

# RIVERMOUTH FORESHORE DEVELOPMENT CONCEPT PLAN - DENMARK

NOVEMBER 2017

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









## Acknowledgments

The Rivermouth Foreshore Development Concept Plan has been produced for the Shire Of Denmark in consultation with and assistance from:

- The Rivermouth Foreshore DP Working Group
- Community Members & Residents
- The Smith Family (Clive Smith)
- Commercial Fishing (George Ebbetts)
- The Rivermouth Caravan Park
- Denmark Riverside Club
- Denmark Boating & Angling Club
- Denmark Yacht Club
- Local Tour Boat Operators
- Department of Water and Environmental Regulation
- Department of Transport



## Legend







	VARIOUS TRAILS AS INDICATED ON DRAWINGS		TURF
			TURF MOUND
			GRANITE ROCKS
			ASPHALT PATH
	WAYFINDING   TRAFFIC MGT. (BY COUNCIL)		BUSHLAND   NATIVE PLANTING
	INTERPRETATION		CONTRASTING BITUMEN SURFACE   TRAFFIC CALMING
	SCULPTURE   PUBLIC ARTWORK		EXPOSED AGGREGATE CONCRETE PATH
	DRINKING FOUNTAIN		FORESHORE STABILISATION   BRUSH-MATTRESSING
	OUTDOOR SHOWER		TIMBER BOARDWALK
	BOLLARDS   ILLUMINATION		
	BENCH SEAT		
	RECLINING TIMBER SEAT		
	PICNIC TABLE + BENCHES		
	EXISTING CHANNEL MARKERS		

PHOTOGRAPHS PROVIDED IN THE REPORT ARE INTENDED FOR REFERENCE AND IDEA PRESENTATION PURPOSES ONLY.

## Recommended Planting Palette

	AGONIS FLEXUOSA (PEPPERMINT)
	LEPIDOSPERMA GLADIATUM
	FICINIA NODOSA
	ANIGOZANTHOS FLAVIDUS
	BEAUFORTIA SPARSA
	XANTHOSIA ROTUNDIFOLIA

## Recommended Material Palette

	STABILISED CRUSHED LIMESTONE
	EXPOSED CONCRETE AGGREGATE
	COMPOSITE TIMBER MATERIALS (LOW MAINTENANCE / DURABLE)
	ASPHALT ROAD
	GRANITE BOULDERS
	BRUSH MATTRESSING   STABILISATION



## 1.0 Introduction

The Denmark Rivermouth Foreshore represents an area of natural, recreational and tourism significance to the Great Southern region. The area is a hub for a variety of activities including caravan park accommodation, commercial fishing, recreational boating, fishing and public recreation. An opportunity exists to enhance the existing infrastructure and natural landscape through considered site development and rehabilitation.

Entry to the Rivermouth Foreshore and Rivermouth Caravan Park is through a junction of several existing trails including the Mokare Heritage Trail, Bibbulmun Track, Karri Walk Trail, Denmark - Nornalup Heritage Rail Trail and the Munda Biddi Trail. This area forms a point of visual significance, and a natural Node / Hub meeting point where the entry meets the Heritage Railway Bridge.

Existing public facilities onsite include limited carparking, boat trailer parking, boat ramp, fish cleaning station, toilet block, non-permanent seating and boat moorings and jetties for commercial, recreational and tourism boating. The majority of existing facilities are situated in appropriate areas, however would benefit from upgrading and design development in keeping with the natural environment.

Enhancing the integration between the Heritage Precinct, the Rivermouth Foreshore and the existing Gazebo and BBQ area adjacent to the Heritage Railway bridge with a future Trail Node / Hub would also benefit the overall development.

While the existing natural layout, contours and progression of the foreshore allows for development and rehabilitation with minimal disruption to the existing landscape, there is significant weed encroachment into riparian vegetation. In addition, the Paperbark trees along the edge of the foreshore towards the Heritage Railway Bridge require protection. Areas of erosion along the foreshore require stabilisation, as well as access and usage formalisation to prevent further erosion.

The Rivermouth Caravan Park facilities adjacent to the foreshore are currently in the process of design development for a new building, with a public access shop / cafe. Design guidelines for the interface between the new facility, and the Rivermouth Foreshore Development Plan, will be an important aspect of the project, to ensure congruent and effective visual design objectives and development.

## 2.0 Site Analysis

### Place | Character | Principles

#### DESIGN PRINCIPLES

Create future Development Principles drawing from the natural Denmark landscape, that incorporate the requirements of Key Stakeholders and the Public.

Utilise the location of the Rivermouth Caravan Park entry to create a visually appealing point of interest and Information / Rest node, connecting through to the rivermouth foreshore.

Develop an accessible, modern and informative natural activity area - incorporating mixed use requirements (Caravan Park, Residents, Pedestrians / Public, Fishing, Boating), enhancing the existing potential for a natural Denmark social hub.

Provide access design elements (Pedestrian and Vehicular) that retain, protect and rehabilitate areas of significant native vegetation.

Create a consistent design language and interface between the Caravan Park and Foreshore.

Create clear zones; identifying public and private areas.

The use of materials, colours and vegetation that are consistent with design principles appropriate for the location and the Shire of Denmark's overall development plans.

#### DESIGN OBJECTIVES

Ensure due environmental consideration for all development principles.

Enhance the positive tourism and economic contribution that the Rivermouth Foreshore Caravan Park and associated areas provide for Denmark.

Acknowledge and incorporate social aspects of the site (Built, Historical and Indigenous Heritage).

Provide signage and amenities for the public, that are in clearly defined public areas.

Analysis of intersecting trails, and the potential for connections through to Ricketts Reserve and the Heritage Precinct.











The upgrade of existing amenities with a clear design language (shelter, fish cleaning station, toilets, boardwalks, jetties and boat ramp).

Due consideration given for existing usage of the Gazebo area to the west of the Heritage Railway Bridge.

Staged development recommendations for Short to Mid Term (0 - 10 years) and Long Term (10 - 20 years) implementation guidelines.



#### LEGEND

-  FUTURE CONNECTION THROUGH TO RICKETTS RESERVE
-  WAYFINDING | TRAFFIC MGT. (BY COUNCIL)
-  INTERPRETATION
-  SCULPTURE | PUBLIC ARTWORK
-  EXISTING CHANNEL MARKER
-  RED ASPHALT PATH
-  BUSHLAND | NATIVE PLANTING
-  CONTRASTING BITUMEN SURFACE | TRAFFIC CALMING
-  FORESHORE STABILIZATION | BRUSH-MATTRESSING
-  TIMBER BOARDWALK

**A** ENTRY NODE

**C** RECREATIONAL AREA

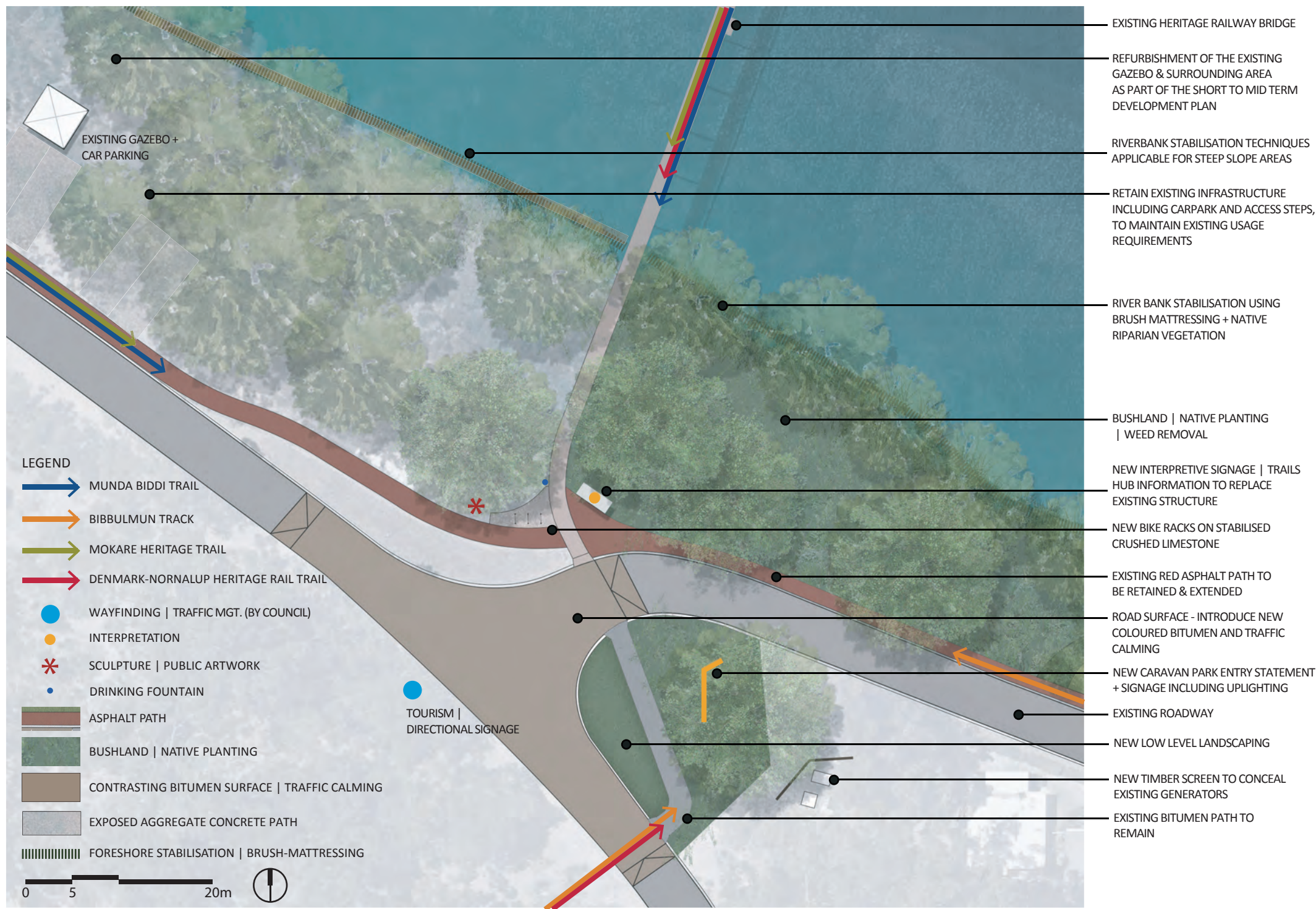
**E** INLET BOARDWALK EXTENSION

**B** COMMERCIAL FISHING & CLASSIC BOATS

**D** BOATING / RECREATIONAL FISHING

**F** RIVERMOUTH CARAVAN PARK





### 3.0 Entry Node (Area A)

The Denmark rivermouth foreshore entry is at a meeting point of several trails, including the Mokare Heritage Trail, the Bibbulmun Track, Karri Walk Trail, Denmark - Nornalup Heritage Rail Trail and the Munda Biddi Trail.



An opportunity exists to create a Node | Hub at the meeting point of the Heritage Railway Bridge and the Rivermouth Caravan Park.

This Node can incorporate a new Rivermouth Caravan Park entry statement, and a new timber structure with signage to facilitate information wayfinding, identifying the start of the rivermouth foreshore interpretation | information trail. Traffic slowing elements on Inlet Drive, where pedestrian access to the caravan park intersects with a number of trails, should however be considered.

An aesthetic site line between the trail information Node | Hub at the entry to the rivermouth foreshore through to the new shop / cafe development can be created. Public sculptural art works could also highlight the start of this site line, and connect visually through to the developed rivermouth recreation area. The next interpretation node to visually connect to will be the Commercial Fishing interpretation area.

Existing footpaths should be upgraded to match existing where required, and extended to include a connection through to the Heritage Railway Bridge, as well as a stabilised crushed limestone area for new custom bike racks.

To create a visually appealing entry node, the following design guidelines should be integrated for the caravan park entry and future development of the existing gazebo / rope swing area adjacent to the Heritage Railway Bridge:

- Layered natural timber structures and signage
- Timber screening to existing generators
- Composite timber materials utilised in the existing gazebo / picnic area (low maintenance / durable)
- Stabilised crushed limestone area for new custom bike racks, and exposed aggregate paths as required
- BBQs to be refurbished as part of the Mid-Term development plan
- New stainless steel drinking fountain adjacent to bike racks (wheel chair accessible) - adhering to natural, organic flow design principles
- River bank stabilisation using bio-engineering techniques such as brush mattressing (techniques appropriate for steep bank area required west of the Heritage Railway Bridge)
- Native riparian vegetation planting, and weed removal required
- Standardised signage for trail groups + wayfinding to be incorporated as required



IMAGE: TIMBER SCREENING INCORPORATING SIGNAGE



IMAGE: TIMBER STRUCTURES AND SIGNAGE



IMAGE: TIMBER WAYFINDING | INTERPRETATION SIGNAGE



IMAGE: TIMBER SIGNAGE STRUCTURES



IMAGE: NEW CUSTOM SCULPTURAL BIKE RACKS



## 4.0 Commercial Fishing (Area B)

Access to the river should be formalised in this area, to assist with and facilitate sustainable and continued small scale local commercial fishing from the rivermouth foreshore.



The use of floating jetties, anchored where there is a natural bank and break through the existing paperbark trees, would increase mooring accessibility.

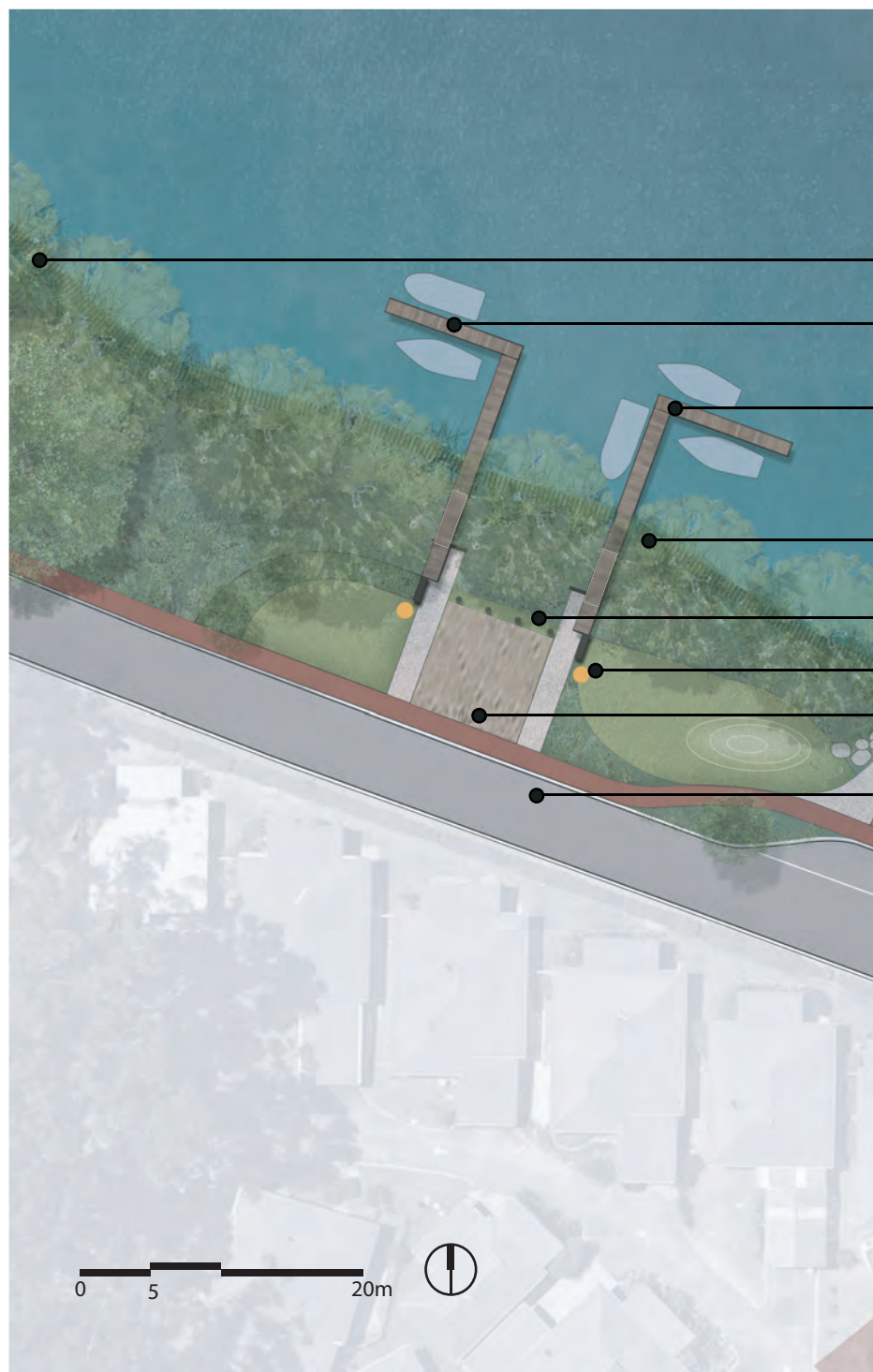
Interpretive signage should be continued along the foreshore; Area B being the second node, describing both the current and historical commercial fishing practices in the area. In addition, imagery of the old finger jetties could be included as a reference to the past river footprint and utilisation, as well as images of local boating groups utilising the river in the past and as they do today.

The influence that the Smith family has had in establishing commercial fishing in the Denmark area should be a focal point for the interpretive signage, highlighting that the family continue to utilise the area for commercial fishing today.

Fish can be purchased by the public directly from the fishing boats; this important social aspect specific to the rivermouth foreshore should be maintained and supported.

Design elements that can be incorporated into the area are:

- Core 10 and timber interpretation signage
- Riverbank stabilisation using brush mattsing
- New floating jetties with composite timber materials (low maintenance / durable)
- Stabilised crushed limestone area for the new hardstand
- Composite timber materials for bench seating (low maintenance / durable)
- Solar powered illuminated bollards



- RIVER BANK STABILISATION USING BRUSH MATTRESSING + NATIVE RIPARIAN VEGETATION
- NEW COMMERCIAL FISHING FLOATING JETTY WITH COMPOSITE TIMBER DECKING MATERIALS (LOW MAINTENANCE / DURABLE)
- NEW MULTI-USE FLOATING JETTY WITH COMPOSITE TIMBER DECKING MATERIALS (LOW MAINTENANCE / DURABLE)
- RIVER BANK STABILISATION USING BRUSH MATTRESSING + NATIVE RIPARIAN VEGETATION
- NEW SOLAR POWERED ILLUMINATED BOLLARDS
- INTERPRETATION SIGNAGE FOR COMMERCIAL FISHING
- NEW STABILISED LIMESTONE HARDSTAND AREA FOR COMMERCIAL FISHING TRAILERS AND VEHICLES
- EXISTING ROADWAY

### LEGEND

- INTERPRETATION | WAYFINDING
- • • BOLLARDS | ILLUMINATION
- BENCH SEAT
- ASPHALT PATH
- TURF
- TURF MOUND
- BUSHLAND | NATIVE PLANTING
- STABILISED CRUSHED LIMESTONE
- EXPOSED AGGREGATE CONCRETE PATH
- FORESHORE STABILISATION | BRUSH-MATTRESSING



IMAGE: FLOATING JETTY WITH COMPOSITE TIMBER DECKING



IMAGE: FLOATING JETTY



IMAGE: CORE 10 INTERPRETATION SIGNAGE & WAY FINDING

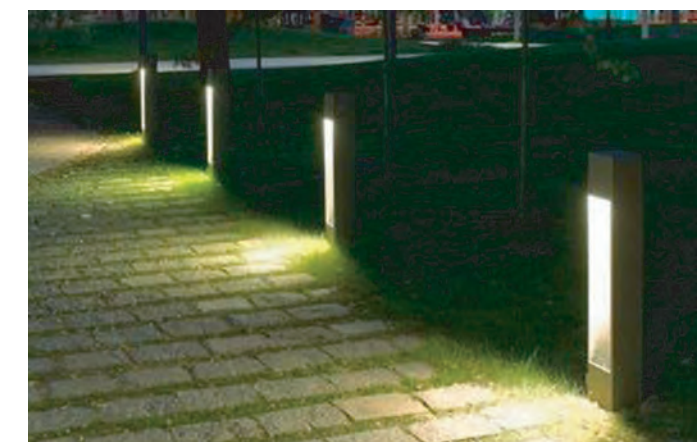
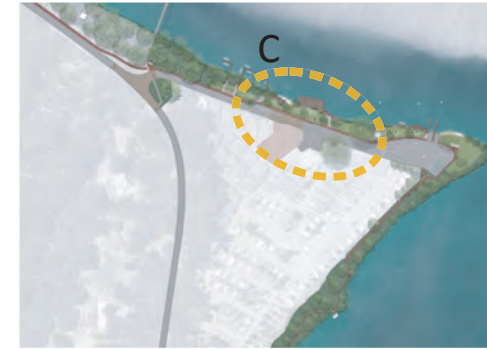


IMAGE: SOLAR ILLUMINATED BOLLARDS

## 5.0 Recreation & Caravan Park Interface (Area C)

The interface between the new Rivermouth Caravan Park shop / cafe and the foreshore should be developed using a design language consistent with the Rivermouth Foreshore Development Plan. This could include a road treatment to create traffic calming and a pedestrian zone connecting to the foreshore, potentially incorporating flush kerbs for accessibility.



Utilising a consistent design language, will assist in identifying the shop / cafe as a public "zone" versus the remainder of the caravan park. Elements such as a graduated, landscaped, and layered entry to the shop / cafe from the foreshore would create an open approach. A clearly accessible public building will provide much needed amenities and encourage visitors and locals to spend time at the rivermouth foreshore.

The turf area opposite the caravan park is a popular recreation place for the general public, as well as caravan park users. This area should be developed as the primary recreational zone.

Design elements that can be incorporated are:

### Short - Mid Term Development Plan

- Informal nature / water play spaces in the overall foreshore recreation zone
- Increase shade facilities by providing trees (refer to Planting Palette), landscaping and structures utilising natural + composite timbers
- Increased seating facilities, including permanent seating, as well as seating that is integrated with the contours of the foreshore utilising composite timber materials (low maintenance / durable)
- Stabilised crushed limestone area for new custom bike racks, and exposed aggregate paths
- Solar powered illuminated bollards
- New outdoor shower to be incorporated with the existing ablution block
- New stainless steel drinking fountain (wheel chair accessible) - adhering to natural, organic flow design principles
- Accessible Floating Jetty with composite timber decking for tour boat operation, allowing side on mooring for commercial boats and greater utilisation (appropriate handrails to be incorporated)
- Short term mooring facilities to minimise informal mooring (preventing the use of star pickets)
- Native vegetation, including sedges, utilised to control pedestrian and vehicular access to the water as well as any potential grass encroachment

### Long Term Development Plan

- Stepped access jetties for water craft launching + beach access at varying water levels
- Additional Finger Jetty extension



- NEW PADLEBOAT MOORING JETTY BY OTHERS
- NEW STEPPED ACCESSIBLE BEACH + JETTY ACCESS FOR WATER CRAFT LAUNCHING (LONG TERM PLAN)
- NEW FLOATING JETTY WITH COMPOSITE TIMBER DECKING FOR TOUR BOAT DOCKING
- NEW FIXED TIMBER JETTY WITH BENCH SEATING - POTENTIAL FOR EXPANSION IN LONG TERM PLAN
- NEW BIKE RACKS ON STABILISED LIMESTONE WITH ADJACENT DRINKING FOUNTAIN
- SHORT TERM MOORING (FORMALISED)
- RIVERBANK STABILISATION USING BRUSH MATTRESSING + NATIVE RIPARIAN VEGETATION
- EXISTING ABLUTION BLOCK TO BE REFURBISHED AS PART OF THE SHORT - MID TERM DEVELOPMENT PLAN WITH OUTDOOR SHOWER INCLUDED

- LEGEND**
- INTERPRETATION | WAYFINDING
  - OUTDOOR SHOWER
  - • • BOLLARDS
  - BENCH SEAT
  - PICNIC TABLE + BENCHES
  - EXISTING CHANNEL MARKERS
  - DRINKING FOUNTAIN
  - EXPOSED AGGREGATE CONCRETE PATH
  - ASPHALT PATH
  - TURF
  - TURF MOUND
  - BUSHLAND | NATIVE PLANTING
  - CONTRASTING BITUMEN SURFACE | TRAFFIC CALMING
  - GRANITE ROCKS
  - ||||||| FORESHORE STABILISATION | BRUSH-MATTRESSING



IMAGE: FIXED STEPPED JETTIES WITH COMPOSITE TIMBER DECKING

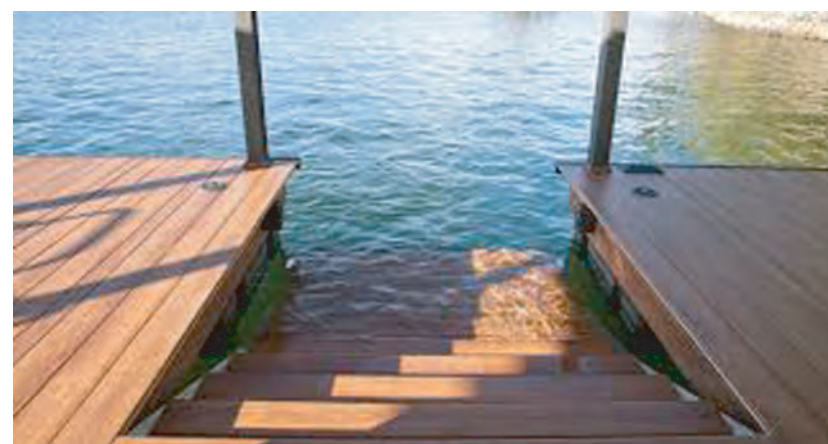


IMAGE: WATER ACCESSIBLE STEPPED JETTIES WITH COMPOSITE TIMBER DECKING



IMAGE: LANDSCAPING, NATIVE SEDGES & FORMALISED RIVER ACCESS



IMAGE: PEPPERMINT TREES FOR SHADING



IMAGE: DRINK FOUNTAIN





## 6.0 Boating & Fishing (Area D)

This area has been identified as a multi-use zone, incorporating boating, recreational fishing, river access as well as the socially significant boat ramp and fish cleaning station. The overall location of the facilities should be maintained, however they require significant refurbishment and upgrading.



The fish cleaning station is currently a social hub and should be upgraded in line with the development plan design guidelines. The facility should also be extended to include an additional shelter and boat washdown facility.

Areas of erosion along the river and inlet edges should be stabilised using bioengineering techniques including brush mattressing, and planting native riparian vegetation.

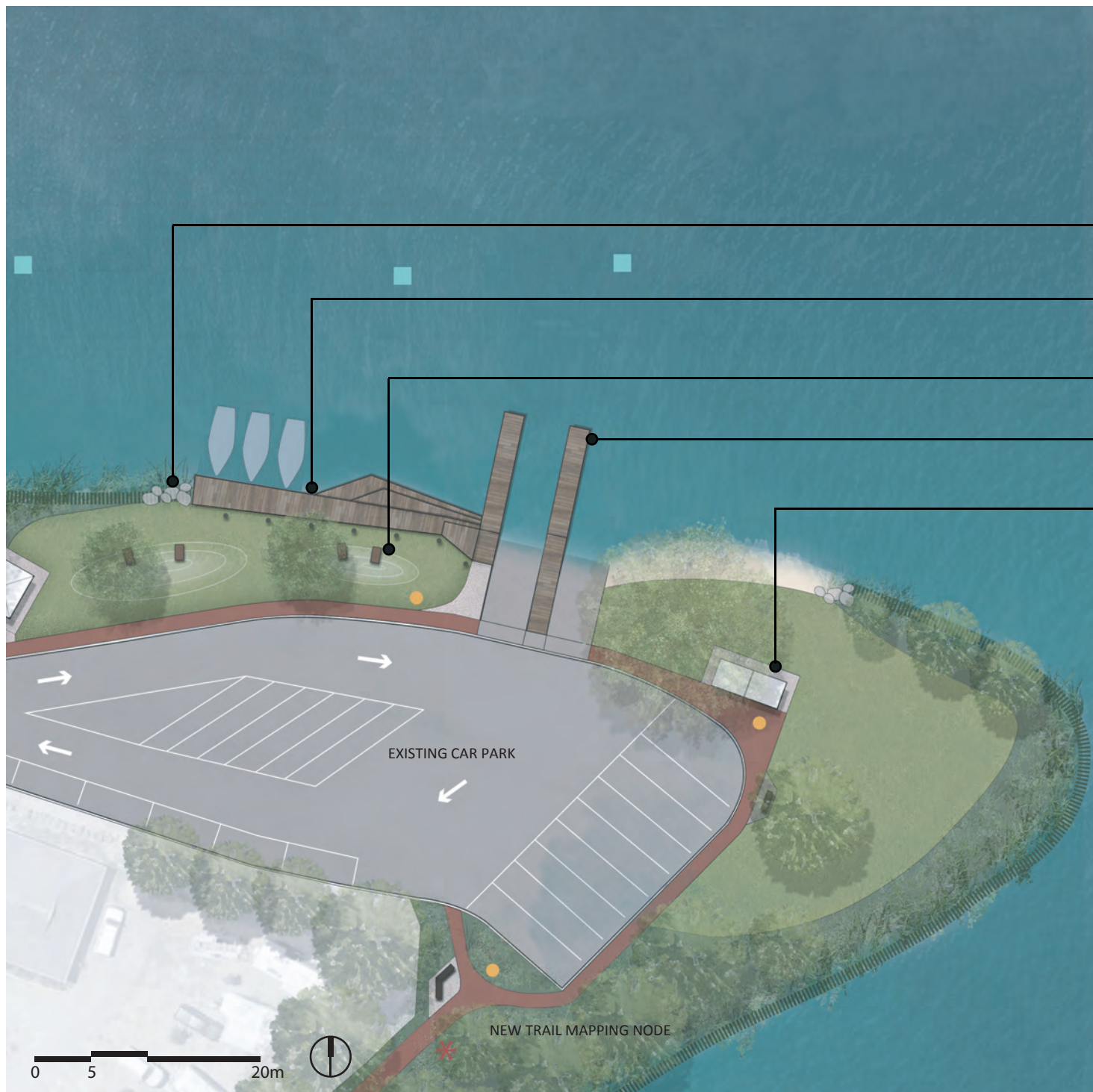
Floating Jetties should be installed to replace the existing jetty infrastructure, which will increase river access and utilisation. Due to the water levels and revised infrastructure, the existing concrete boat ramp level will require re-engineering with revised levels.

A river edge boardwalk and formalised boat mooring points will create safe / user friendly access along the river front. Low native riparian vegetation can be utilised to create a pedestrian barrier to water access.

The sandy beach access point to the river should be increased, to provide additional space for swimming and kayak, sailing and dragon boat launching.

The carpark line work should be upgraded. Existing boat trailer parking is to be maintained, and there is the potential for overflow carparking in the Heritage Precinct. The new walk trail signage created will help facilitate pedestrian direction from the Heritage Precinct to the Rivermouth Foreshore area.

A continuous path can be developed along the foreshore towards the inlet point, linking the existing foreshore and inlet trails. The opportunity for a trail mapping node can be created where the trails meet.



- RIVER BANK STABILISATION USING BRUSH MATTRESSING, GRANITE BOULDERS + NATIVE RIPARIAN VEGETATION
- NEW FIXED STEPPED JETTY WITH COMPOSITE TIMBER DECKING AND DURABLE NON-SLIP MATERIALS ON SUBMERGED SURFACES SUITABLE FOR MARINE CONDITIONS (POTENTIALLY REINFORCED FIBREGLASS GRATING); LONG TERM MOORINGS + ILLUMINATED BOLLARDS TO BE INCORPORATED
- COMPOSITE TIMBER RECLINING CHAIRS FOLLOWING THE CONTOURS OF NEW TURF MOUNDS
- EXISTING JETTIES TO BE REPLACED WITH NEW FLOATING JETTIES UTILISING COMPOSITE TIMBER DECKING + REVISED BOAT RAMP LEVELS
- EXISTING FISH CLEANING STATION TO BE REFURBISHED, AND EXTENDED TO INCLUDE A SEPARATE SHELTER, AS PART OF THE SHORT TO MID TERM DEVELOPMENT PLAN

- LEGEND**
- INTERPRETATION | WAYFINDING
  - \* SCULPTURE | PUBLIC ARTWORK
  - • • BOLLARDS | ILLUMINATED
  - BENCH SEAT
  - RECLINING TIMBER SEAT
  - EXISTING CHANNEL MARKERS
  - EXPOSED AGGREGATE CONCRETE PATH
  - ASPHALT PATH
  - TURF
  - TURF MOUND
  - BUSHLAND | NATIVE PLANTING
  - CONTRASTING BITUMEN SURFACE | TRAFFIC CALMING
  - GRANITE ROCKS
  - ||||||| FORESHORE STABILISATION | BRUSH-MATTRESSING

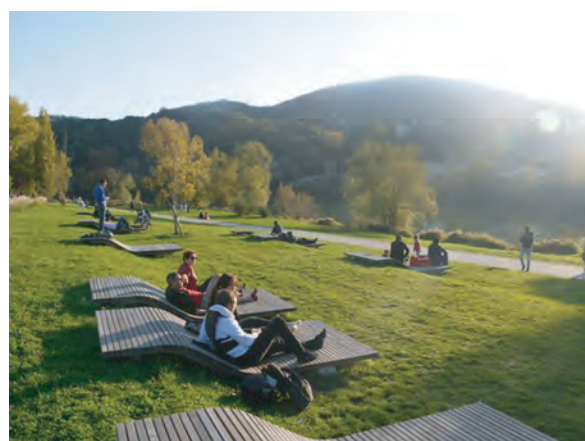


IMAGE: RECLINING SEATS CONTOURED TO TURF



IMAGE: FLOATING JETTY CONCEPT



IMAGE: DESIGN LANGUAGE FOR NEW SHELTERS



IMAGE: UPDATED FISH CLEANING STATION



## 7.0 Boardwalk (Area E)

From the trail mapping node created in Area D, there is the potential to create a boardwalk from the existing carpark, through to Ricketts Reserve.

Bird Hides and bird watching nodes can be incorporated into the boardwalk. There is also the opportunity to create a sculpture walk with installations by local artists.



Formalised bench seating, low level landscaping, illuminated bollards and low level boardwalk lighting would create a destination walk trail for the public and locals to enjoy.

### Short to Mid Term Development Plan

- New timber boardwalk extension from the existing asphalt path
- Low level planting buffer between caravan sites and footpath
- Bird hide and bird watching | rest nodes
- Bushland | native planting | weed removal
- Composite timber materials for bench seating (low maintenance / durable)
- Solar powered illuminated bollards | low level boardwalk lighting
- Interpretive signage at rest nodes | points of interest

### Mid to Long Term Development Plan

- Timber boardwalk extension from the existing carpark through to Ricketts Reserve
- Sculptural walk trail with installations by local artists
- Additional bird hide and bird watching | rest nodes
- Bushland | native planting | weed removal
- Additional composite timber bench seating (low maintenance / durable)
- Additional solar powered illuminated bollards | low level boardwalk lighting

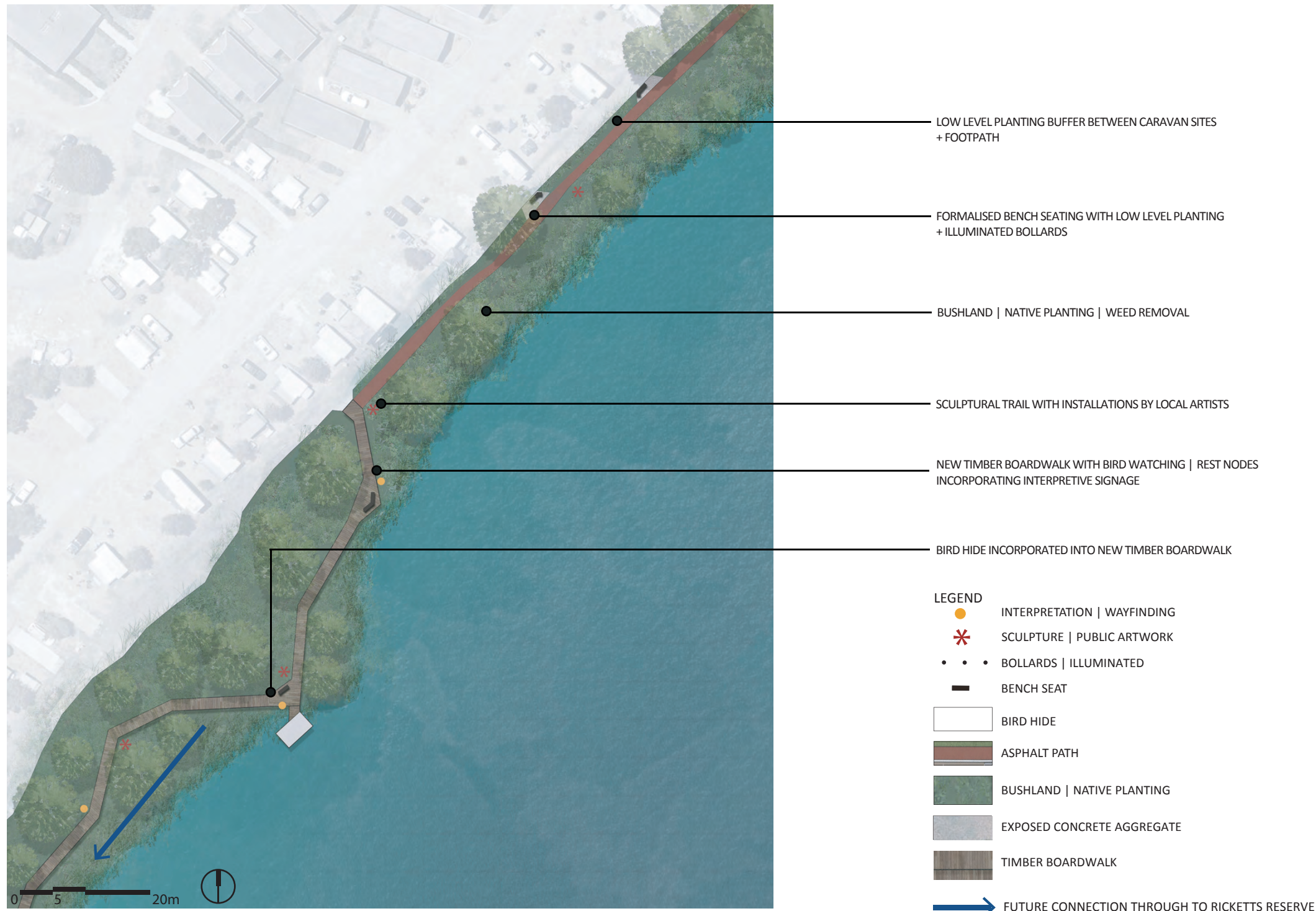


IMAGE: BOARDWALK



IMAGE: TIMBER INTERPRETIVE SIGNAGE

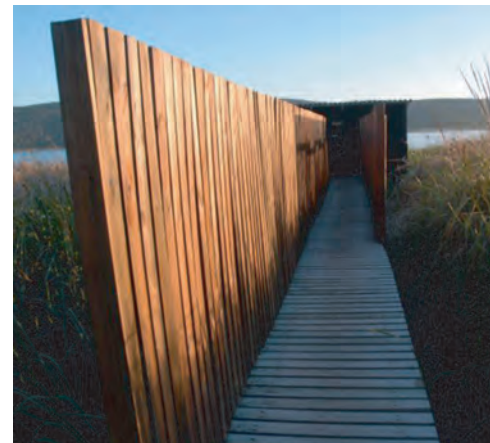


IMAGE: BIRD HIDE



IMAGE: BOARDWALK SEATING + LOW LEVEL LIGHTING



IMAGE: SCULPTURAL TRAIL

## 8.0 Rivermouth Caravan Park Precinct (Area F)

The future development of the Rivermouth Caravan Park will play a vital role in retaining and enhancing the recreational and social importance of the Rivermouth Foreshore area, for the Denmark community, and visitors to the Great Southern region.

The Rivermouth Caravan Park contributes significantly to the tourism industry in Denmark, and forms an integral part of the Rivermouth Foreshore recreational hub.

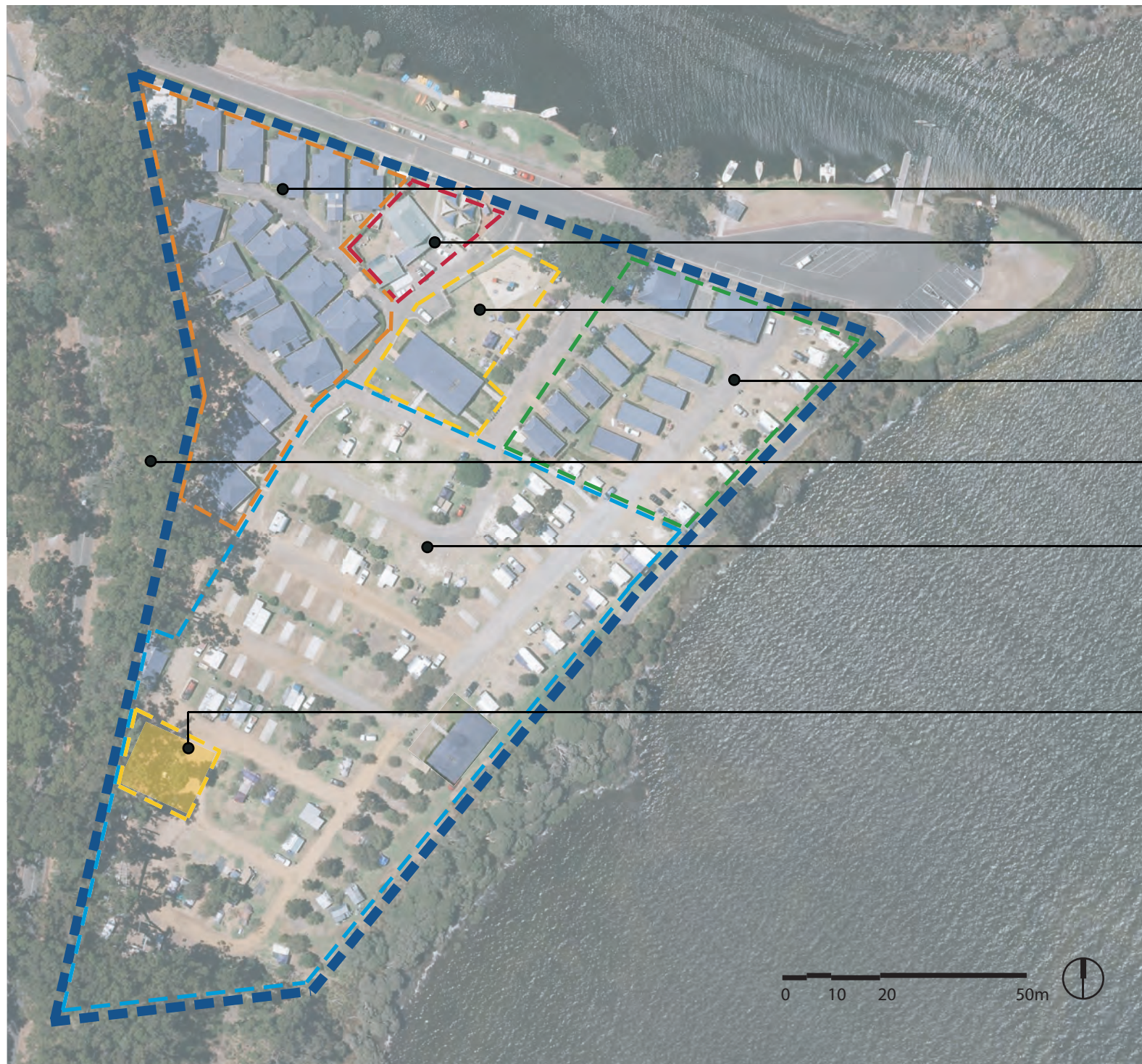
Improving the amenities and services provided at the Rivermouth Foreshore (cafe / shop / amenities / improved river activity access), specifically through the Caravan Park, will assist in creating an accessible and user friendly area, as well as a tourism draw card for the region, where both the community and visitors will want to stay and enjoy the foreshore's natural beauty and resources.

This report and associated plan are intended as a resource to upgrade and supersede the existing 2004 Development Plan, encapsulating work that has occurred onsite to date, and providing guidelines for future development areas identified across the site (Reserve 46241). The guidelines are intended to consider the potential needs and requirements of the community, the Rivermouth Caravan Park lessees and the Shire of Denmark (*in the capacity of the Management body for the Reserve*).

The plan has been separated into a number of Development Areas to allow flexibility and development options for the Caravan Park lessees. Design principles adopted in the Foreshore Development Plan should guide future Caravan Park development designs, ensuring consistency throughout the site (Rivermouth Caravan Park & Foreshore).

Design principles that can be incorporated are:

- Shade facilities by providing trees (refer to Planting Palette), landscaping and structures utilising natural + composite timbers
- Seating and other facilities utilising composite timber materials (low maintenance / durable)
- New built structures to follow the design language established for the Rivermouth Foreshore Development Plan, and incorporate layered natural + composite timbers and materials
- Stabilised crushed limestone areas for feature areas, and exposed aggregate paths
- Solar powered illuminated bollards
- Where stainless steel amenities are required, they should adhere to natural, organic flow design principles
- Native vegetation utilised to control pedestrian and vehicular access & egress



- PERMANENTS AREA (INCL. MANAGER'S RESIDENCE)
- RECEPTION OFFICE / CAFE / SHOP
- RECREATION + FACILITIES AREA
- CHALET AREA
- MAINTAIN 12m NATURAL LANDSCAPE BUFFER BETWEEN CARAVAN PARK + INLET DRIVE
- CARAVAN + CAMPING SITE AREA
- BBQ / RECREATION AREA

LEGEND	
	EXISTING SITE BOUNDARY
	RECEPTION / OFFICE / CAFE / SHOP
	PERMANENTS (INCL. MANAGER RESIDENCE)
	RECREATION & FACILITIES
	CHALETS
	CARAVAN & CAMPING SITE
	BBQ / RECREATION AREA



IMAGE: CARAVAN PARK RECEPTION / SHOP / CAFE AESTHETIC



IMAGE: CHALET AND LANDSCAPING DESIGN TO MATCH EXISTING



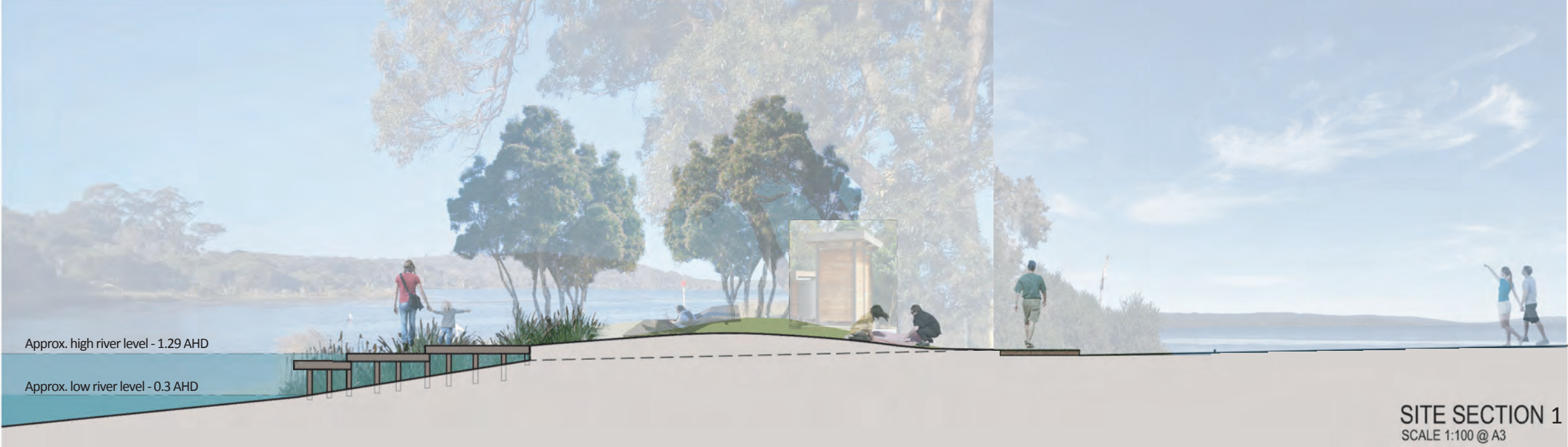
IMAGE: NATURAL CAMPING GROUND FACILITIES MAINTAINING TREES AND TURF AREAS



IMAGE: BBQ AREA FIXTURES USING NATURAL MATERIALS



9.0 Site Sections (Conceptual)



Section Location Plan

