Playspace has enabled this parkland in Mount Waverley to become a hub of community activity. Image courtesy & © City of Monash

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



Overview of the zone

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 on-leash area¹⁹, 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.

The wetland and bird sanctuary provides habitat for over 20 species of water birds, including a number of migratory species that are listed under agreements between the Australia and Japan and China for the protection of migratory birds and their habitats that are in danger of extinction²⁰.

A raised boardwalk connects the end of the Esplanade to Fyans St. and Quamby St. The boardwalk traverses the low lying Barongarook creeklands, with the west arm crossing the creek via an old timber bridge to meet up with Fyans St. The east arm of the boardwalk links to Quamby St. The boardwalk is narrow with right angle junctions that do not provide easy access for bike riders.

There is an opportunity to vegetate the area in line with Guilfoyle's vision for 'The Dell' and to incorporate a public art trail along the raised board walk that reflects the environmental and social themes of the lake environments and the township of Colac.

A significant public art feature through this area will potentially draw interest and activity across the Barongarook Ck. and to the wetlands environmental features. Refer to section 9.5 for additional discussion on public art.

Consideration should be given to extending the public art trail upstream along the Barongarook Ck. to Murray St. Over time, as the trail is developed, it has the potential to be a major feature that extends the opportunities associated with the foreshore zone without 'crowding' the foreshore zone itself.

¹⁹ Refer Colac Otway Local Laws / Responsible Pet Ownership brochure www.colacotway.vic.gov.au/Files/ResponsiblePetOwnershipBrochure.pdf 20 www.otway.biz/lakecolac.html

Key focus for the zone:

- Environmental
 - Habitat / wildlife protection
 - Environmental education
 - Views
- Heritage / Culture
 - Public art
- Recreation / Lifestyle
 - Walking / jogging / cyclingexisting shared pathway upgrade.
 - Nature observation

Key Actions for the Zone

- Cluster plantings of trees such as River Red Gums around Esplanade Park
- An environmental education / picnic shelter
- Environmental education stations
- Wetlands boardwalk and bird hide
- Extension of the raised boardwalk from the vicinity of The Esplanade to meet with the shared foreshore pathway near Barongarook Ck. mouth
- Public art trail (through 'The Dell') that reflect the natural environment, Indigenous and non-indigenous history, and story telling.
- Signage Distance / direction, precinct and compliance signage.



An environmental education station and outdoor classroom with rooftop garden, as created by the Grass Roof Company. Image courtesy & @ Grass Roof Company; http://www.grassroofcompany.co.uk



Zone 7: Bruce St. to Clark St. (Reference Map 7)

Overview of the zone

The pathway in the form of the maintenance track continues along the foreshore past the former landfill site and the informal extension of McGonigal St to Clark St. The former landfill site cannot be vegetated because tree and plant roots will penetrate the 'cap' / cover of the landfill which then allows the contained leachates to escape into the environment.



Because of the above and the remoteness of the site, the master plan does not recommend the site for BMX or other related activities that were raised for consideration during the project.

There are high points along this section of the track, particularly in the vicinity of McGonigal St., that provide expansive views over the lake.

Consideration could be given to allowing dogs off-leash given it is not a significant habitat or recreation zone and there are no other opportunities to allow dogs off leash in the parklands. Consideration was given to the Esplanade Park as a possible off-leash area, however its close proximity to the wetlands and associated wildlife would preclude this.

The barren former landfill site adjoins the project area. Although requested during consultation, is not possible to vegetate this site because of the need to preserve the integrity of the landfill cap.

Key focus for the zone:

- Recreation / Lifestyle
 - Walking / jogging / cycling
 - Dog off-leash
- Environmental
 - Amenity tree planting
 - Views

Key Actions for the Zone

- Cluster plantings of trees such as River Red Gums along the lake foreshore and the edge of the landfill where they will not interfere with the landfill cap and accompanying seating are proposed. This will enhance the amenity of the zone, provide a visual connection with Esplanade Park and the Wetlands Zone, and provide a visual buffer from the industrial buildings at the end of Clark St. Screen planting along the last 50-75 metres of St. will provide an additional visual buffer.
- It is not proposed to formalise the foreshore pathway at this time due to the low level of use. However, use should be monitored and in the long term there can be further investigation of opportunities to formalise the pathway and extend it around the lake to the north.
- Signage Distance / direction, and compliance signage.

Zone 8: Lower Barongarook Ck. to Chapel Street Bridge (Reference Maps: Map 8)





Overview of the zone

From Fyans St. the pathway travels along both sides of the Barongarook Ck. and crosses the creek 4 times. The pathway is generally 1.8-2 metres wide in this zone and is in predominantly poor condition. The creek parklands have a sense of serenity after the more formal and activity focus of other zones.

The zone is characterised by old plantings of large exotic trees and in some areas later plantings of Australian natives (northern area of Hugh Murray Reserve).

The Hugh Murray Reserve includes seven old steel archways that are covered in creeping plants including jasmine, hardenbergia and honeysuckle²⁰. The archway structures are old and dated and because they are enclosed by vegetation it is difficult to see into the archway and as a result they do not comply with safe design principles.

The zone also includes a large open timber structure, referred to as 'the Woolshed' (near Chapel St.), which was constructed as a community project in in the 1980s along with a number of other structures including small timber gazebos in varying condition, and a pathway junction arbour that is also dated and in poor condition.

There is an opportunity to better define Chapel St. as an entry point to the foreshore parklands with street tree plantings and more attractive and updated road / pedestrian barrier treatments. Wear on the roadside indicates car parking occurs at the end of the barriers on a narrow strip of road verge.

Council has undertaken extensive weed eradication, planting, and bank stabilisation works in this zone over the last 3-5 years.

The Hugh Murray Reserve is classified as a 'neighbourhood' park²¹ which indicates that it is not a site that warrants or is appropriate for additional recreation of social infrastructure. Any additional infrastructure proposed for the site must take into consideration the likely level of use, given its profile, and the function of the park in the overall open space / park network.

There is the opportunity to establish the Hugh Murray Reserve as a more significant local family recreation precinct with the enhancement of the informal BMX track; land sculpting and feature rock installations that are suitable for climbing and scrambling; dog off leash sensory plantings and exploratory landscapes; and social / picnic facilities. Respondents to the community survey

²⁰ Declared pest plant references) http://agriculture.vic.gov.au/agriculture/pests-diseases-and-weeds/weeds/state-prohibited-

²¹ Colac Otway Open Space Strategy, p 57; http://www.colacotway.vic.gov.au/page/Page.asp?Page_ld=203&h=1

expressed a desire for family friendly areas and facilities elsewhere in the parklands as an alternative to the foreshore area.

There is also the opportunity to continue the public artwork trail upstream of the proposed art trail alongside the raised boardwalk in zone 6.

Creative and significant feature landscapes that are easy to maintain provide exploratory and play opportunities for families, and if it remains as a dog off-leash area, the family dog.

Key focus for the zone:

- Environmental
 - Environmental education
 - Tree / vegetation amenity
 - mixed planting of native and exotic
 - Habitat enhancement
- Recreation / Lifestyle
 - Walking / jogging / cycling
 - Family play
 - Off-leash dog activities

Key Actions for the Zone

- Removing of the 7 old archways and derelict gazebos
- Continue the public art trail with installations that reflect the natural environment, Indigenous and nonindigenous history, and story telling.
- Bridge replacement upgrading
- Enhancing Hugh Murray Reserve as a local community hub with activity spaces and recreation features that attract families and young people. Features to include land sculpting and large feature rocks that are 'playable and climbable'; enhancing of the BMX track; and social / picnic facilities
- Mature feature plantings of trees such as Crepe Myrtle along Chapel St. to profile the entry to the parklands and provide seasonal colour to the streetscape
- Informal car park off Chapel St. (Hugh Murray Reserve)
- Liahtina
- Signage Distance / direction, and precinct signage.



Pinus pinaster specimen, one of the recommended exotic varieties.





Contemporary bridge designs.

Zone 9: Upper Barongarook Ck. from Chapel St. to Murray St. Bridge (Reference Map 9)



Overview of the zone

The Barongarook Ck. pathway continues under the Chapel St. bridge to emerge on the western side of the creek as a 'desire line', an unformed track that continues through the 3rd / 4th Colac Scouts precinct to rejoin the sealed pathway.

The northern area of this precinct is characterised by older unkempt plantings of Australian native trees, open areas, and low lying ground that is often wet for 4-6 months of the year. The southern area of the precinct contains the scout facilities and access road ways.

The main pathway through this zone is accessed from the footpath on Chapel St. and travels along the east side of the Barongarook Ck. The area known as the 'Sculpture Park' lays to the east of the creek and includes various steel based public art installations that were erected in the 1970s as part of a public art project.

Some of the pieces have been relocated and many of the remaining works are in disrepair and have no interpretive information that would normally accompany such installations. The works are scattered through open parkland areas, which can remain wet underfoot for 4-6 months of the year. The general consensus from consultation supported the removal of the works from the site because they were dated, and are not an attractive reflection of the Colac Community.

There is however the opportunity to continue the public artwork trail proposed for zones 6 and 8, upstream and through this zone

This zone can be enhanced with plantings to screen adjoining properties, including the motel.

When the pathway meets with the Murray St. wayside stop, the main branch of the pathway follows the creekline past the scout precinct and passes under Murray St. A landscape plan has been developed for this precinct as the CBD entry point.

The other branch of the pathway travels along the eastern side of the wayside stop where it ends at Murray St. There is an opportunity to neaten vegetation in this area and increase the profile of the area as a main entry point to the parklands and creek pathway

Council has renovated the toilet block and added picnic facilities and shelters at the wayside stop. The car park is graveled but is subject to degradation, particularly in wet weather. Some residents of the adjoining units use the car park for private parking and there is evidence that residents use the car park, parklands, and lane way at the back of the motel to access their units.

Council has also undertaken extensive weed eradication, planting, and bank stabilisation works in this zone over the last 3-5 years.

Key focus for the zone:

- Environmental
 - Tree / vegetation amenity mixed planting of native and exotic trees
 - Habitat enhancement
- Recreation / Lifestyle
 - Walking / jogging / cycling
 - Reflection / Nature observation

Key Actions for the Zone



Art installations to reflect and enhance the natural environment.

- Continue the new public art trail with installations that reflect the natural environment, Indigenous and non-indigenous history, and story telling.
- Relocating / removing installations from the Sculpture Park
- Additional exotic tree plantings to the east of the pathway to create massed lawn plantings
- Screen planting of adjoining properties
- Prevent car access from the parklands
- Upgrading wayside stop car park
- Neatening vegetation along pathway (eastern side of wayside stop)
- Enhancing entry in line with CBD and Entrances Master Plan
- Lighting
- Signage Distance / direction, and precinct signage.



 $Decorative \ tree \ and \ pathway \ lighting \ can \ provide \ entirely \ new \ perspectives \ on \ parkland \ areas.$

Zone 10: Meredith Park (Reference Maps: Map 9)



Overview of the zone

Meredith Park is on the northern bank of Lake Colac. Prior to 2008 when water levels were high the park was a popular picnic and recreation zone, and a launch point for watercraft. The site treed and rocky with a peaceful and expansive outlook over the lake

There is no fee for camping at the site, however council is in the process of considering whether to retain free camping. Discussions with caravaners indicate it is the natural amenity, quietness, and remoteness of the site that appeal to caravaners.

The site is popular for special events such as New Year's Eve celebrations and private celebrations. Because of the remoteness of the site it often attracts anti-social behavior at these events.

The BBQ, picnic and toilet facilities at the site are basic but any upgrade should consider the future of the site as a camping venue.

There is an opportunity to improve the amenity of the site with some minor maintenance and road works. Pine trees are the dominant tree species at the site, which need to be removed over time. These can be replaced with a mix of Australian natives and shade trees, that will assist to suppress grass growth over the rocky landscape.

Key focus for the zone:

- Recreation / Lifestyle
 - Reflection / Nature observation
 - Camping The continuation or extent of camping will depend on the outcome of the proposed camping feasibility study
 - Water activities The extent of activities is dependent on water levels
- Environmental
 - Tree / vegetation amenity enhancement mixed planting of native and exotic

Key Actions for the Zone

- Cleanup vegetation and increase maintenance to gravel road and road verges
- A feasibility study to determine the future of camping at Meredith Park
- Depending on the outcome of the feasibility study, renew or relocate toilets and renew picnic infrastructure
- Fishing platform. Priority will be dependent on lake water levels and associated fish stock
- Signage Distance / direction, precinct and compliance signage.

8. Design Considerations

This section highlights some of the key open space and landscape design principles that underpin the Lake Colac Foreshore Master Plan.

8.1 Universal Design

Universal design is the term used to describe the practice of designing buildings and public spaces so they allow use by the broadest range of ages and abilities.

Rather than focusing on users with specific disabilities, universal design focuses on making provision for mobility issues faced by people through every stage of their life.

The key principles include design that caters for a wide range of abilities, is simple and easy to use, and minimises the effort required to use.

The following are examples of how universal design principles will influence the Lake Colac Master Plan:

- Easy and direct access between park amenities and features such as between car parks and toilets and picnic areas
- Play equipment and environments that optimises play opportunities for children of different ages and abilities; and opportunities for carers of different abilities to interact with children
- Pathways and access ramps that are easy to access, and even and wide enough to accommodate people with different mobility needs and abilities e.g. motorised scooters, children on trikes, parents with prams
- Toilets that are easily accessible for different abilities
- Car parking spaces of a size and layout that allows easy access to cars for mothers with children and prams, people with mobility aids, or people with picnic equipment
- Feeder and internal road crossings that are safe
- Directional and distance signage that clearly indicates distance; estimated times; and terrain information if relevant.

8.2 Design that Encourages Use and Physical Activity

There is an array industry documents²² that clearly detail the design requirements for public spaces so these spaces will attract use, and encourage people to be physically and socially active.

Importantly, these spaces must be and feel safe, and be attractive and inviting. To achieve this, spaces should:

Be modern, attractive, inviting, and well maintained to encourage constant and high levels of use used

- Optimise sightlines including sightlines:
 - Into parks from surrounding streets and local residences. This means minimising the enclosing of spaces by backyard fences
 - Along pathways
 - From car parks and toilets
- Be well lit to enhance visibility and natural surveillance
- Be designed to accommodate the activities people want to use them for e.g. recreation and commuter trails
- Regular spacing of seating i.e. every 200-400 mts
- Have well designed elements such as park furniture, drinking fountains, public information, public toilets, and play equipment to encourage the informal use of parks
- Ensure vegetation and landscape features (e.g. pergolas, rock mounds) do not obscure sightlines or lighting

Healthy active spaces are achieved by providing:

- well planned networks of walking and cycling routes
- streets with direct, safe and convenient access
- local destinations within walking distance from homes
- accessible open spaces for recreation and leisure
- conveniently located public transport stops
- local neighbourhoods fostering community spirit.

Ref: Healthy By Design

²² Safer Design Guidelines for Victoria, Department of Land Water Environment and Planning; and Healthy By Design: A Planners' Guide to Environments for Active Living, Victorian Heart Foundation.

- Have directional signage to major local destinations, public transport, facilities (e.g. police, telephone); distance and 'walking time' signage, closest exit routes etc.
- Spaces that are well used are less likely to be subject to vandalism and anti-social behavior.

9. Discussion of General Project Findings

A number of considerations raised during consultation were relevant to all, or a number, of the project zones. These are discussed in this section.

9.1 Lake Colac Water Body

There is an overwhelming desire for the return of the days when lake water levels were consistently high and enabled water based activities to flourish.

There was diverse opinion expressed as to the strategies that might return water to Lake Colac, and the sometimes-high costs associated with these. This is despite the many technical and scientific reports²³ written about changed climatic conditions that will continue to affect water levels.

The majority of project participants acknowledged the changed climatic conditions in the region and the ongoing impact on water levels. In view of this, they agreed there should be a focus on enhancing land-based opportunities as the priority over water based activities.

9.2 Activation of Spaces

Spaces that are constantly used have a number of attributes that stand them apart from lesser-used spaces. These attributes include a wide range of different things to do, to see, to interact with all in close proximity to each other; attractions for different age groups and abilities; facilities that support these attractions such as toilets and picnic facilities; infrastructure such as pathways that makes it easy to move between different environments and facilities; attractive and interesting design features; natural features; and features such as lighting that increase hours of use. Importantly they feel safe and are safe.

'Enhancements to informal recreation facilities can generate broader social benefits including improvements to community health and fitness, enhanced civic pride and improved recreation opportunities.'

Ref: Lake Colac Commercial Development Opportunity Report, p31

The more of these features and considerations that can be addressed then the more popular the space will be that can be drawn together the more popular or 'activated' a space will.

A number of council planning documents have identified the need to activate the Foreshore Zone including the Open Space Strategy and the Lake Colac Commercial Development Opportunity Report²⁴

This section gives consideration to the activation of the Foreshore Zone, which received strong support through the project, and the activation of other spaces such as trails and the surrounding Foreshore.

9.2.1 Activation of the Foreshore Zone

There is overwhelming agreement from the community consultation for the activation of the Foreshore Zone, which is viewed as a lost opportunity for the town's economy. There is a strong desire for the Foreshore Zone to 'better reflect who we are as a community'²⁵.

The Open Space Strategy identifies the Lake Colac Foreshore as a regional open space asset. Currently it does not have the level of features and amenities, and the level of use that normally accompanies a regional level facility.

Comments about the foreshore typically related to the need for additional and modern picnic, BBQ and toilet facilities; invigorating and cleaning up the area; providing facilities that cater for

²³ Refer Appendix 1 for examples

²⁴ Lake Colac Commercial Development: Opportunity Profile, Cost-Benefit Analysis and Economic Impact Assessment

²⁵ Lake Colac Foreshore Master Plan, Community Survey, 2015

families; shade trees; modern play features that cater for a wider age group and people of all abilities, and things that make the foreshore interesting and different.

Residents involved in the project identified 'making the foreshore area in front of the Botanic Gardens more appealing'²⁶ as the most important priority for improving the Foreshore. Retaining a large open but well landscaped grassed area to the west of the proposed play space, preserves an area to accommodate a range of community events. These events would include open-air picture nights or performances that could take advantage of the embankment for spectator viewing; and community markets. Preserving an unencumbered open grassed area means there is flexibility in terms event layout. It is for this reason that permanent structures such as sound shells have not been included in the site plan.

Activation of the foreshore will only be achieved by introducing features and environments that people want access to and by landscape and design features that create attractive and safe environments. Public spaces that have people constantly coming and going because there is a significant array of different things to do, will in turn attract more people, creating a destination that becomes a prominent community hub.

There does not appear to be any sound justification for the inclusion of any significant commercial infrastructure at this time. Council has commissioned reports that made recommendations regarding water based commercial activities and does not recommend that commercial infrastructure be developed in the foreshore area at this time.

The CFA training track is viewed as an obstacle to the foreshore achieving its potential as a community and family recreation hub. Previous studies²⁷ have recommended that the CFA fire training track and facilities be moved. These structures remain intrusive on views from the Botanic and impose on the amenity of the lower foreshore area. The CFA training track significantly impacts on the ability to enhance the grassed foreshore area and expand its use.

The training track is used in summer 2 times a week for senior training and 2 times a week for junior training.

The project considered opportunities to use the sealed training track for alternative activities including recreation activities and community markets. However, the safety, functional and access requirements of these activities cannot be addressed with the existing dimensions and configuration of the track. Importantly the size and location of the running track prevents optimising the use and development of the foreshore area as a significant community recreation and social hub.

Residents at community meetings and responding to the survey strongly identified with the need for 'wow' features in the foreshore areas, and in particular in the Foreshore Zone, that might include landscape features and a more significant and modern play space.

A large number of residents²⁸ consulted for the project viewed the foreshore as a good location for an 'iconic play space' that could cater for a wider age and skill range than the existing play space. Contrary opinion was reflected on the basis that a play space would change the use and amenity of the foreshore; would not be in keeping with the amenity and theme of the Botanic Gardens; and would not have shelter from prevailing winds.

Young people involved in the survey communicated a desire for more exciting and challenging things for them to do. Older children indicated that they 'hung around' the play space because there was nowhere else to go. They did not find the play space suitable or challenging enough and did not find other areas of the foreshore parklands particularly inviting for young people.

The great majority of people who participated in the project recognise and accept that prospects associated with the water have significantly diminished. This is because of changed environmental conditions, and water levels that are unlikely to return to those of the past for any consistent period of time.

They did however ask that consideration be given to opportunities to create a 'connection to the water' though they were unclear how this might be achieved. The project proposes that

²⁶ Lake Colac Foreshore Master Plan, Community Survey, 2015; community meetings; project comment wall at COPACC 27 Patrick & Wallace, 1993, as cited in the Botanic Gardens Master Plan, p100; Botanic Gardens Master Plan; 2012 Lake Colac Master Plan 28 including 62% of survey respondents who agreed / strongly agreed. 38% of survey respondents disagreed / strongly disagreed with a play space on the foreshore

circular walkway be constructed at the end of the jut of land that includes the mosaic. The walkway will extend the visual, and on some occasions physical, connection to the water body; provide access to the sandy lake shoreline when exposed; and will sit above the water when water levels are higher to provide a reflective space.

Further activation can be achieved through partnerships with private enterprise. This is occurring to a small degree with private fitness providers using the foreshore, Botanic Gardens and pathways, and often at times when the Foreshore are not widely used. Additional opportunities should be considered as they arise or proactively investigated. If demand from commercial operators does eventuate to any significant degree council may need to develop a policy to guide.

9.2.2 Activity Nodes
Foreshore and Botanic Gardens Play Space





The Lake Colac foreshore play space is located on the treed eastern embankment of the Botanic Gardens.

The community and the Friends of the Botanic Gardens have primarily been responsible for the development of the play space over this time and many of those close to the development have strong sentiment about any changes that might be proposed for the play space. The play space is in an attractive and shady setting, which provides protection from the heat in the summer.

Despite this it has to be acknowledged that the layout and design of the play space is dated as are many of the pieces of equipment, even though some remain popular with children. There are three key issues that detract form the site as a play space and these are highlighted in the Victorian State Government 'Safer Design Guidelines' and the 'Healthy by Design Guidelines'. Because of the surrounding vegetation and terrain passive surveillance of the site from the road and Foreshore Zone is poor. In addition, sightlines from the main seating and picnic area are limited.

Further, the play space does not provide easy access for children and carers with restricted mobility, and the terrain will make this more difficult to address than a play space on a more even site. Feedback from mothers with prams and young children and older people commented that many elements within the play space are difficult to access.

There was significant feedback from parents and school children that the play space did not cater for older children, lacked 'challenging' and 'interesting' elements and was outdated.²⁹ It will not be possible to introduce elements that address these requirements because of the restrictions associated with its location in the Botanic Gardens.

²⁹ COPACC display and feedback wall, onsite meetings, children's submissions and surveys, community survey

Upgrading and relocating and the play space to the Foreshore Zone had greater support from project participants than upgrading the play space in its current location. It is however noted that shade structures would need to be incorporated into the design on the foreshore until new tree plantings provided natural shade.

A play space constructed on the foreshore should be sympathetic to the natural environment of the adjoining Botanic Gardens, integrated well with the open grassed area and the gardens. Heritage Victoria has given 'in principle' support to the foreshore play space however approval will be dependent on the final design.

The master plan recommends that consideration be given to a nature / botanic themed 'children's garden' and education space for younger children in the vicinity of the existing play space.

If legislative controls prohibit the development of an iconic playspace on the foreshore then options for modernising and enhancing the existing playspace. This should be done in line with modern day play space and universal access design guidelines.

It is essential that all play opportunities are enhanced at the site in order to help optimise the activation of the foreshore.

Alternative sites for a playspace

The open space area on the Esplanade and the Hugh Murray Reserve were suggested as alternatives sites for a regional play space. This was primarily by people who did not support the relocation of the play space to the Foreshore Zone.

If a play space were to be located at either of these sites, the retention of the Botanic Gardens play space could not be justified on play space planning basis or in terms of cost. That is, an additional play space could not be justified in such close proximity to existing play spaces (Chapel St. and Botanic Gardens play space) or in terms of the cost to maintain and renew the play space over its life. In addition, council is struggling to maintain and renew existing play spaces and has to plan for additional play space in growth areas.

A site that is to accommodate a regional play space needs to have, or have the space for toilets, picnic and social facilities and shelters, pathways that connect to parklands and play elements, and off-road and sealed car parking.

Regional play spaces are usually on regional level open space that has a range of social and recreation activity options. The Hugh Murray Reserve and the Esplanade Park are classified as 'Neighbourhood' level parks in the Open Space Strategy³⁰, which means they are not designated to have regional level facilities.

Fitness / Exercise Elements

The foreshore is popular with fitness trainers and for sporting club training sessions. These groups use the Botanic Gardens embankment and internal road, the foreshore pathway and to a lesser extent the exercise equipment at the end of Stodart St. west. These groups use the Foreshore because of the different environments available, the attractive amenity of the area, and the camaraderie associated with being with like-minded people. Equipment that would provide alternative training and exercise options was looked on favourably but not seen as a necessity.

Western Bay Park (Hamilton St.)

There is an opportunity to enhance the Western Bay Park as part of a longer-term plan to upgrade and integrate the foreshore area occupied by the yachting and sea scout's buildings. Council plans to renew the Western Bay Park play space in the on council's 2016 capital works program. There is an opportunity to create a play / activity node that provides recreation and health and wellbeing infrastructure for a wide age range. The master plan recommends that consideration be given to constructing a parkour circuit for young people, and or installing new fitness equipment once the equipment at the end of Stodart St. west reaches the end of its life.

The master plan proposes that mature trees be planted on the site to provide shade and make the site more attractive. Development on the site will need to be undertaken in consultation with local residents, and young people who were involved in consultation for the project.

The right of all people, regardless of age or ability, to access play spaces and associated amenities such as toilets, seats and tables, and pathways in line with the requirements of the Federal Disability Discrimination Act (1992)

9.3 Infrastructure

The Lake Colac foreshore partklands are classified as a 'regional' level asset. This means that, generally speaking, facilities and environments will be developed to a higher level than at 'district' or 'township' level facilities. Council defines the type and level of development (e.g. for trails, buildings, bollards) for each classification of open space.³¹

It is necessary that infrastructure and environments are renewed and upgraded over time to ensure they remain relevant to community needs and expectations, attractive, and modern in design. Proactive maintenance will help extend the life of public infrastructure, however trends and expectations change over time, which means council, has to budget for the ongoing renewal of its public infrastructure if it is to continue to reflect the aspirations of the community. Residents involved in the project identified a number of commonly recurring themes and aspirations relating to infrastructure. These are summarised as follows:

- Ensure a modern and consistent style and colour of infrastructure for seating, shelters, barriers and bollards, bridges and pathways / walkways
- Modernise or replace old / out of date buildings and structures
- Ensure infrastructure incorporates creative, unique and conversational design features

The following sections summarise findings in relation to specific types of infrastructure – buildings and structures surfaces; signage; park furniture; public art and memorial plates.

³¹ Colac Otway Open Space Strategy, p15

9.3.1 Buildings and Structures





Buildings along the foreshore vary greatly in style and construction materials and are generally very dated and tired.

When buildings reach the end of their life consideration should be given to removing or consolidating them with other buildings if there is still a viable use for them. In the short-term rendering / painting of the buildings should be considered to provide a colour theme that is consistent with other infrastructure, and minimises their visual impact.

Council undertook cosmetic works on the three toilet blocks in the parklands³². This has provided a short-term enhancement of the buildings but over time they need to be replaced with modern facilities.

Both the Colac Botanic Gardens Conservation Study³³ and the later review of the Botanic Gardens Master Plan³⁴ recommended, at a minimum, the painting of the building occupied by the Colac Angling Club, and preferably its removal.

Even more modern structures such as the picnic shelters at the Murray St. wayside stop and Meredith Park do not reflect a style or standard characteristic of a regional open space asset or a CBD 'gateway'. The picnic / band rotunda in the Foreshore Zone, while a representation of a heritage theme, is different in style again.

The community is looking for more picnic facilities in nodes throughout foreshore areas that can provide opportunities for adjoining residential areas. Shelters need to be designed so they are of a size and style that provide adequate shelter and extend use of the parklands throughout the year.





³² Murray St; Foreshore carpark; Meredith Park

³³ Patrick & Wallace, 1993, as cited in the Botanic Gardens Master Plan, p100

³⁴ Colac Botanic Gardens Master Plan Review, 2012, p91

Structures throughout the parklands, such as bridges, arbours and pergolas, are generally constructed from treated pine timber, and are of a style that is characteristic of 1970's and 80's design. Many of these structures are in poor condition, do not reflect modern day design trends and as a result detract from the amenity of the parklands.

Some of these structures were built with a significant investment of community labour and passion as in the case of the 'Hayshed' and the wooden arbour over the trail in Hugh Murray Reserve. These together with the dilapidated timber shelters near the raised walk way alongside Barongarook Ck. and alongside Fyans St. have reached the end of their practical / structural life and need to be dismantled.

Similarly, the seven steel archways along the creek are dated and detract from the amenity of theparklands. The archways are not in keeping with safe landscape design principles³⁵ because they are fully enclosed with creeping plants and so do not allow for the passive surveillance of people who walk through or around the arbours.

Passive surveillance of the parklands should be optimised, particularly along Barongarook Ck. where residential properties abut the parklands and passive surveillance is generally only achieved from the intersecting roads. Many people reported that they do not feel comfortable using the archways, particularly when there are no people around and after twilight. There was support for removing the archways for reasons of safety and amenity. In addition, the archways do not provide the minimum 0.5 mt clearance of either side of a pathway used by cyclists³⁶ or allow a clear line of sight to oncoming cyclists and pedestrians.

There are however residents who have a sentimental attachment to the archways for historic (e.g. extension of the Botanic Garden theme, their age) or environmental reasons (e.g. they provide habitat for wildlife).

Four bridges cross the Barongarook Ck. between the foreshore and Chapel St. These should be progressively upgraded to better reflect the design guidelines for infrastructure throughout the parklands.

9.3.2 Pathways















³⁵ Safer Design Guidelines for Victoria, Department of Sustainability and Environment Crime Prevention Victoria; Healthy By Design, SA Government 36 Cycling Aspects of Austroads Guides, p 107

The style and condition of pathways throughout the parklands differs significantly. The most common surface is concrete as in the vicinity of Murray Street and Ross's Point and bitumen. In the area between Quamby St and the Esplanade there is a raised walkway.

The construction of the brick pathway in the Foreshore Zone is a relatively recent development. For some residents the pathway will be very symbolic and there is likely to be a sentimental attachment. When the pathway is upgraded consideration must be given to an appropriate incorporation of the pavers into the pathway or an appropriate feature. This should be done in conjunction with people for whom the pavers have special meaning.

Overall, the narrow width (1.8-2.0 mts) of pathways and the uneven or poor condition of surfaces means pathways are well below the recommended minimum 2.5-3.0 mtr width³⁷. Pathways throughout the parklands are used by families with prams and children on bikes or scooters; skateboarders and inline skaters; fitness and recreation joggers and cyclists; and dog walkers

The standard of pathways is not supporting of the range of activities residents want to use the pathways for. The pressure on pathways in the foreshore parklands is particularly intense given there are no other off road pathways in Colac.

The master plan recommends that when pathways are upgraded to meet the standards for shared pathways in recognition of the range of activities, ages, and skill levels they cater for. The master plan also recommends that pathways have a 0.5 – 1.0 mt clearance either side, be of a consistent width, and have a smooth and even surface. This should also apply to access pathways and ramps from adjoining streets and car parks.

Good design³⁸ of shared pathways will optimise use and minimise conflict between pathway users³⁹. Good design should also be complemented by educational messages relating to pathway etiquette.

The Colac Otway Physical Activity and Open Space Strategies highlight the need to better connect residential areas to the Lake Colac Foreshore trails. Consultation for the master plan reinforces community aspirations for well linked walking and cycling routes to the township and residential areas.

A relative immediate opportunity to achieve this is via the Murray St. underpass trail that currently ends in the vicinity of the railway line. There is an opportunity to upgrade the trail in line with guidelines recommended in the master plan and to extend it to connect with nearby residential areas via the existing pathway or roadway network. These works will need to be accompanied by relevant pathway and road markings and signage.

If and when subdivision occurs in the vicinity of Rifle Butt Rd. (Zone 1) the master plan recommends that an exclusive bike lane be constructed along the Moore Street extension to service the secondary college and the new subdivisions, through to Deans Ck. Rd. This should be a minimum width of 1.5m within the 60km/h driving zone.

A number of requests were received in relation to the extension of the foreshore trail around the perimeter of the lake to the east to Meredith Park, and to the west beyond Deans Ck. The master plan recommends that council work with relevant stakeholders to investigate issues, opportunities and timeframes associated with achieving this.

The extension and widening of paths to meet shared pathway standards is a major element of the new plan and whilst this may not seem exciting it is critical to encourage more use of the area. Importantly, the plan has linked the paths to accomodate the Park Run concept, which is a popular way for people to go to different places and take a run along a set course and then post their time on a website to see how they stack up against others.

³⁷ Austroads Guide to Road Design Part 6a - Pedestrians and cyclist paths

³⁸ Cycling Aspects of Austroads Guides, Austroads

³⁹ Pedestrian-Cyclist Conflict Minimisation on Shared Paths and Footpaths , Austroads Research Report, 2006

9.3.3 Signage













The style and condition of signage varies throughout the parklands and is generally very dated. The most modern signage is in the vicinity of the Tachyglossus mosaic. In some areas there is a clutter of signs, which do not add to the visual amenity of the area. The majority of signs are compliance related and some interpret landscape cultural features.

The need for directional, to and within the Foreshore, and distance signage was repeated throughout the consultation. People who walk, jog, or cycle for exercise where interested in distance signage along circuits that incorporated Foreshore pathways and local footpaths and streets.

There are a number of signs to Lake Colac from the highway, however these are small and often and easily overlooked. There is minimal signage along the roads leading to the Foreshore, and various vehicle and pedestrian entry points to the lake environs and viewing points are not well marked.

'Safer By Design Guidelines' highlight the importance of directional and distance signage and the Open Space Strategy designates that regional level parklands 'must have' information, directional and interpretive signage and linear open space corridors 'must have' information and directional signage and 'might have' interpretive signage.⁴⁰

9.3.4 Park furniture













Similar to other Foreshore infrastructure, the style and condition of park furniture varies throughout the Foreshore, including the Botanic Gardens and in most cases is of a basic style, and dated. Seats are made from a variety of materials but primarily timber. There does not appear to be any regular placement of seats along trails and in most cases the distance between seats is greater than the 200-400 mts recommended in industry guideline documents.⁴¹

Bollards and railings are generally made from treated pine and date from the 1980s, and in many areas have fallen into disrepair or have been vandalised.

The master plan recommends that bollards be replaced over time to improve the amenity of the parklands. The master plan identifies sites where replacement of bollards and barriers should occur as a priority, but consideration should be given to a gradual replacement as part of the parks maintenance program.

9.4 Landscape and Plantings

The different project zones and landscapes provide an opportunity to create / consolidate landscape and vegetation themes. There are opportunities to create or consolidate landscape themes throughout the parklands.

A number of proposed directions were tested during community consultation in relation to this. The following reflect directions that were commonly supported or that were raised and considered as viable opportunities.

- Tree and vegetation plantings
- More shade trees, particularly along the Barongarook Ck. parklands and the foreshore pathway to Stodart St. West, where practical
- Shade trees in Western Bay Park
- The renewal of flowering gum plantings along Queens Av. and

"A mix of Australian natives and exotic trees makes the Foreshore interesting and represents our environmental heritage."
Ref: Project meetings & 83% project survey respondents

⁴¹ e.g. Healthy By Design: A Planners' Guide to Environments for Active Living, Victorian Heart Foundation; Safe Design Guidelines for Victoria

the embankment to create a colourful vista from the shoreline / lake and preserve the treed amenity along Queens Av.

- Cluster perimeter planting of trees (River Red Gums) on the Esplanade Park to provide shade and feature plantings. Cluster planting will preserve a large area for run-about play
- Planting of mature shade trees in Western Bay Park
- Maintain / enhance historic exotic tree plantings in lawn areas along the Barongarook Ck.
 corridor with native plantings in the immediate vicinity of the creek
- Screen plantings to break / screen the impact of adjoining properties e.g. motel, residential fenceline
- Optimise habitat plantings.

Landscape Features

Creative but cost effective landscape features that are low maintenance but make the
zones different and interesting to pass through. Every effort should be made to create
landscape features that are interesting and draw people into them such as climbable
and playable rockscapes, grassy knolls, and edible plant gardens.

9.5 Public Art / Celebration / Recognition plates

In the 1980s a community project resulted in the installation of a number of modernistic and rustic artistic pieces in what became known as the Sculpture Park. The park is located alongside Barongarook Ck. in between Murray and Chapel St. Over the years some of the pieces have been relocated and many of the remaining pieces have fallen into disrepair.

"Public art projects will be most effective when they are part of a larger, holistic, multidisciplinary approach to enlivening a city or neighborhood.

Ref: Collaborative, Creative Placemakina

While community feedback largely supported the removal of the Sculpture Park installations, there was support for quality public artwork installations throughput the parklands. Quality public art installations that reflect local history, character and environment; encourage conversation and diversity of opinion; and included interactive elements were well supported. Further, many saw this as one of a number of key parkland features, if of a high standard, that could draw people to Colac⁴².













⁴² In addition to a modern regional playspace, wetland / wildlife areas / features, and quality picnic facilities

There is an opportunity over time to strengthen the linear or pathway linkages through the parklands and with the CBD with public art. This will extend activity opportunities available at easy walking distance from the main car park. The area has an existing raised walkway from which installations can be viewed in wet weather. At other times of the year visitors can more closely interact with installations.

The Open Space Strategy and the CBD and Entrances Master Plan recommend public art be incorporated in the CBD and regional parklands. The Open Space Strategy designates that artwork 'must be' incorporated into regional level parklands and 'might be' incorporated into regional level linear corridors such as along the Barongarook Ck. corridor.⁴³

9.6 Maintenance and Amenity













There is an overwhelming desire by the community for the parklands to be presented to a higher standard than is occurring. This was generally expressed in terms of the standard and style of infrastructure, and the state of disrepair of infrastructure.

In terms of general maintenance project participants were divided as to their opinion on the appropriateness of maintenance standards. Generally speaking, basic maintenance was viewed as fair. However observation and feedback indicates the need for expanded maintenance regimes particularly in relation to pruning / removal of relevant vegetation; and removal of fallen and pruned tree branches.

Maintenance protocols relating to mowing in wet weather, spraying and removal of disused / vandalised infrastructure should be reviewed to ensure practices do not detract from parkland appearance.

The previous master plan recommended that spraying procedures be reviewed in order to minimise the unsightliness of vast areas of poisoned grass / dirt around trees and signs. Similar practices continue throughout the project area. Unfortunately changing management protocols can result if additional budget requirements, however alternative protocols should still be investigated.

The community recognise the significant works that council has undertaken along Barongarook Ck. and appreciate how works have improved the appearance of the parklands and environmental values. Maintenance standards will need to be reviewed to determine how

maintenance can better reflect the regional status of the project area. This will be particulally relevant as environments and facilities are progressively renewed and upgraded.

The master plan recognises the significant costs associated with enhancing or replacing ageing and less attractive infrastructure such as broken and remedial repairs on lake retaining walls as in the vicinity of Ross Point; reinforcement of jetty embankments, old boat ramps and jetties.

In the longer term this will require separate and significant consideration given the change in recent weather events the significant cost involved. In the short term, other measures to enhance associated environments should be considered to improve the appearance of the parklands. These include tree and vegetation plantings, upgrading of park furniture, and enhancing infrastructure that will activate the parklands.







Old concrete mounded inspection pits are a common, and unattractive structure along the Barongarook Ck. parklands. The opportunity to replace these with less intrusive infrastructure, particularly in high profile locations such as the entry to the parklands off Murray St., should be investigated.

10. Landscape Concept Plans and Budget Estimates

10.1 Landscape Concept Plan Plates

Plate 00 – Plan of the Project Zones

Plate 1 – Zone 2: Rifle Butt Rd. to Stodart St. West

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

Plate 3 - Zone 3: Stodart St. East to Armstrong St.

Plate 4 - Zone 4: Armstrong St. to Gellibrand St.

Inset 1 (Plate 4) – Gellibrand St. Car Park

Plate 5 - Zone 5: The Foreshore / Commons

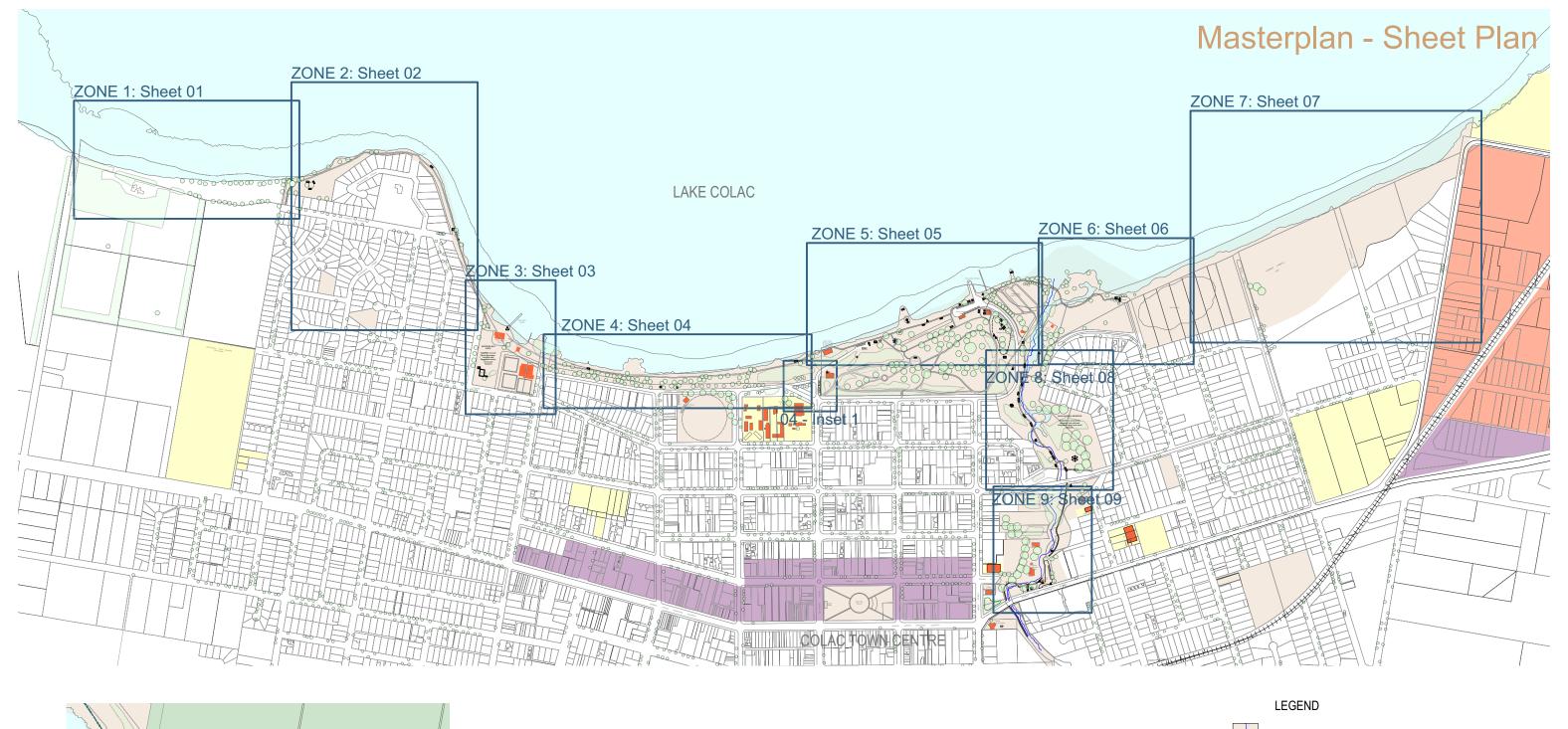
Plate 6 - Zone 6: The Esplanade and Wetlands to Bruce St.

Plate 7 - Zone 7: Bruce St. to Clark St.

Plate 8 - Zone 8: Lower Barongarrok Ck. to Chapel St.

Plate 9 - Zone 9: Chapel St. to Murray St.

Plate 10 - Zone 10: Meredith Park





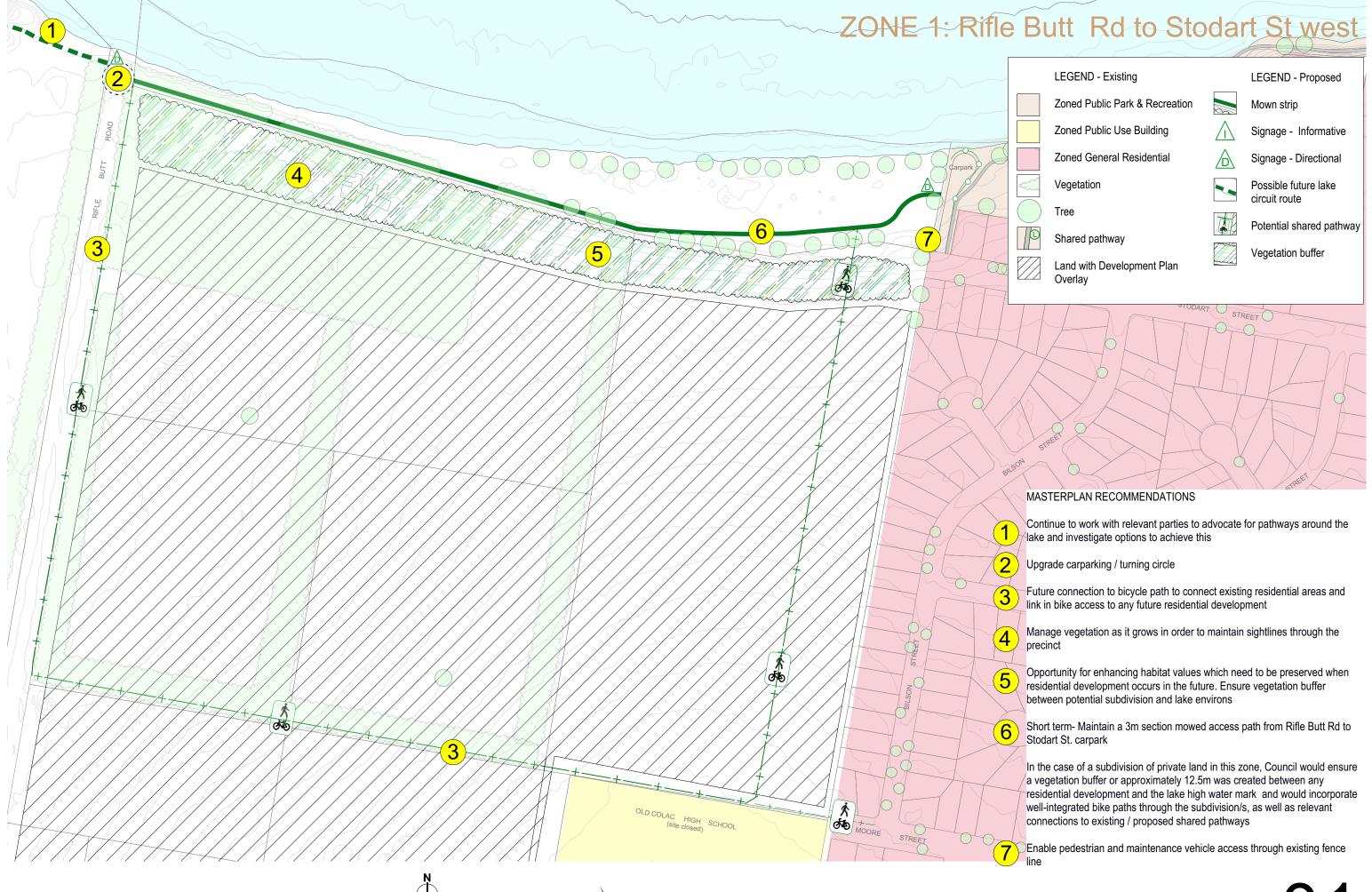
LAKE COLAC MASTERPLAN

SCALE: 1:11000 @ A3

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ISSUE: FINAL ISSUE







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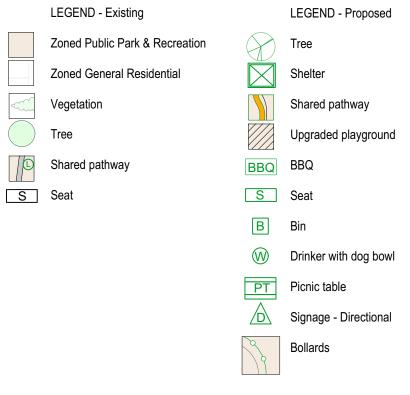






ZONE 2: Stodart St west to Stodart St east





MASTERPLAN RECOMMENDATIONS

- Replace old bollards and include maintenance access
- Pormalise and upgrade carpark and entry road
- Protect Ash trees with earthworks to reinforce trees / exposed roots
- Install shade trees and provide end of trip amenities eg drinker, shelter and seating
- Remove excercise equipment at the end of its life. Replace with natural landscape play features to compliment equipment at Donaldson Street Park. Consider in line with Colac Otway Play Space Strategy
- Retain open family kickabout area
- Replace Balnagowan Ave, pedestrian ramp ensuring it is all abilities accessible
- 8 Lake edge to be stabilised with local volcanic rock. Retain sloping edge
- 9 Widen shared pathway where possible
- 10 Intermittent plantings of native trees along foreshore pathway corridor
- Move the pathway to the lake side of carpark and install tyre stops at the edge of the car park if reversing room is adequate
- Consider the need to retain the toilet box at the end of Stodart St. when new public toilets are provided in the yachting / sea scout, park precinct at the end of Hamilton St.
- Consider the construction of a fishing platform in the zone. Priority will be dependent on lake water levels and subsequent fish stock





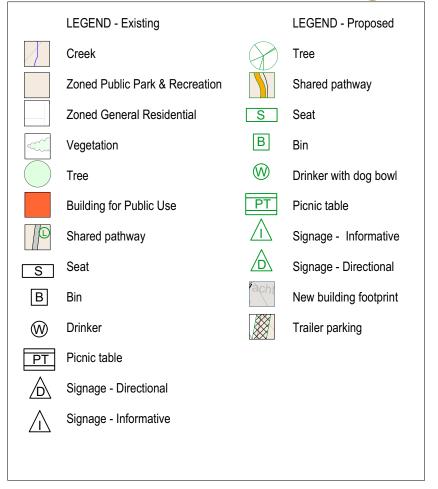




& jetty B WESTERN BAY PARK 3 Establish as local family recreation hub with well integrated activity and social

ZONE 3: Stodart St east to Armstrong St



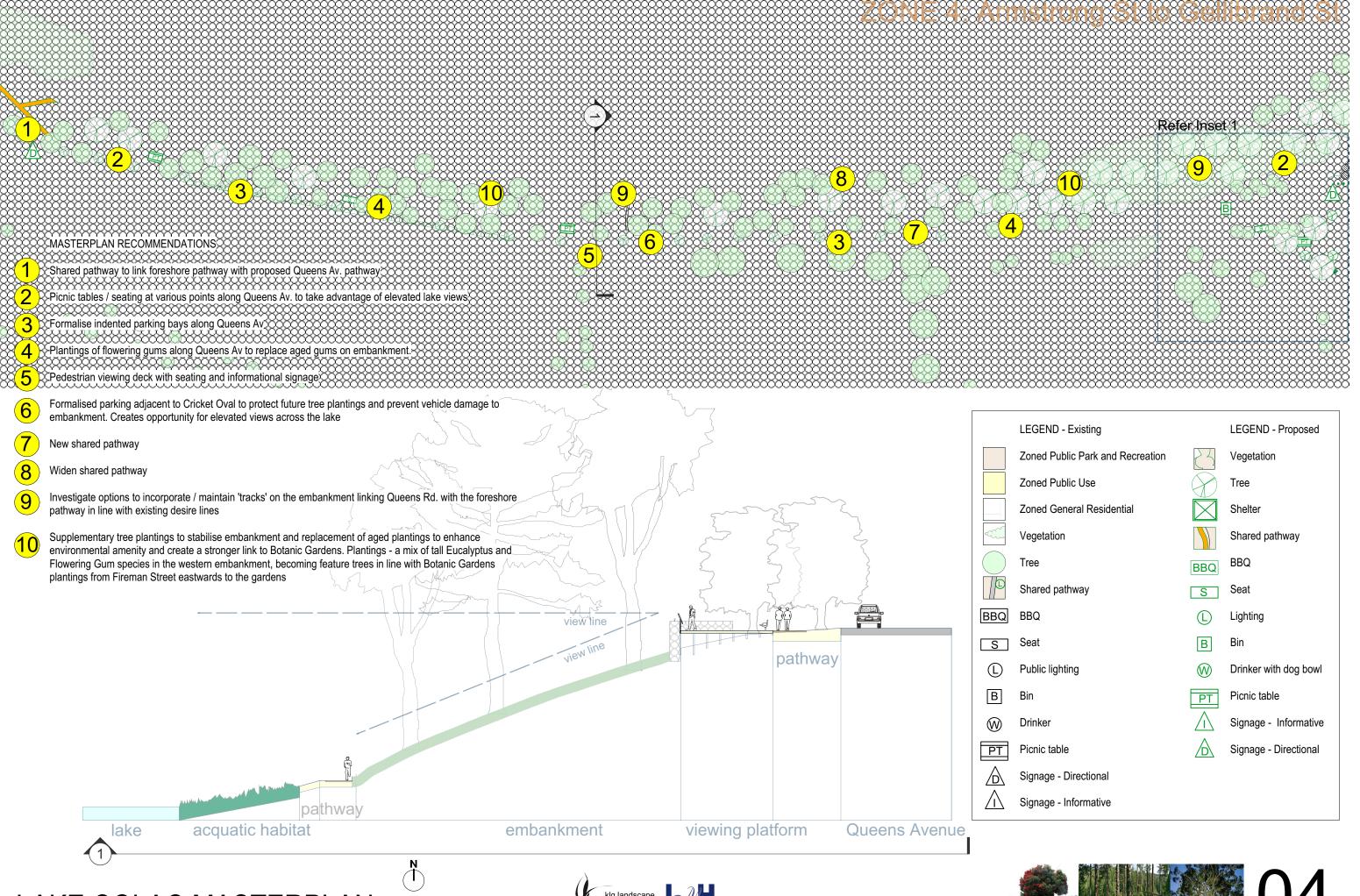


MASTERPLAN RECOMMENDATIONS

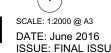
- Remove weed species (Willow trees) and replace with suitable shade trees such as Quercus bicolor (Swamp White Oak)
- Undertake maintenance works of jetties as required. At the end of the life of the jetties, consider replacement requirements
- Widen shared pathway
- Short term Painting and clean up / screen plant around buildings. Longer term - if water-based activities are considered viable, renovate in line with Council building style guide. When buildings reach the end of their life, investigate options to accommodate yachting and seas scout activities in a multi-purpose facility
- Short term Landscape and clean up environs in the vicinity of the buildings used by the yachting and sea scouts buildings
- **6** Public toilets to be integrated with new building / pavilion
- Western Bay Park could be considered as an alternative site for excercise or parkour equipment. Install seating and shade trees to take advantage of the views, enhance the amenity of the park and integrate the area with the foreshore
- Investigate options for improving street and path connectivity into the precinct, traffic flow and management, amenity, and precinct arrival / entry statements e.g public art, feature plantings,











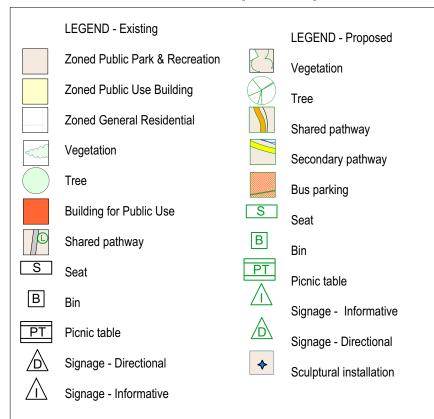






Lake Colac Rowing Club & Colae City Band Room **11** Olac **AVENUE** W M 4 GELLIBRAND (C) STREET **FYANS** St Mary's School & Presbytery LAKE COLAC MASTERPLAN SCALE: 1:1000 @ A3 DATE: June 2016

Zone 4: Gellibrand St carpark precinct

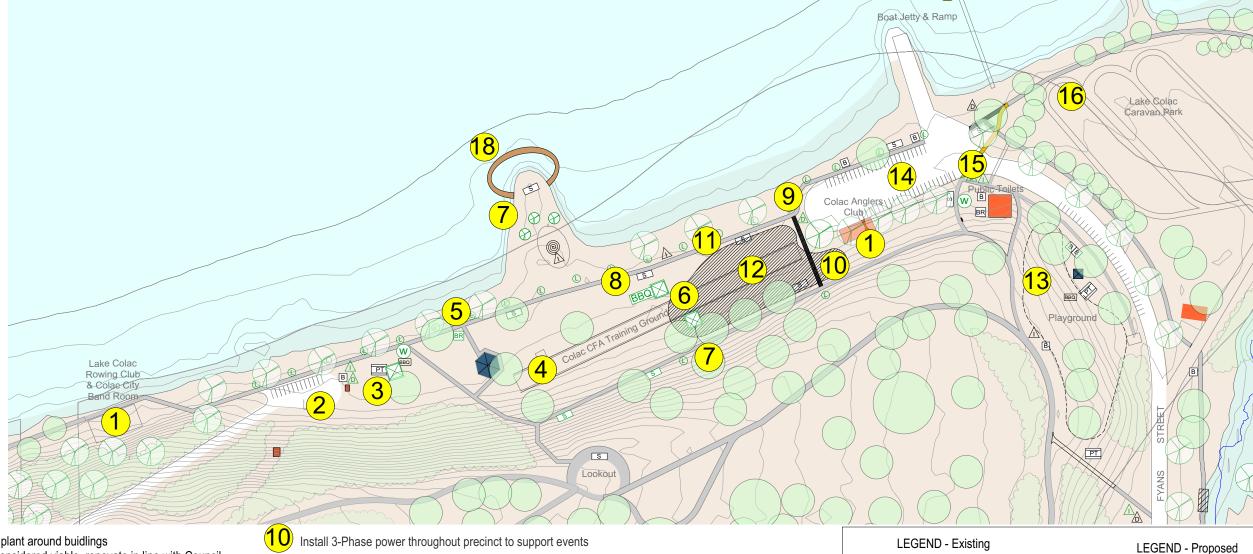


MASTERPLAN RECOMMENDATIONS

- Street tree plantings between Pollack and Calvert Street to strengthen visual link along Gellibrand Street between Colac town centre and the lake environs. Match proposed Murray Street plantings of Ulmus procera (English Elm) to strengthen the connection
- 2 Utilise gravel verge in Fyans Street as overflow parking. Upgrade as required
- Enhancing of the impact of the Gellibrand St / Queens Ave intersection / as a main entry to the lake & Botanic Gardens precinct and as a key link with Colac township. This area needs to communicate a strong sense of arrival to a major destination. Investigate options for improving street and path connectivity, and traffic flow and management
- A formal rock wall and sculptural / public art installation or similar (e.g. Dorothy's anchor) to help define the entrance to the lake environs. Detailed design to determine features / elements
- Planting of 3 advanced Cook Pines (Araucaria columnaris). When mature the pines will act as a visual marker from the town centre and signal a main entry to the lake / Botanic Gardens environs
- 6 Formalising / sealing car and bus parking
- Sealing of the end of Gellibrand St
- Removable bollards to control traffic during festivals or events
- New picnic tables / seating (universal access design)
- Road markings to denote shared pedestrian / car roadway
- Short term Painting and clean up / screen plant around buildings
 Longer term if water-based activities are considered viable, renovate in line with Council building style guide. When buildings reach the end of their life, investigate options to accommodate rowing and angling activities in a multi-purpose facility

04 - INSET 1

ZONE 5: The Foreshore / Common Lake Colac Rowing Club Berd Room B



Short term - Painting and clean up / screen plant around buildings
Longer term - if water-based activities are considered viable, renovate in line with Council building style guide. When buildings reach the end of their life, investigate options to

accommodate rowing and angling activities in a multi-purpose facility

2 Formalise and seal carpark to the west of the common

MASTERPLAN RECOMMENDATIONS

- 3 Install new shelter and drinker near existing BBQ and picnic table
- Move CFA training track and associated infrastructure. Enhance the integration between the embankment with new gently undulating grassed areas into the foreshore to cater for public events e.g. film nights, markets, fireworks etc.
- Plant feature trees (Pinus Pinea Italian Stone Pine) along the foreshore to provide shade and enhance environmental amenity
- Install 2 additional shelters with BBQ facilities in the eastern area of the common and integrate with proposed regional play space
- Install feature lighting among trees (foreshore and Botanic Gardens embankment) and in conjuntion with circular jetty
- 8 Widen shared pathway
- Install security / safety lighting in the car park and along the foreshore pathways

- (11) Interpretive artwork: Consider opportunity to install 'Dorothy's anchor in the precinct
- Investigate options for a fully accessible play space at the eastern end of the common. Design to be sympathetic to the surrounding envionments and features. Play elements to consider Hammock swing; Basket Swing; Sandpit with deck; Climbing nets; Natural play landscaping; Shelters; Sound / sensory elements; Various type undersurfacing; Access pathways; Feature walls / rockery
- Enhance existing play space in line with a 'Children's Garden' theme. Consider plant, rock and water features. If legislative controls prevent the development of a regional playspace on the foreshore then investigate options for upgrading the existing playspace to a sub-regional playspace in line with current day playspace design
- Carpark to be re-sealed. Review line marking to maximum parking capacity and accommodate tandem parking. Consider redesign
- 15 Shared pathway to be re-aligned away from boat ramp
- Investigate options for caravan park site when lease expires to determine whether lease will be renewed. Remove scrubby vegetation along lake edge which obscures the shared pathway at this point. Remove willows and replace with native species
- 17 Replace and relocate fishing jetty next to / near boat ramp
- Circular 'infinity jetty' enabling access to sandy lake foreshore and fishing during high water and enhancing the spit as a celebration of Aboriginal culture







LAKE COLAC MASTERPLAN SCALE: 1:2000 @ A3 DATE: June 2016

ZONE 6: The Esplanade and the wetlands **LEGEND** - Existing LEGEND - Proposed Creek Vegetation To Bruce St-Zoned Public Park and Recreation Tree Zoned General Residential Shelter Vegetation Shared pathway Shared pathway - gravel Tree BBQ Shelter ke Colac S Shared pathway BBQ Liahtina В S **Public lighting** Drinker with dog bowl В Picnic table Bin 5 \bigcirc Drinker Signage - Informative Signage - Directional Picnic table 4 Sculptural installation Signage - Directional ESPLANADE Signage - Informative Possible on road bike lane BR Bike rack 8 MASTERPLAN RECOMMENDATIONS Widen and extend shared walkway at intersection points to remove 90 degree junctions. Ease and safety of access for cyclists and pedestrians. Install kickboards on side of boardwalk Remove old shelter TOORAK CRESCENT Environmental themed sculptural art trail alongside the boardwalk with explanatory / interpretive information Provide shared pathway to link foreshore shared path with the Quamby Avenue boardwalk to create circular link. Widen other sections of shared pathway Screen off Pump house with Woolly Tea Tree and Scented Paperbark or similar Install carp barrier across the creek New picnic shelter/ education shelter with seating and tables. Mound land to ensure shelter is out of flood zone Environmental stations placed through out zone to enhance environment and indigenous history education Maintenance vehicles only past this point. Install suitable traffic management device Nesting island for birdlife as protection against predators - shown as 20m x 30m Wetland boardwalk with birdhide Cluster plantings of Eucalyptus camaldulensis (River Red Gums) or other appropriate species. Area to be kept relatively open for informal run about / kite flying area Bollards to prevent vehicle access

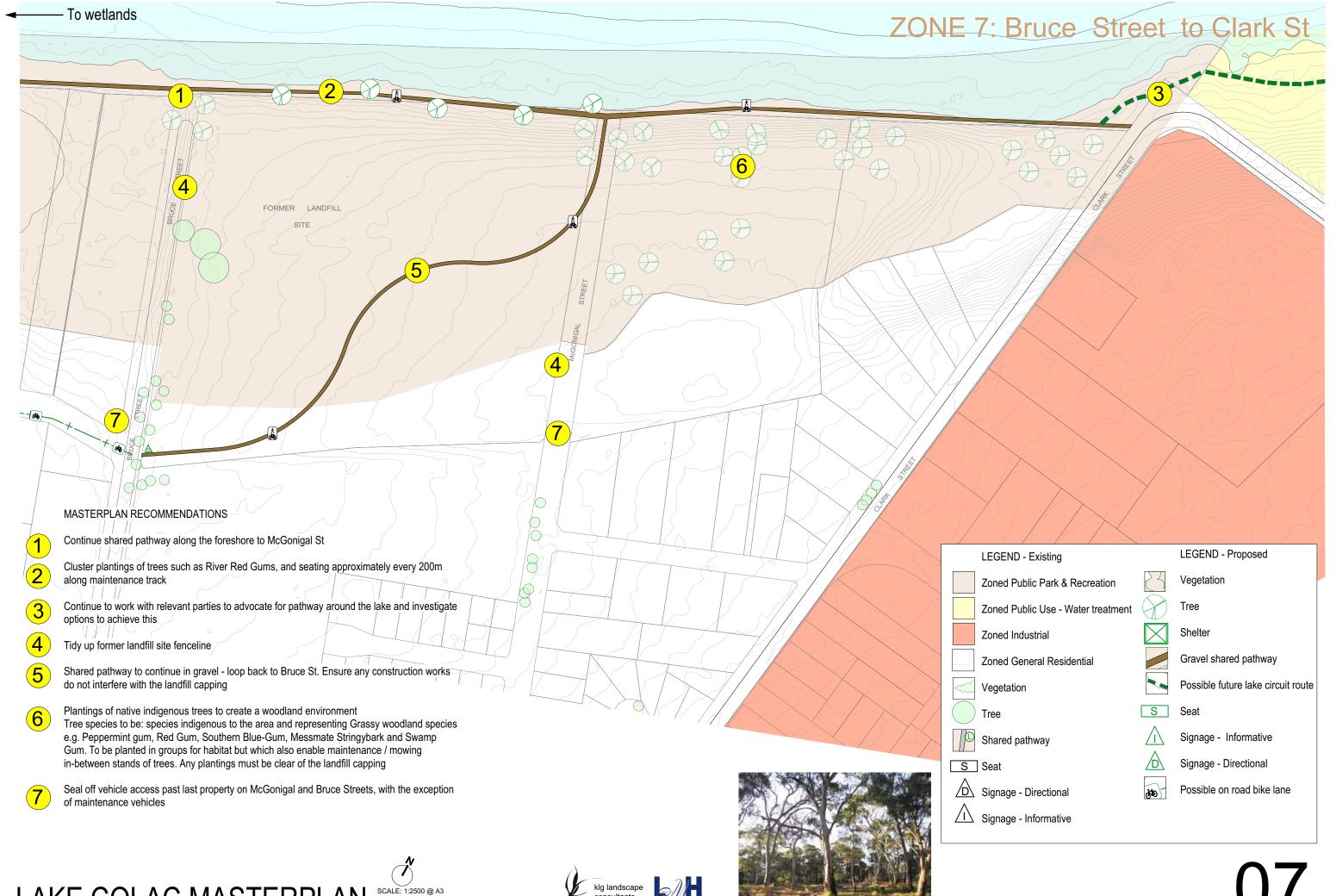
LAKE COLAC MASTERPLAN

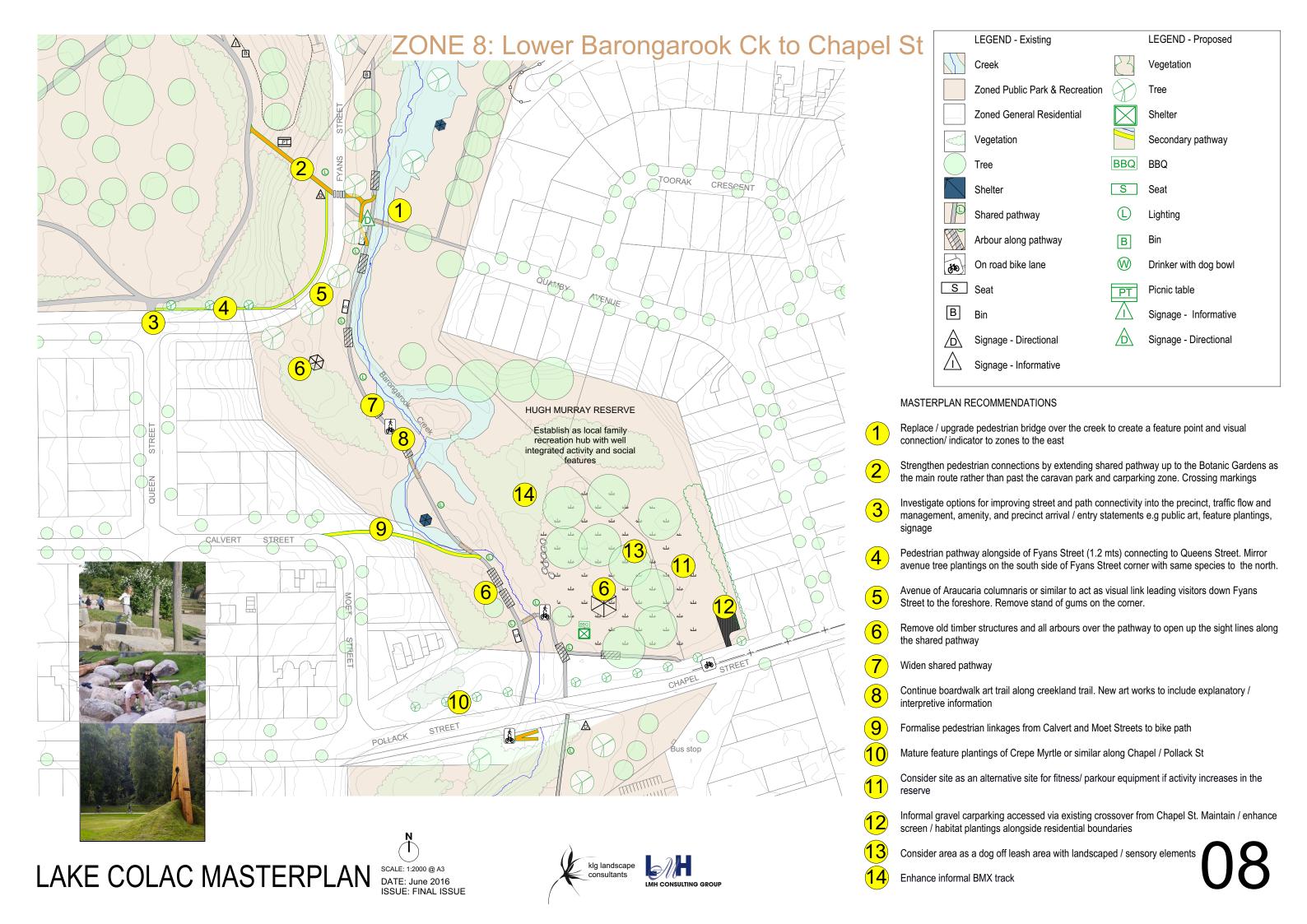
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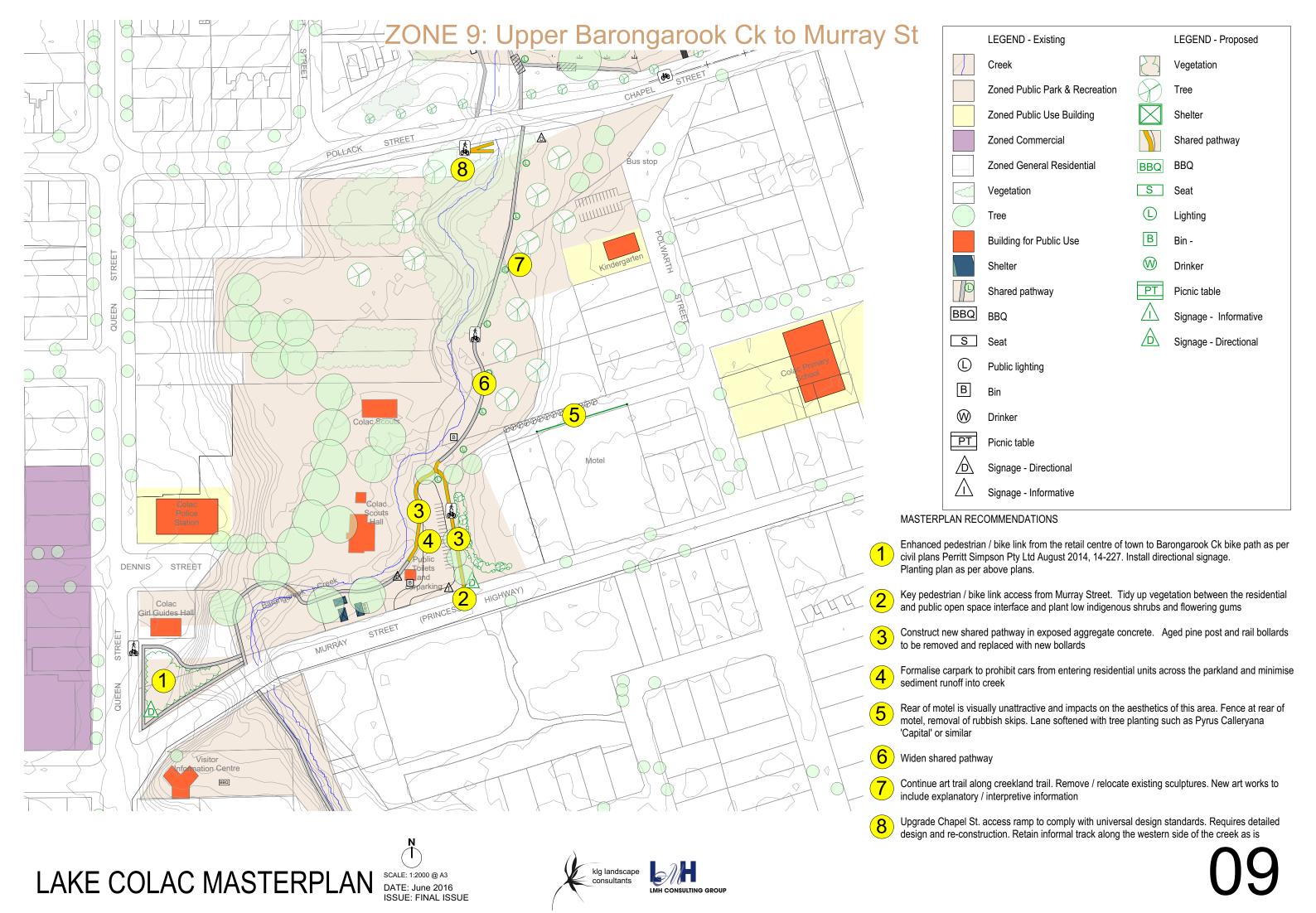


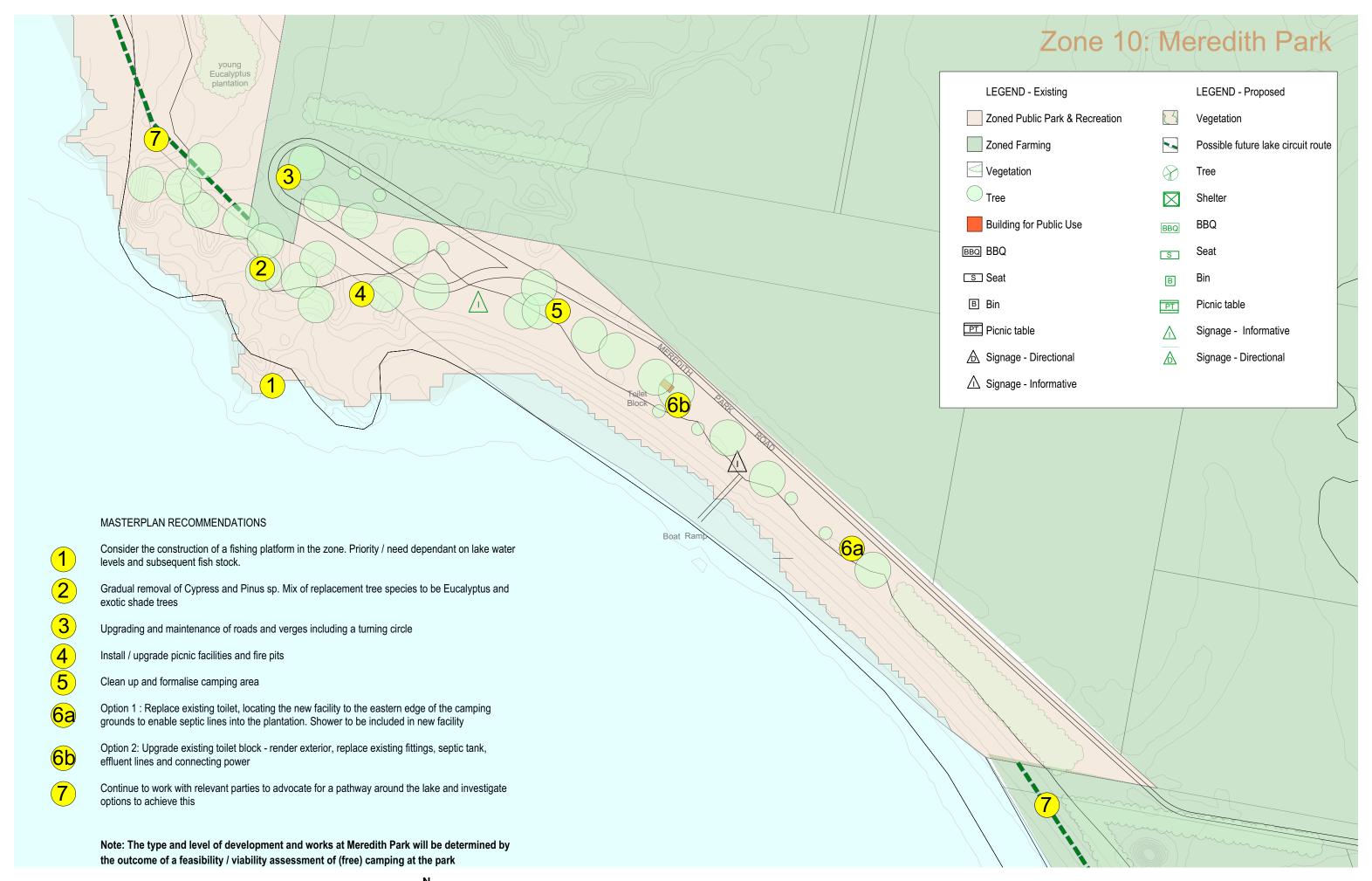


Investigate options for improving street and path connectivity into the precinct, traffic flow and management, amenity, and precinct arrival / entry statements e.g public art and signage













10.2 Years 1 to 5 proposed infrastructure works

The estimated budget, required to achieve the actions proposed in the 20-year master plan is \$10,020,623⁴⁴. 65 provides an estimated cost summary for each zone.

Table 5 – Cost estimates for achieving the 20 year master plan						
ZONE	DESCRIPTION	TOTAL	Yr. 1-5	Yr. 6-10		
Zone 1	Rifle Butt Rd. to Stodart St. West	156,300	7,500	1,800		
Zone 2	Stodart St. West to Stodart St. East	476,838	135,640	124,250		
Zone 3	Stodart St. East to Armstrong St.	2,064,928	182,360	128,460		
Zone 4	Armstrong St. to Gellibrand St.	1,285,720	788,335	394,385		
Zone 4 - Inset 1	Gellibrand St. Entry	330,712	22,150	258,562		
Zone 5	The Foreshore / Commons	2,047,770	922,338	446,832		
Zone 6	The Esplanade and Wetlands to Bruce St	954,892	97,870	411,254		
Zone 7	Bruce St. to Clark St.	95,318	14,015	4,443		
Zone 8	Lower Barongarook Ck. to Chapel St.	1,471,085	250,050	553,775		
Zone 9	Chapel St. to Murray St.	893,860	124,330	440,050		
Zone 10	Meredith Park.	243,200	40,800	90,000		
	TOTAL	10,020,623	2,585,388	2,853,811		

10.3 Years 1 to 5 proposed infrastructure works

The estimate for completing works proposed for years 1-5 of the master plan is \$2,585,388⁴⁵. Table 6 provides a summary of works proposed in years 1 to 5 for each zone and associated cost estimates.

Table 6 – Cost estimates for works proposed for years 1-5 of the master plan		
PROPOSED WORKS FOR YEARS 1-5		
Zone 1: Rifle Butt Rd. to Stodart St. West	\$7,500	
Ensure relevant changes / notations are made to the planning scheme to ensure provision is made for:		
 recreation, amenity and vegetation / habitat buffers between the high water level 		
 and future residential infrastructure e.g. roads and houses. Ensure public access to the lake surrounds are in line with CEPTED / safe design principles⁴⁶ 		
appropriate set backs and buffers to accommodate a sealed 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		

⁴⁴ At 2016 cost estimates. Allowance will need to be made for CPI and other cost increases for future years 45 At 2016 cost estimates. Allowance will need to be made for CPI and other cost increases for future years

⁴⁶ Crime Prevention Through Environmental Design; Safer Design Guidelines for Victoria, Department of Land Water Environment and

Table 6 – Cost estimates for works proposed for years 1-5 of the master plan				
PROPOSED WORKS FOR YEARS 1-5				
Extend foreshore planting				
Risk and needs assessment in relation to the toilet at the end of Balnagowan Av.				
Plant Eucalypt species along the foreshore and remove weed species				
Signage – Distance / direction signage	\$100.720			
Zone 3: Stodart St. East to Armstrong St.	\$182,630			
Install of bins (Sea Scouts / Yachting precinct) and Western Bay Park				
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.	\$788,335			
Shared pathway along Queens Av.				
Curb and channel and asphalting of parking bays to formalise indented parking bays along Queens Av. Including near cricket oval				
Picnic tables / seating at various points along Queens Av.				
Supplementary tree plantings to stabilise embankment and enhance environmental amenity and create a stronger link to Botanic Garden				
Signage – Distance / direction signage				
Zone 4: Inset 1 - Gellibrand St. Entry (and car park)	\$22,150			
Landscape / ground works to address compaction of tree roots and mulching (triangle) and planting of 3 advanced feature trees				
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.	\$97,870			
Environmental themed public art sculptural features alongside the boardwalk ('The dell')				
Upgrade to the boardwalk				

Table 6 – Cost estimates for works proposed for years 1-5 of the master plan			
PROPOSED WORKS FOR YEARS 1-5			
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.			
Seal off vehicle access immediately past last property in McGonigal, Bruce Sts.	\$14,015		
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	\$250,050		
Remove aged timber structures including the 'Woolshed, timber arbours and derelict arbours			
Remove 7 aged steel arbours in line with 'Safe Design Guidelines' 47			
Mature tree planting along Fyans St., and Chapel St.			
Habitat and screen plantings (adjoining properties)			
Replace 1 bridge over Barongarook Ck.			
Seating			
Install carp barrier in creek			
Signage – Distance / direction, Precinct signage			
Zone 9: Upper Barongarook Ck. from Chapel St. to Murray St. Bridge	\$124,330		
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			
Environmental themed public art sculptural features alongside the shared pathway (as part of ongoing installation program)			
Mature tree planting in parklands 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			
Clear rubbish, old / unkempt vegetation and fill depressions			
Signage – Distance / direction, Precinct, Compliance signage			

10.4 Action Plan to Address General Project Findings

The following recommendations are in addition to the infrastructure works proposed and costed in the proposed Action Plan for each of the project zones. They are also listed in the Action Plans.

1. Commence discussions and planning for a new all abilities play space in the Foreshore Zone

Stakeholders: Friends of the Botanic Gardens, Heritage Victoria, Parents / families; Young people

Timeframe: Year 1

Resources required: Within operational budget

Lead Department: Arts and Leisure

- 2. Develop a consistent style guide so that new park buildings, structures, signage, and furniture:
 - is modern, interesting and includes creative design / feature elements is applied consistently throughout the project area

⁴⁷ 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

- is cost effective in terms of whole of life costs

- can be refined where required to optimise integration with the environmental, social, and cultural settings.

Stakeholders: Council; General community

Timeframe: Year 1

Resources required: \$35,000

Lead Department: Assets and Property Services

- 3. Review maintenance provision for the project area to ensure:
 - protocols respond to council's best practice objectives (i.e. weed / grass spraying, wet weather mowing, and other as identified)
 - service levels (e.g. vegetation clearing / pruning and removal) are in line with council guidelines for regional level parklands
 - damaged infrastructure is removed or repaired within agreed timeframes.

Stakeholders: Council; General community; Arts community

Timeframe: Year 1 and ongoing

Resources required: To be identified as part of the review

Lead Department: Services and Operations

4. Develop a framework that will guide the funding and procurement of public art for the project area and how art installations will be maintained and renewed.

Stakeholders: Council; General community; Arts community

Timeframe: Year 2

Resources required: Within operational budget

Lead Department: Arts and Leisure

5. Design a suite of landmark installations that denote the Lake Colac foreshore and parkland precinct and gradually install over time.

Stakeholders: Council; Public Art / Town Entry Artwork designers; General community

Timeframe: Year 2

Estimated budget: \$40,000

Lead Department: Assets and Property Services

6. Undertake a feasibility study to determine the future of free camping at Meredith Park.

Stakeholders: Council; Regional councils; General community; DELWP

Timeframe: Year 2

Estimated budget: Within operational budget

Lead Department: Economic development and Events

7. Investigate opportunities to replace the old inspection pits along the Barongarook Ck.

Stakeholders: Council; CMA

Timeframe: Year 3

Estimated budget: Within operational budget Lead Department: Assets and Property Services

8. Prepare a an infrastructure and detailed landscape plan for the yachting and sea scouts precinct once the future use of the zone has been determined.

Stakeholders: Council; General community; Community groups; Local residents

Timeframe: Year 5+

Estimated budget: Within operational budget

Lead Department/s: Arts and Leisure Services / Assets and Property Services / Community

Services

9. Continue to liaise with relevant land management agencies to identify opportunities to address issues associated with the Lake Colac water body and associated environs.

Stakeholders: Council; State government; CMAs; Landowners; Lake Colac Coordinating

Committee

Timeframe: Ongoing

Estimated budget: Within operational budget

Lead Department/s: Environment and Safety / Arts and Leisure

10. Continue to liaise with relevant land management agencies to identify opportunities to identify issues and opportunities associated with creating a pathway around Lake Colac.

Stakeholders: Council; state government; Landowners; Lake Colac Coordinating Committee

Timeframe: Ongoing

Estimated budget: Within operational budget

Lead Department/s: Environment and Safety / Arts and Leisure

11. Materials and Landscape Concepts Guide

11.1 Materials and structures





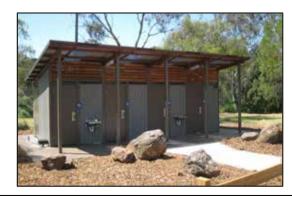










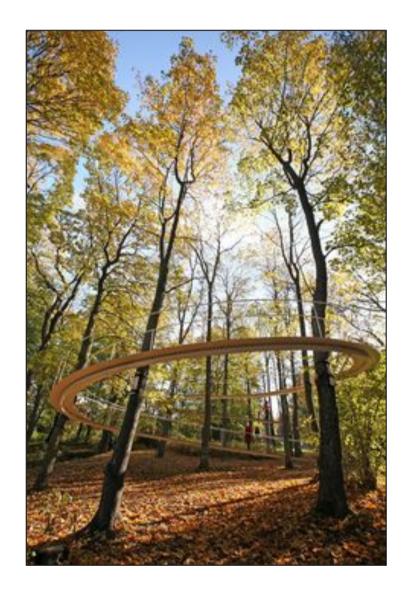












11.2 Pathways & Lighting









11.3 Signage













11.4 Park furniture

















11.5 Public Art / Celebration / Recognition / Memorial plates















11.6 Examples of Parkland Entry Features

















11.7 Examples of Play Space Elements







































11.8 Playable Landscape Features











11.9 Feature Tree Examples



















12. Implementing and Reviewing the Master Plan

12.1 How Were Priorities Determined?

Actions that best address the following criteria will be considered for priority works. Criteria that determine priorities may differ from one zone to another depending on the objectives for the zone and the way in which an action helps achieve these. Priorities will generally be determined by actions that:

- Activate spaces with a priority on the Foreshore Zone and zones extending from it
- Respond to verified demand
- Address risk management issues
- Address 'Universal Design'
- Enhance / update existing amenities
- Achieve the greatest benefit for the expenditure
- Enhance opportunities for physical activity
- Address changing recreation and social trends
- Enhance natural environments
- Create efficiencies in procedures and operations.

12.2 Implementing and Reviewing the Master Plan

The timing of various tasks outlined in the master plan may vary depending on:

- the capacity of the community to raise local funds
- the availability of state and federal government grants
- the availability of council grants and other competing council budget items and
- changing community priorities and needs

The cost items in the master plan are estimates only. Final costs will be subject to the final scope of works approved / agreed and detailed design findings. They will also vary depending on fluctuations in the price in materials, labour, and in-kind support; and environmental conditions identified as part of detailed design process.

The Lake Colac Foreshore Master Plan will be reviewed every two years to identify any actions that have not been implemented in line with proposed timelines.

These actions will be reviewed to ensure they are still consistent with community and council priorities and aspirations. Any issues that may have prevented these actions from being implemented will be identified and addressed.

A major review of the Lake Colac Foreshore Master Plan will be undertaken in 10 years.

13. Appendix 1 - Reference documents / information

Lake Colac / Climate Change

- CSIRO and BoM 2014. Climate change in Australia, Technical report. (www.climatechangeinaustralia.gov.au/resources.php)
- CSIRO and Bureau of Meteorology, Climate Change in Australia website, cited 1 March 2016 (http://www.climatechangeinaustralia.gov.au/)
- Department of Environment, Land, Water & Planning, 2015 Climate-Ready Victoria: Barwon South West. The State of Victoria Department of Environment, Land, Water & Planning.
- Grose, M et al., 2015, Southern Slopes Cluster Report, Climate Change in Australia Projections for Australia's Natural Resource Management Regions: Cluster Reports, eds. Ekström, M et al., CSIRO and Bureau of Meteorology, Australia
- Leahy, P et al., 2010, lakes in the Western District of Victoria and Climate Change, EPA Publication 1359 – Scientific Report, EPA, Australia

Council Documents

- Council Plan 2013-17
- Colac Botanic Gardens Master Plan Review, 2012
- Lake Colac Management Plan, MacroPlan Australia, 2002
- Colac Otway Open Space Strategy
- Colac Otway Physical Activity Strategy, 2014 2017
- Colac Structure Plan, 2007
- Consultation on Lake Colac Family Recreation Area, 2008
- Lake Colac Commercial Development: Opportunity profile, Cost-Benefit Analysis & Economic Impact Assessment
- Colac Otway Access, Equity, and Inclusion Plan
- Colac Otway Shire The 50+ Plan 2015-2025 (Phase 1: 2015-2017)
- Lake Colac and Barongarook Creek Revegetation and Weed Control Plan
- Apollo Bay Strategic Footpath Network Plan
- Colac Otway Active Transport Strategy
- Colac CBD and Entrances Master Plan