

Concept Master Plan

Bullock Island



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01 Introduction

“Lakes Entrance over the next 15 years will continue to grow in its appeal as a key holiday and boating destination, providing visitors and residents with opportunities to undertake a broad range of recreational and water-based activities. First-class boat launching, mooring and access facilities will exist to support the area’s importance as a State Marine Precinct and to meet increasing demand for use by commercial and recreational boat operators.”

(Lakes Entrance Foreshore Management Plan, September 2011)

Bullock Island has been identified for redevelopment under several documents including the Lakes Entrance Urban Design Framework 2007 (UDF) and the Lakes Entrance Foreshore Management Plan 2011 (LEFMP). Within the LEFMP there are specific high priority actions to develop a Master Plan for the site of which this document is the result.

The island, which is pre-dominantly man-made, is located in a strategic position at the entrance of the Gippsland Lakes. It is occupied by an array of maritime associated industries and companies. Gippsland Port’s facilities cater for port management and vessel maintenance and are particularly important in servicing the large commercial fishing fleet. Recent agreements have enabled Gippsland Ports to construct the Bullock Island Landing and extension of depot facilities and boat yard operations into the centre of the island to accommodate predicated demand over the next 40 years. These appointments are linked to the Gippsland Port’s western yard being decommissioned and adjacent rock landing wharf being demolished.

The Lakes Entrance Fisherman’s Co-operative Society Limited (LEFCOL) is one of the largest fishing co-operatives in Australia and has established itself as one of the most important voices in the Australian Fishing Industry. LEFCOL handles between 3.5 and 4.2 million kilos of fish per year and services between 40 and 50 fishing vessels on a regular basis. Bullock Island has been their home since 1968.

The South East Australia Maritime Education Centre (SEAMEC), also located on the island, is one of Victoria’s top performing TAFE institutes and has won the prestigious Victorian Training Provider of the Year Award.

The larger part of Bullock Island (which is covered by Schedule 1 to the Special Use Zone) is currently vacant. An area of public open space has been designated for the balance of the island (west and north-west) which is to be developed for recreational use.

The Master Plan takes into account the special values of the Island and its location, and that public access is preserved to areas that are not conflicted with commercial uses. This document has been prepared to direct future development and investment in improved recreational uses including:

- Improved parking and access
- Fishing platforms
- Public toilets
- Picnic facilities
- Shelters
- Playground
- Kiosk
- Landscaping

With this design Bullock Island will remain a centre for industry and research but will also become an important recreational and tourist destination.



02 The Master Plan



2.1 Vision

The vision for Bullock Island is to achieve a high-quality, integrated design that takes advantage of the unique qualities of the site, expands the range of facilities and opportunities available in Lakes Entrance.

The Master Plan will preserve the public's ability to access and use the Island for passive recreation and other activities. The uses proposed for the site will improve the range of facilities and services available in the Lakes Entrance district and so widen the appeal of the Gippsland Lakes within the local and regional tourism market.

Development of tourist activities should take account of existing activities on Bullock Island and locate sensitive uses where they will not be affected adversely by the ongoing operations of marine servicing and processing facilities.

2.2 Principles

Consultation with key stake holders and the public was undertaken during the master planning process. Key master planning principles that came out through these sessions were:

Movement and Access

- To provide a clear movement network separating commercial and recreational activities
- Retain areas of 'park and view;' where the local community can enjoy sitting in their car and watch the water
- Ensure there is sufficient car parking for all different uses on the island

Pedestrians and cyclists

- To connect the different activities and areas for all users of Bullock Island
- To ensure pedestrian safety through the design of the master plan
- To design both formal and informal pathways that respect the existing natural environment of the island

Open space network

- To prioritise passive recreation facilities and areas throughout the site by walking tracks or similar means
- To ensure there are different types of open spaces for different user groups and ages
- To provide shelter from sun and wind through shelters and tree planting

Activities and land use

- To ensure recreational activities on Bullock Island will not be affected adversely by the ongoing operations of marine servicing and processing facilities
- To provide areas for passive play, fishing and sight-seeing areas as part of the overall development of the site
- To ensure the natural, cultural and historical values will be preserved through interpretive opportunities



NORTH ARM

The north arm area includes:

- New destination Jetty co located with fuel jetty
- Vehicle turning circle allowed for fuelling vehicles
- Shared public promenade and trail system connecting activities

PASSIVE RECREATION AREAS

The passive recreation area include:

- Easy access from mainland by pedestrians and cyclists
- Seating and shade
- Shared trail connects precinct to the wider activities within the island

BULLOCK ISLAND PARKLAND

The parkland includes:

- Playground with maritime theme
- Interpretive nodes telling the maritime stories, history of the site and the lake system
- Small kick a bout area, approximately 900 m
- Connections to public promenade and board walk areas
- Kiosk and toilet facilities
- Fishing areas
- Shelter, seating and bbq facilities

RECREATION AREA

The recreation areas include:

- Public promenade and board walk areas
- Fishing areas
- Destination jetty
- Convenient car parking

CUNNINGHAME ARM

The recreation areas include:

- Public promenade and board walk edge connecting the shared path and trail system
- Informal open space area with opportunities for seating, shade and bbqs
- Car park facilities including larger vehicle car parking with no camping signs

Plan 1 Concept Master Plan



03 The Master Plan Elements



3.1 Movement Network

Bullock Island has historically been accessible by car, and is important that clear vehicle movement and access to both the recreation and industry land uses is retained.

BOULEVARD ROAD

Entry to the Precinct is via Bullock Island Road. Crossing the bridge, directional signage will lead vehicle traffic towards the recreational area of the Island or the Commercial and TAFE precinct.

The Boulevard Ring Road does not connect through on a day to day basis to prevent a conflict between commercial and private vehicles. Bollards are located south west of the Gippsland Ports Works and Boat Yard extension where in an emergency or where the need arises, vehicles can circulate the Boulevard Road should it be required.

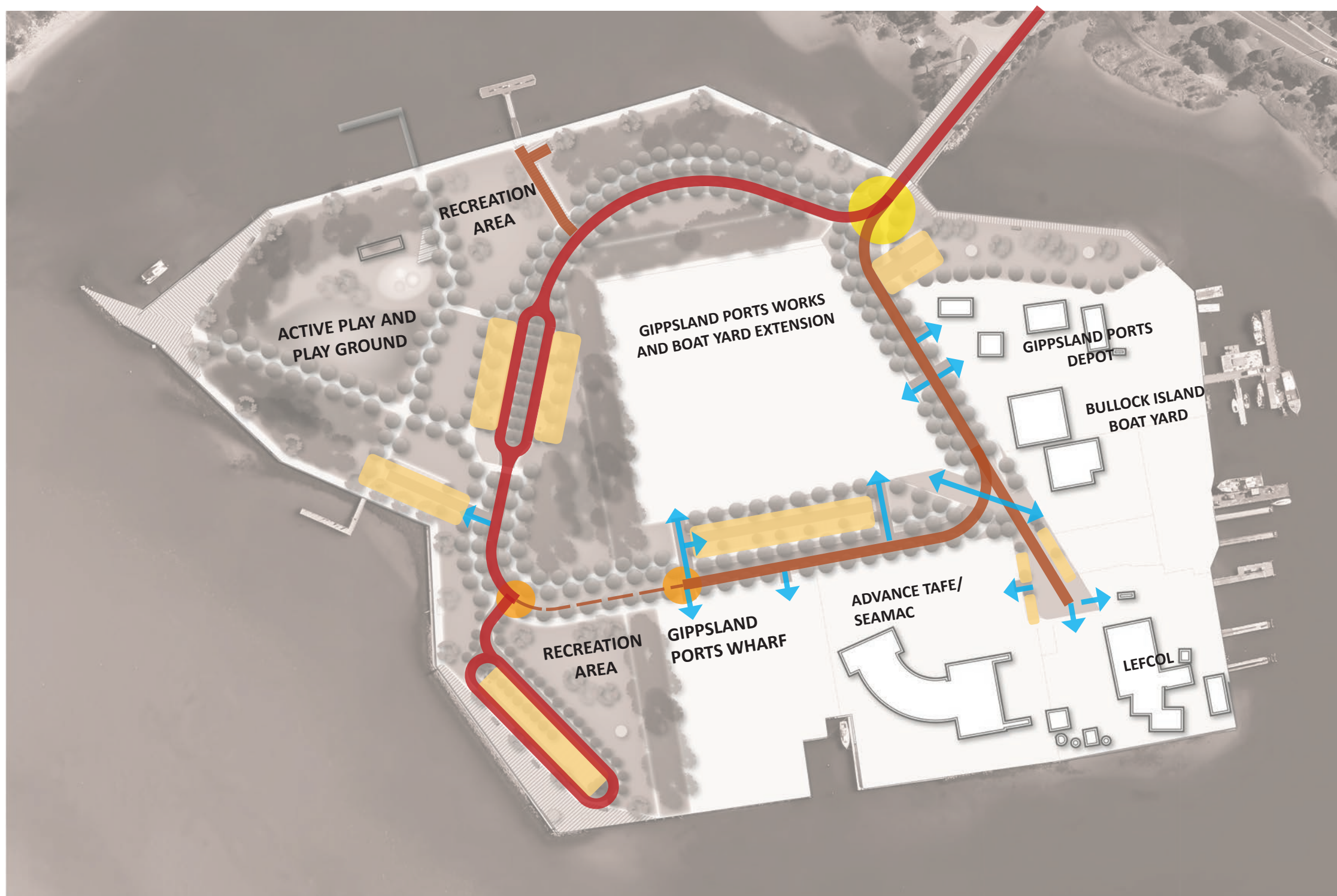
Where there is a potential for conflict between commercial vehicles, private vehicles and pedestrian, a different pavement treatment is proposed to acknowledge a potential traffic hazard.

CAR PARKING

Car parking is located along the Boulevard Road throughout Bullock Island in key activities and viewing areas. A total of 188 car parks have been allocated within the master plan. This includes spaces for larger vehicles and disabled car parking.

All visitor parking will be clearly demarcated and 'no camping' signs are to be placed at all car park locations.

Where car parking is adjacent to the water edge an adequate buffer will be provided to allow for the safety of pedestrians whilst ensuring views are preserved for visitors to 'park and watch'.



PRIMARY VISITOR ROAD NETWORK

- Road network to be used by visitors to Bullock Island
- Separates industry related traffic and recreation traffic

PRIMARY INDUSTRY/BUSINESS ROAD NETWORK

- Road network to be used by industry traffic movement and access to Advance Tafe/ SEAMEC to Bullock Island
- Separates industry related traffic and recreation traffic
- Fuelling vehicle turning circle allowed for at fuel Jetty

EMERGENCY VEHICLE ACCESS

- Allows for a 'through' road network should it be required for emergency services
- Potentially can be used for over size vehicles related to industry
- Each side bollarded for no vehicle access on a 'typical' day

BULLOCK ISLAND ENTRY POINT

- Clear signage to recreation or industry precincts

NO PUBLIC ACCESS POINTS

- Clear signage and traffic management to ensure no vehicle access

INDUSTRY/BUSINESS AND CAR PARKING ENTRY POINTS

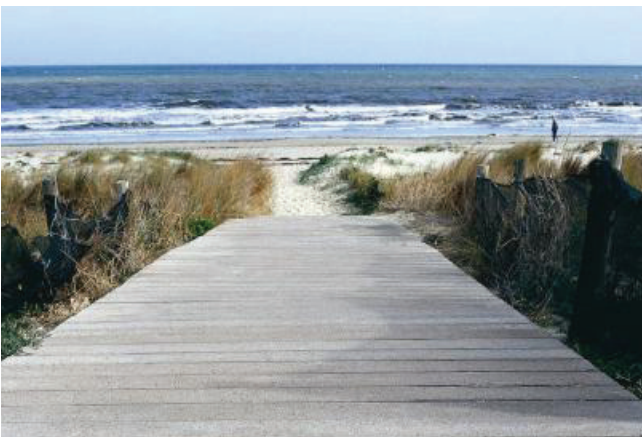
- Ensure entry points are demarcated to ensure no pedestrian vehicle conflicts

CAR PARKING

- Clear demarcated car parking areas for visitors to Bullock Island
- No camping signs to be provided at all car parks

Plan 2 Movement Network





3.2 Pedestrians and Cyclists

Pedestrian and cyclist networks are an important part of the Bullock Island Master Plan. These networks will link primary land uses and open spaces. These include:

- Passive recreational areas
- Activities and interpretive nodes
- Fishing areas

The paths will offer connections throughout Bullock Island, giving access to those who both work and visit the Island.

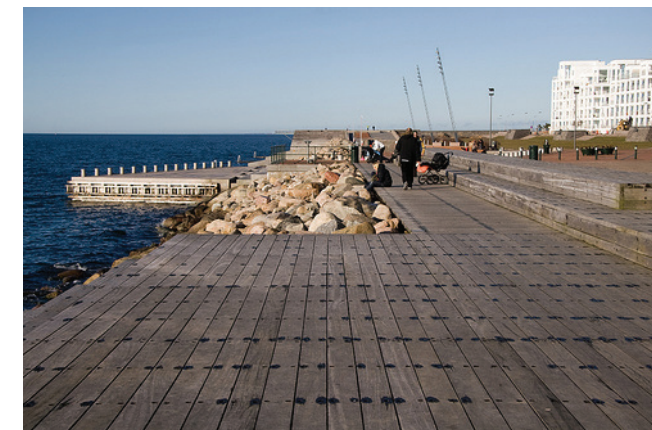
The pedestrian and cyclist network has been designed to be safe, clearly articulated, and have a high quality landscape response (both hard and softscape) and be accessible for all people of all abilities. The promenade network has been designed with ample shade and shelter for relief from the elements. End of ride facilities at key destinations should be provided, such as bicycle racks, drinking fountains and seating.

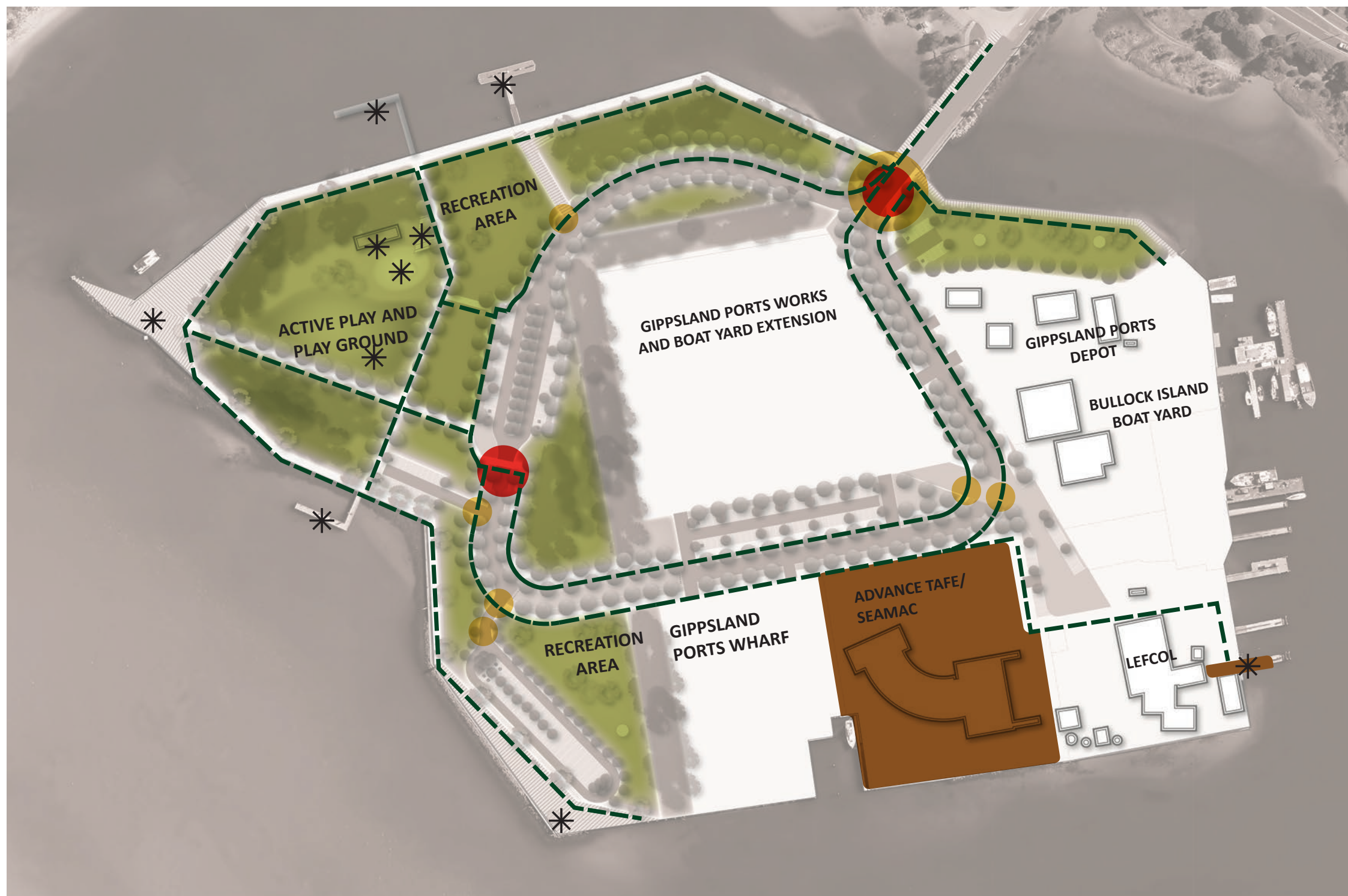
Pedestrian and cyclists movements that traverse the Boulevard Ring Road will have clear safe road crossing points with signage and demarcation. Priority should always be given to pedestrians and cyclists.

The Master Plan has been designed with shared public promenades and board walks for both pedestrians and cyclists along primary movement networks. These paths connect into the wider open space networks.

Formal and informal pathways are designed to integrate with the local coastal environment and vegetation, creating a more intimate experience where possible. Where necessary paths are elevated to maximise views and provide separation for safety and vegetation preservation.

The use of board walks, decking and timber sleepers throughout Bullock Island reinforces the rural coastal style of the Island.





- OPEN SPACE/RECREATION NETWORK**
 - Formal and informal areas
 - Programmed activities such as kick a bout and playground
 - Informal areas for passive recreation and fishing
- PROMENADE NETWORK**
 - Formal shared linear network to provide structure to movement patterns and networks between activities
 - Combination of board walk, hard and softscape
 - Shared path network by strengthened by strong planting regime
 - Tree planting to give shelter and shade for pedestrians and cyclists
- PEDESTRIAN CROSSINGS**
 - Clear demarcation for pedestrian crossings at priority locations
- PEDESTRIAN/CYCLIST PRIORITY POINTS**
 - Ensure pedestrian/cyclist priority where there is conflict with cars
- PRIMARY DESTINATIONS**
 - Primary destinations linked by the shared path and trail network
 - Between these destinations there are smaller activity nodes and interpretation nodes
- EDUCATION**
 - Education destinations will bring visitors to the island and should be clearly connected to the wider shared path and trail network
 - Opportunities to leverage off Lefcol viewing platform with further signage and education about fishing

Plan 3 Pedestrians and Cyclists



3.3 Open Space Network

The vision for Bullock Island is to establish a precinct for open spaces and places for active and passive recreation, celebration of the waterfront and community enjoyment, while retaining and respecting the existing enterprises.

The Master Plan establishes a public promenade and board walk that traverses the edge of the island to connect all available activities.

A small scale playground and kick a bout area provides healthy entertainment and activity for both adults and children. The playground will sit within the landscape so that the boundary of area of play is blurred and integrated with the surrounding landscape. Elements of the play equipment could be more sculptural exhibiting distinctive elements of Bullock Island to inform imaginative play.

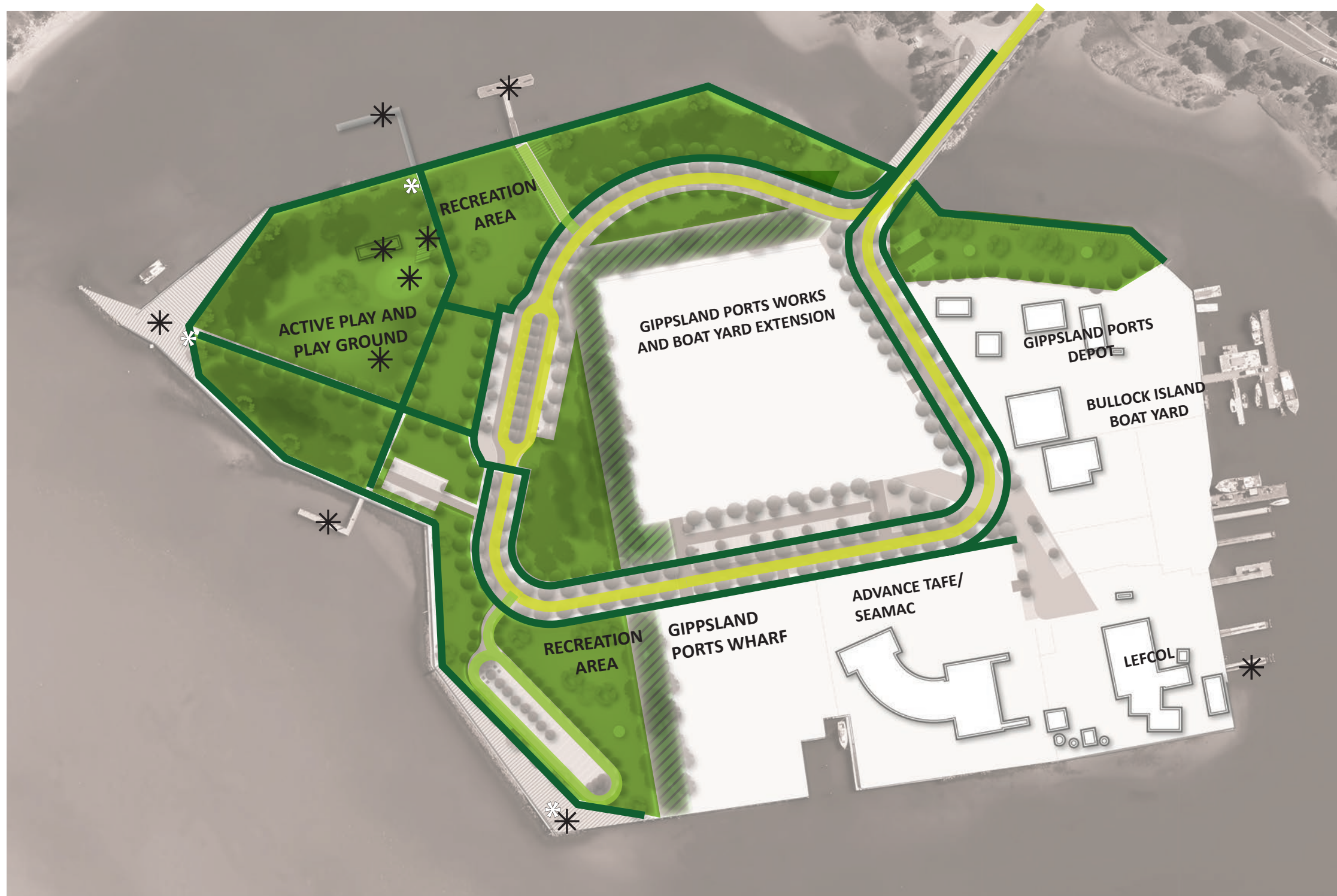
Where the opportunity exists furniture can perform multiple functions. Creating height for viewing, multiple tiers to create amphitheatre style seating, frame particular views during seasonal events and create wind break and sun protection during certain seasons.

Shelters will create a designated meeting point for visitors, and for people employed or attend TAFE on Bullock Island. Shelters will be able to provide all weather use and lighting will aid with security at night.

A 15m vegetation buffer around the Gippsland Port Wharf and Boat Yard extension will ensure all passive recreation uses are sufficiently protected from industrial activity.

Primary streetscapes will provide tree-lined avenues with shared footpaths for pedestrians and cyclists. The secondary streetscapes will have a different planting palette to highlight hierarchy of the network.





OPEN SPACE AREAS

- Playground with maritime theme
- Kick a bout area
- Connections to public promenade and board walk areas

INDUSTRY BUFFER

- 15m vegetated buffer between industry and recreation areas

PRIMARY DESTINATIONS

- Primary destinations linked by the shared path and trail network
- Between these destinations there are smaller activity nodes and interpretation nodes

ACTIVITY AND INTERPRETATION NODES

- Passive activity and interpretation nodes throughout the wider open space system
- Allows for passive activity and recreation

PRIMARY STREETSCAPES

- Primary streetscapes provide tree avenues and shared footpaths for pedestrians and cyclists

SECONDARY STREETSCAPES

- Secondary streetscapes planting palette should differ from primary streetscape to highlight hierarchy of network

PROMENADE NETWORK

- Formal shared linear network to provide structure to movement patterns and networks between activities
- Combination of board walk, hard and softscape
- Shared path network by strengthened by strong planting regime
- Tree planting to give shelter and shade for pedestrians and cyclists

Plan 4 Open Space Network



3.4 Activities and Land Use

Bullock Island historically has been used for maritime industry and education. This will continue on the island with tenants being:

- Gippsland Ports Authority
- Lefcol
- Advance Tafe/Seamac

The Master Plan must protect the viability of these maritime industries and education. This will be achieved through a separation of movement networks and clustering recreation land uses together away from existing uses.

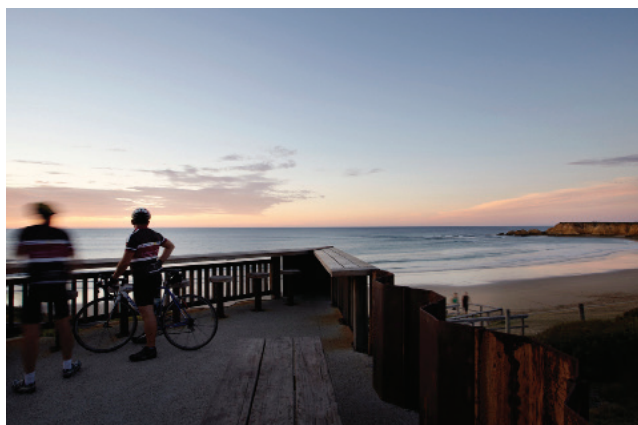
Revitalisation of Bullock island will be dependent on a variety of activities promoted and encourage across the island- both active and passive.

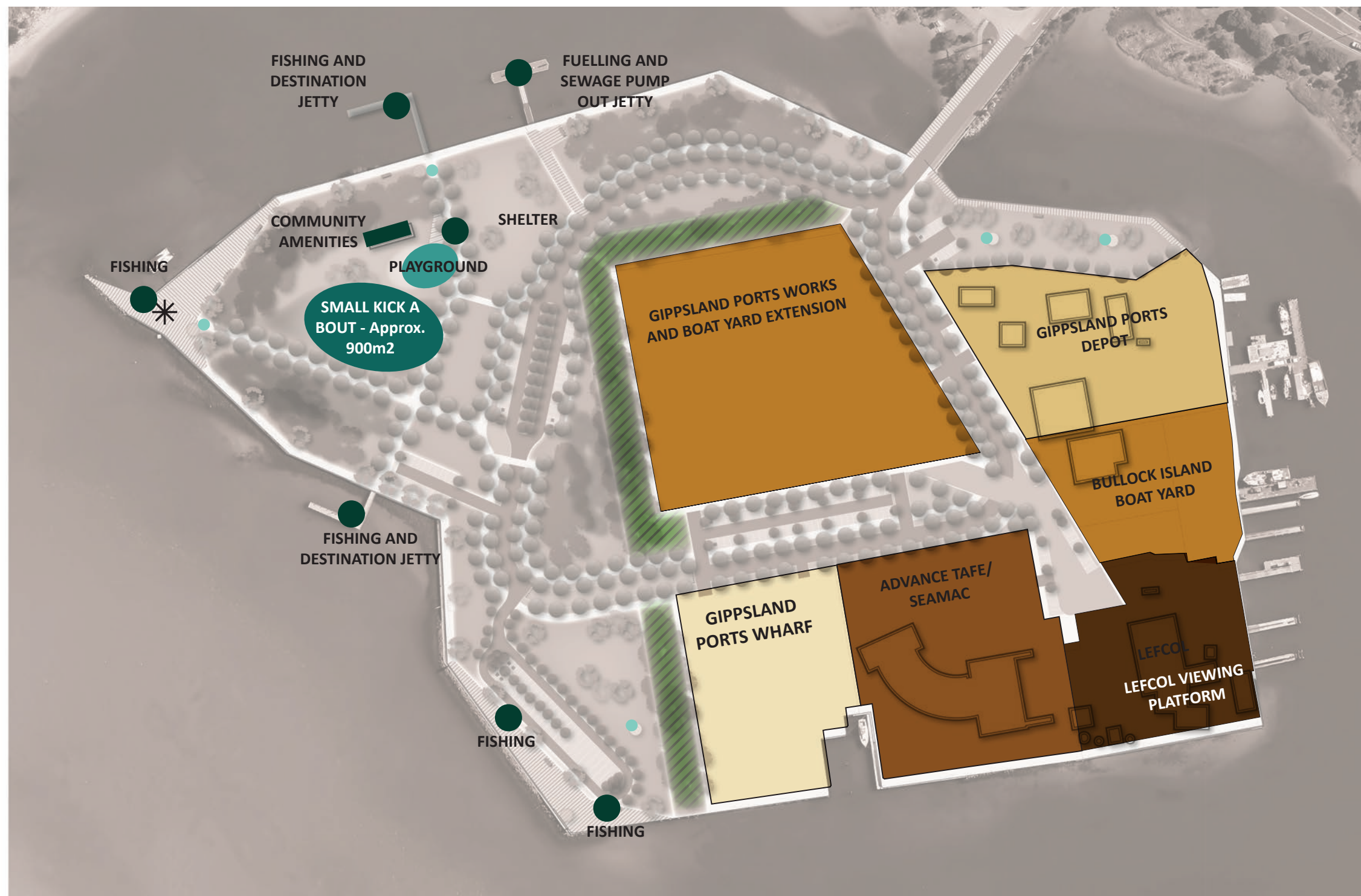
Key activities include:

- Small kick a bout area
- Playground
- Primary destinations
- Activity and interpretation nodes

A community amenities focal point on the island will allow seasonal use for commercial purposes on a small scale. This area would provide the elements required for small groups whether they be business or charitable to occupy the space throughout periods of the year. The structure itself can be informal, reflecting the themes and materials of the rural coastal environment, sited harmoniously within the landscape.

Throughout Bullock Island interpretive signage can be used to describe and inform visitors of the many unique functions the island performs, business' it maintains and local environment. Signage should be reflective of the local materials that represent the rural coastal environment. Interpretative signage will further enhance the users experience with an increase of their knowledge of the area.





- GIPPSLAND PORTS**
- Gippsland Ports Depot
 - Gippsland Ports Works and Bullock Island Boat Yard and Extension
 - Gippsland Ports Wharf
- LEFCOL**
- ADVANCE TAFE/SEAMAC**
- INDUSTRY BUFFER**
- KICK A BOUT**
- PLAYGROUND**
- PRIMARY DESTINATIONS**
- Destinations include:
- Fishing and destination jetty's
 - Fuelling and sewage pump out jetty
 - Lefcol viewing platform
 - Designated fishing areas (does not limit fishing in other areas)
 - Shelter
 - Community amenities
- ACTIVITY AND INTERPRETATION NODES**
- Activities include:
- Interpretive signage of maritime and fishing
 - Information and directional signage
 - Picnic settings/bbq's

Plan 5 Land Uses



04 Priorities

The master plan will need to be delivered in stages due to the size and scale of the project. A list of the top 5 potential project priorities are:

1. Undertake Civil Works
 - Site Works
 - Earthwork
 - Essential Services
 - Delivery of the Boulevard Road
2. Detailed Design and Construction of Promenade (2 parts)
3. Detailed Design and Construction of Promenade (2 parts)
4. Detailed Design and Construction Playground and Open Space Area
5. Detailed Design and Cunningham Arm
 - Informal open space area with opportunities for seating, shade and bbqs
 - Car park facilities including larger vehicle car parking with no camping signs



05 The Master Plan Costings

5.1 Civil Preliminary Estimate Summary

Item	Description	Amount
1 Siteworks and Earthworks		
1.1	Siteworks	
1.1.1	Site establishment including provision of access, survey setout, provision of site and office compounds, insurances and other works as specified.	\$20,000
1.1.2	Site preparation including disposal of all surface rock, trees, timber, fences, wire, rubbish, removal of kerb and other existing works and any other materials as specified on the drawings, disposed offsite to a tip to be arranged by the contractor.	\$30,000
1.2	Bulk Earthworks	
1.2.1	Cut material including stripping	\$82,620
1.2.2	Disposal of excess material offsite	\$100,125
1.2.3	Trim and prepare subgrade	\$6,770
2	Pavement works	
	Centreline Length	
2.1	Road and Parking Bays	
2.1.1	Asphalt	
2.1.1.1	25mm depth of 7mm nom. size	\$119,025
2.1.1.2	30mm depth of 14mm nom. size	\$142,830
2.1.1.3	Prime	\$23,805
2.1.2	Crushed rock	
2.1.2.1	20mm nom size Class 2 F.C.R.	
2.1.2.2	100mm compacted depth	\$103,155
2.1.2.3	20mm nom size Class 3 F.C.R.	
2.1.2.4	150mm compacted depth	\$84,000
3	Concrete works	
3.1	Kerb and channel	\$88,036
4	Watermains	
4.1	100mm dia. PVC	\$35,100
5	Electrical	
5.1	Cable	\$0
5	Miscellaneous	
5.1	Kiosk	
5.1.1	Sewer Package Pump Station	\$20,000
	PE Rising main	
5.1.2	100mm dia.	\$30,250
5.1.3	Service Relocation	\$150,000
5.1.4	Geotechnical assesment	\$40,000
5.1.5	Detailed Design	\$50,000
6	Contingency 30 %	\$337,714
TOTAL (EXCLUDING GST)		\$1,463,431

5.2 Landscape Preliminary Opinion of Probable Cost Summary

Item	Total
Softworks	
Tree planting- 45L tree stock	\$113,750
Grassed Areas- Hydroseeding, including cultivation and topsoil	\$286,700
Shrub Planting- Garden bed, including cultivation, topsoil, planting and mulching	\$278,500
Hardworks	
Internal Promenade Network- Standard concrete pavement	\$476,100
External Promenade Network- Timber boardwalk	\$1,560,000
Fishing Areas- Timber boardwalk	\$1,257,500
Furniture & Fixtures	
Interpretive Signage	\$9,000
Bin	\$6,000
Double BBQ	\$12,000
BBQ	\$18,000
Picnic setting	\$20,000
Seating	\$25,000
Drinking fountain	\$12,000
Shelter	\$30,000
Playground (local scale, including softfall/rubber pads allowance)	\$100,000
Community Amenities (Kiosk & toilet facilities)	\$80,000
Pedestrian bridge	\$100,000
CCTV	\$50,000
Contingency 30%	\$1,330,365
TOTAL (EXCLUDING GST)	\$5,764,915

Note: The above estimates do not include Establishment and Maintenance Costs

Note: There is a significant potential cost associated with the sea walls on Bullock Island, The potential cost could be in the vicinity of \$1.7-3.8 Million. A complete design will be required to undertsand the extent of works needed, this has not been included in these works.

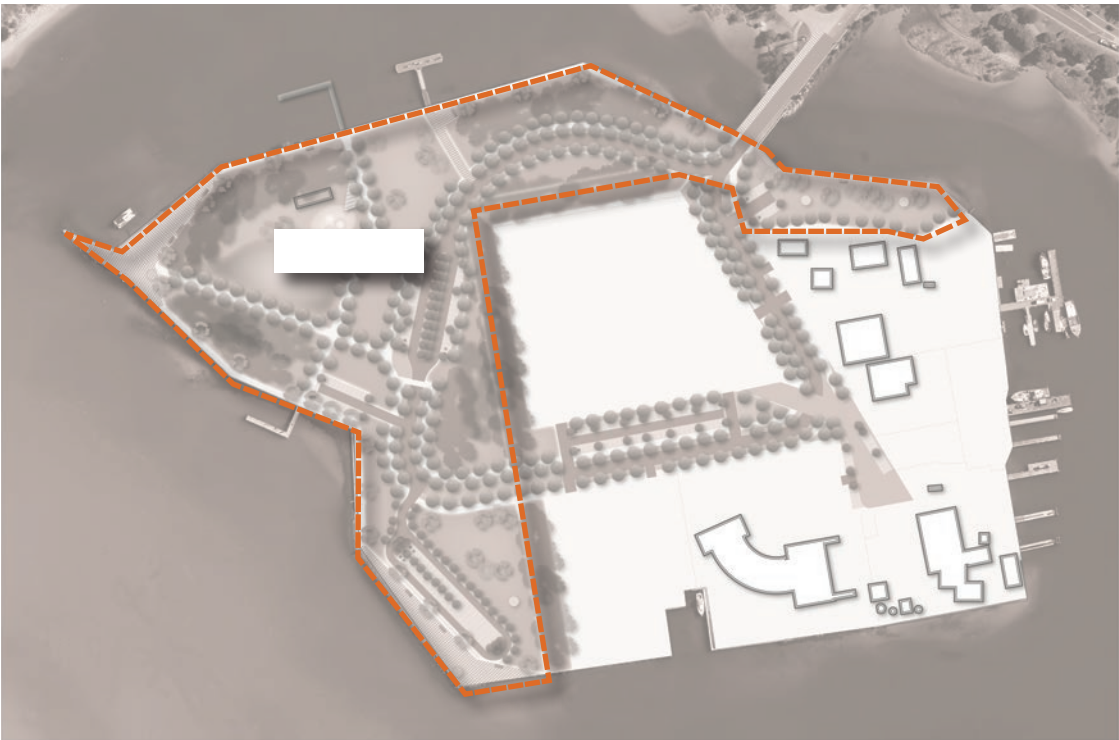
The information in this memorandum is preliminary and has been obtained as a result of informal discussions with officers from the relevant authorities and may differ at some future date when development conditions are officially requested.

The information and any costs supplied by SMEC are subject to change pending official advice, detailed property investigation, detailed design and survey. The information is current to the report date, however, SMEC cannot accept responsibility if any Authority changes its requirements after the date of this report.

Based on the Company's experience and the investigations carried out, SMEC believes that the subject land is capable of being serviced as set out in this Master Plan.

The above estimates do not include Establishment and Maintenance Costs

5.3 Costing breakdown by Stage



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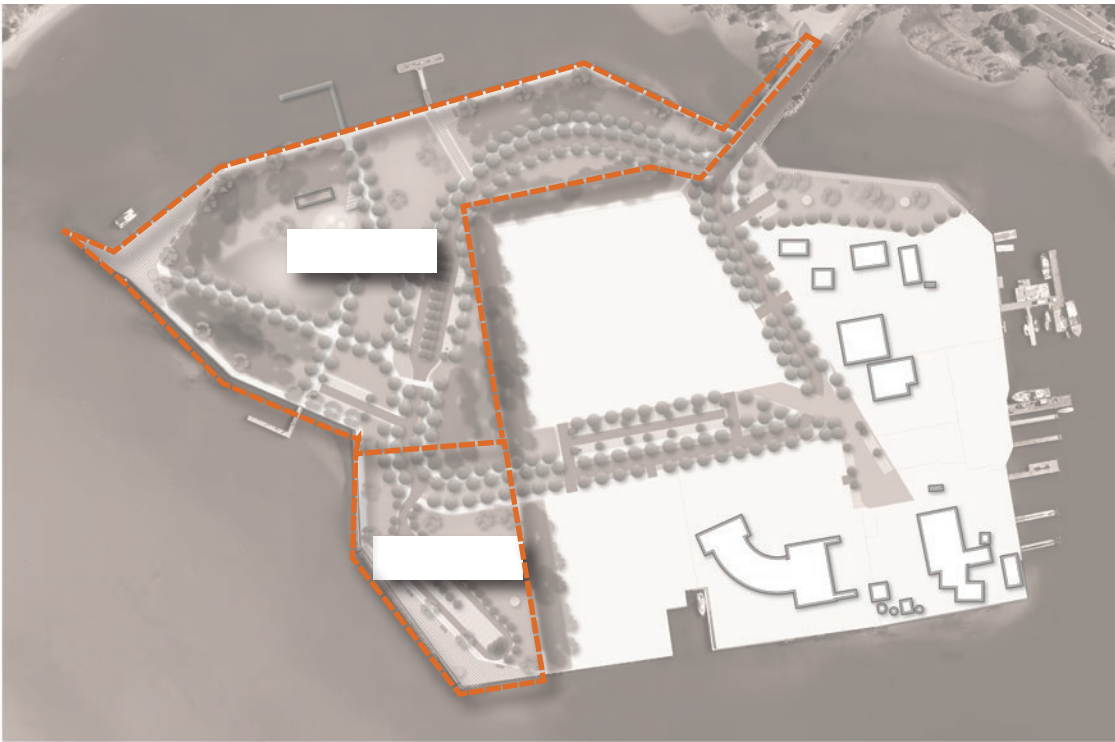
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The above estimates do not include Establishment and Maintenance Costs

Stage 1

Earthworks required for appropriate levelling of the site, road and parking formation, running of pipes, electrical cabling and any other essential services required. This is for the entire project area on the western side of the island in the open space area, it excludes the stage 5 area.

CIVIL WORKS					
Item	Description	Quantity	Unit	Rate	Amount
1	Siteworks and Earthworks				
1.1	Siteworks				
1.1.1	Site establishment including provision of access, survey setout, provision of site and office compounds, insurances and other works as specified.	1	Item	\$10,000.00	\$10,000
1.1.2	Site preparation including disposal of all surface rock, trees, timber, fences, wire, rubbish, removal of kerb and other existing works and any other materials as specified on the drawings, disposed offsite to a tip to be arranged by the contractor.	1	Item	\$15,000.00	\$15,000
1.2	Bulk Earthworks				
1.2.1	Cut material including stripping	6,885	cu.m	\$12.00	\$82,620
1.2.2	Disposal of excess material offsite	4,005	cu.m	\$25.00	\$100,125
1.2.3	Trim and prepare subgrade	3,385	sq.m	\$2.00	\$6,770
2	Pavement works				
	Centreline Length	672	lin.m		
2.1	Asphalt				
2.1.1	25mm depth of 7mm nom. size	4,760	sq.m	\$15.00	\$71,400
2.1.2	30mm depth of 14mm nom. size	4,760	sq.m	\$18.00	\$85,680
2.1.3	Prime	4,760	sq.m.	\$3.00	\$14,280
2.2	Crushed rock				
2.2.1	20mm nom size Class 2 F.C.R.				
2.2.2	100mm compacted depth	4,760	sq.m	\$13.00	\$61,880
2.2.3	20mm nom size Class 3 F.C.R.				
2.2.4	150mm compacted depth	3,385	sq.m	\$16.00	\$54,160
3	Concrete works				
3.1	Kerb and channel	1,176	lin.m.	\$50.00	\$58,786
4	Watermains				
4.1	100mm dia. PVC	270	lin.m	\$130.00	\$35,100
5	Miscellaneous				
5.1	Kiosk				
5.1.1	Sewer Package Pump Station	1	Item	\$20,000.00	\$20,000
	PE Rising main				
5.1.2	100mm dia.	275	lin.m	\$110.00	\$30,250
5.2	Service Relocation				\$150,000
5.3	Geotech Assesment				\$40,000
5.4	Detailed Design				\$50,000
	Contingency 30%				\$265,815
				TOTAL (EXCLUDING GST)	\$1,158,866



Stage 3 Pedestrian Bridge

A new pedestrian bridge or widening of the existing bridge for pedestrians and cyclists, Council will need to undertake a costing exercise due to the complex issue relating to bridge design.

A costing exercise would need to be undertaken. Tasks would include:

- Site inspection
- Design of Concepts for Bridge
- Costing of Bridge

A project of this size and scale would cost in the order of \$10 000- \$15 000. This would not include detailed design for the purposes of construction.

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The above estimates do not include Establishment and Maintenance Costs

Stage 2

The main car park area which has been sealed in stage one will in this step receive the planting, boardwalk area, seating, lighting and landscaping and promenade to make it an attractive area.

LANDSCAPE WORKS	Quantity	Unit	Rate Amount	
Softworks				
Tree planting- 45L tree stock	90	each	\$250	\$22,500
Grassed Areas- Hydroseeding, including cultivation and topsoil	5,440	m²	\$10	\$54,400
Shrub Planting (15% of Reserve planting)- incl. cultivation, topsoil, planting and mulching	960	m²	\$50	\$48,000
Hardworks				
Internal Promenade Network- Standard concrete pavement	710	m²	\$90	\$63,900
External Promenade Network- Timber board walk	335	m²	\$500	\$167,500
Fishing Area- Timber board walk	1,115	m²	\$500	\$557,500
Furniture & Fixtures				
Interpretive Signage	1	item	\$3,000	\$3,000
Bin	1	item	\$1,500	\$1,500
BBQ	1	item	\$6,000	\$6,000
Picnic setting	1	each	\$5,000	\$5,000
Seating	3	each	\$2,500	\$7,500
Optional Items				
Drinking fountain	1	item	\$4,000	\$4,000
Contingency 30%				\$282,240
TOTAL STAGE 2 (Ex. GST)				\$1,232,040

Stage 3

The pedestrian linkage over the bridge to bullock island, the area as shown in stage 3 as per the attached picture, so this will include the landscaping, playground, amenities, kiosk, board walk promenade

LANDSCAPE WORKS	Quantity	Unit	Rate	Amount
Softworks				
Tree planting- 45L tree stock	205	each	\$250	\$51,250
Grassed Areas- Hydroseeding, including cultivation and topsoil	18,130	m²	\$10	\$181,300
Shrub Planting (20% of Reserve planting)- incl. cultivation, topsoil, planting and mulching	3,900	m²	\$50	\$195,000
Hardworks				
Internal Promenade Network- Standard concrete pavement	2,995	m²	\$90	\$269,550
External Promenade Network- Timber board walk	650	m²	\$500	\$325,000
Fishing Areas- Timber board walk	1,400	m²	\$500	\$700,000
Furniture & Fixtures				
Interpretive Signage	2	item	\$3,000	\$6,000
Bin	2	item	\$1,500	\$3,000
Double BBQ	1	item	\$12,000	\$12,000
Picnic setting	1	each	\$5,000	\$5,000
Seating	5	each	\$2,500	\$12,500
Drinking fountain	1	item	\$4,000	\$4,000
Shelter	1	each	\$30,000	\$30,000
Playground (local scale, including soft fall/rubber pads allowance)	1	item	\$100,000	\$100,000
Community Amenities (Kiosk & toilet facilities)	1	item	\$80,000	\$80,000
CCTV			\$50,000	\$50,000
Pedestrian Bridge	1	Item	\$100,000	\$100,000
Contingency 30%				\$637,380
TOTAL STAGE 3 (EXCLUDING GST)				\$2,761,980



Stage 4

Landscape and Promenade Areas

LANDSCAPE WORKS	Quantity	Unit	Rate	Amount
Softworks				
Tree planting- 45L tree stock	26	each	\$250	\$6,500
Grassed Areas- Hydroseeding, including cultivation and topsoil	2,390	m²	\$10	\$23,900
Shrub Planting (10% of Reserve planting)- incl. cultivation, topsoil, planting and mulching	300	m²	\$50	\$15,000
Hardworks				
External Promenade Network- Boardwalk	625	m²	\$500	\$312,500
Furniture & Fixtures				
Bin	1	item	\$1,500	\$1,500
Picnic setting	2	each	\$5,000	\$10,000
Seating	2	each	\$2,500	\$5,000
Optional Items				
BBQ	2	item	\$6,000	\$12,000
Drinking fountain	1	item	\$4,000	\$4,000
Contingency				\$117,120
TOTAL STAGE 4 (Ex. GST)				\$507,520

The information in this memorandum is preliminary and has been obtained as a result of informal discussions with officers from the relevant authorities and may differ at some future date when development conditions are officially requested.

The information and any costs supplied by SMEC are subject to change pending official advice, detailed property investigation, detailed design and survey. The information is current to the report date, however, SMEC cannot accept responsibility if any Authority changes its requirements after the date of this report.

Based on the Company's experience and the investigations carried out, SMEC believes that the subject land is capable of being serviced as set out in this Master Plan.

The above estimates do not include Establishment and Maintenance Costs

Stage 5

Western side upgrades of the site to the roads, planting

CIVIL WORKS					
Item	Description	Quantity	Unit	Rate	Amount
1	Siteworks and Earthworks				
1.1	Siteworks				
1.1.1	Site establishment including provision of access, survey setout, provision of site and office compounds, insurances and other works as specified.	1	Item	\$10,000.00	\$10,000
1.1.2	Site preparation including disposal of all surface rock, trees, timber, fences, wire, rubbish, removal of kerb and other existing works and any other materials as specified on the drawings, disposed offsite to a tip to be arranged by the contractor.	1	Item	\$15,000.00	\$15,000
1.2	Bulk Earthworks				
1.2.2	Cut material including stripping		cu.m	\$12.00	0
1.2.4	Disposal of excess material offsite		cu.m	\$25.00	0
1.2.6	Trim and prepare subgrade		sq.m	\$2.00	0
2	Pavement works				
	Centreline Length	400	lin.m		
2.1	Road and Parking Bays				
2.1.1	Asphalt				
2.1.1.2	25mm depth of 7mm nom. size	3,175	sq.m	\$15.00	\$47,625
2.1.1.3	30mm depth of 14mm nom. size	3,175	sq.m	\$18.00	\$57,150
2.1.1.5	Prime	3,175	sq.m.	\$3.00	\$9,525
2.1.2	Crushed rock				
2.1.2.1	20mm nom size Class 2 F.C.R.				
2.1.2.2	100mm compacted depth	3,175	sq.m	\$13.00	\$41,275
2.1.2.4	20mm nom size Class 3 F.C.R.				
2.1.2.5	150mm compacted depth	1,865	sq.m	\$16.00	\$29,840
3	Concrete works				
3.1	Kerb and channel (includes laybacks)	585	lin.m.	\$50.00	\$29,250
	Contingency 30%				\$71,899
TOTAL (EXCLUDNIG GST)					\$311,564
LANDSCAPE WORKS					
		Quantity	Unit	Rate	Amount
Softworks					
Tree planting- 45L tree stock		134	each	\$250	\$33,500
Grassed Areas- Hydroseeding, inclcuding cultivation and topsoil		2,710	m²	\$10	\$27,100
Shrub Planting (15% of Reserve planting)- incl. cultivation, topsoil, planting and mulching		410	m²	\$50	\$20,500
Hardworks					
Internal Promenade Network- Standard concrete pavement		1,585	m²	\$90	\$142,650
External Promenade Network- Timber boardwalk		1,510	m²	\$500	\$755,000
Contingency					\$293,625
TOTAL (Ex. GST)					\$1,272,375
TOTAL STAGE 5 (EXCLUDING GST)					\$1,583,939