

# PREVELLY GNARABUP FORESHORE MANAGEMENT PLAN



Prepared February 2022  
by Litoria Ecological  
for the Shire of Augusta Margaret River

*We acknowledge the traditional owners of Prevelly,  
Gnarabup and the Capes Region – the Wadandi  
people. This plan recognises and respects their  
continuing connection to land, water and culture, the  
incredibly high level of cultural significance of the  
Prevelly - Gnarabup coast and their deep  
understanding and knowledge of this area, developed  
over thousands of generations of custodianship.*

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## **1. INTRODUCTION**

### **1.1 BACKGROUND**

The Prevelly Gnarabup coastal strip represents is a world renowned portion of the Cape to Cape coastline. It supports a diverse range of values, including significant cultural values, marine and terrestrial biodiversity, stunning amenity values and landscape, and represents a focal point for recreational useage for locals and visitors alike. It is a fragile landscape surrounded by National Park to the North, East and South and Marine Park to the West. It is heavily anticipated that ongoing population and tourist growth will increase use of these reserves and increase the potential threats to the unique values of the area. It is critical that effective, strategic and proactive management of the area occurs in order to ensure that recreational and commercial useage and visitation of the area is undertaken in a way that ensures the important environmental, cultural and recreational values of the area are maintained. This plan represents a significant component in guiding management of the area and as such has been initiated and funded by the Shire of Augusta Margaret River.

### **1.2 PURPOSE AND SCOPE OF THE PLAN**

Litoria Ecological prepared this plan over a five month period between April and August 2021, and involved consultation with local residents, community and agency stakeholders and relevant Shire staff coupled with a detailed site assessment. This Prevelly Gnarabup Foreshore Management Plan (the plan) provides detailed management strategies and actions for the area to guide on-ground works by both the Shire and community groups.

The purpose of this management plan is to identify management recommendations to maintain and improve the key qualities of the foreshore, namely:

- cultural values;
- conservation values;
- recreational and amenity values; and
- social values.

The objectives are to:

1. maintain and enhance cultural, conservation, recreational and social values of the site;
2. foster community stewardship of and responsibility for the foreshore; and
3. facilitate sustainable recreation.

Key elements of the development of the plan involved:

- an assessment of the current physical and ecological state of the site, including native vegetation, weed burden, dune stability, pedestrian and vehicle access and recreational usage;
- community consultation including input from local residents, community and agency stakeholders; and
- development of detailed, prioritised management recommendations for improving and preserving the values of the site.

The scope of the works did not include a detailed flora and fauna survey of the site and the season within which the work was undertaken (outside of the spring flowering season) meant some species were unlikely to be recorded during the site assessment.

Importantly, the following do not form part of the scope of this plan and are being addressed by other processes or plans:

- detailed assessment of existing or proposed infrastructure including car parking, paths and the boat ramp (a number of existing plans are in place relating to these and others are underway running in conjunction with the preparation of this plan);
- appropriateness of proposed developments on adjoining private land (these are subject to several other planning and development assessment processes); and
- review of and assessment of the appropriateness of the existing dog exercise areas (it is understood that this is to occur in the near future through a separate Shire process).

### 1.3 THE STUDY AREA

The plan is bounded by the Margaret River mouth to the north and Gas Bay to the South and incorporates four separate reserves as detailed below, in Table 1.

**Table 1. Reserves of the Prevelly/ Gnarabup Foreshore.**

Reserve	Area	Reserve Class	Vested Purpose
R41545	116.5	A	“Recreation”
R26228	4.9	C	“Public Recreation”
R33793	4.0	C	“Public Recreation”
R37224	30.7	C	“Public Recreation”

The area is shown on Figure 1.



**Figure 1. Project Area**

The total project area includes over 5.5 km of coastal foreshore covering approximately 156 ha in area and includes five distinct nodes:

- Zone 1 – Rivermouth precinct;
- Zone 2 – Surfers Point Precinct;
- Zone 3 – Riflebutts to Gnarabup Boatramp;
- Zone 4 – Gnarabup Headland to Grunters; and
- Zone 5 – Grunters to Gas Bay.

The Prevelly Gnarabup foreshore represents a granite basement overlain by Tamala limestone and depositional beaches and dunes. The area's granite basement outcrops and is exposed at the Northern and Southern extremities of the study area (including the mouth of the Margaret River, southwards toward Surfers Point and around Gas Bay). The northern portion of the landscape is dominated by the mouth of the Margaret River which opens and closes seasonally and the exact location of opening can vary dramatically from year to year. From Surfers Point through to Grunters Point and 'Sewers' beach the landscape is dominated by limestone cliffs and depositional dunes and beaches rising to over 40 metres in elevation. Three prominent cliffs /headlands punctuate this stretch at Surfers Point/ Riflebutts, Gnarabup headland and Grunters Point

Despite a number of outer reefs and surfbreaks, the predominantly west facing coastline is exposed to significant wave action and storm surge, particularly during winter storms and swells. At these times, the beach is shortened, eroded and the profile steepened. In summer, with reduced sea action and a more southerly trend in wave activity, sand is brought back to the beach, and the profile assumes a more gentle form. During winter erosion events, the foreshore is vulnerable to significant damage and has previously experienced loss or damage to important pieces of coastal infrastructure including multiple beach access stairs, damage to the coastal path, the Gnarabup finger jetty, the boatramp and the White Elephant Café deck and retaining wall.

#### **1.4 ABORIGINAL CULTURAL AND HERITAGE VALUES**

INFORMATION BASED ON INFORMATION SUPPLIED BY ISZACC AND NADINE WEBB, CULTURAL CUSTODIANS FROM THE UNDALUP ASSOCIATION:

The Rivermouth, Prevelly and Gnarabup foreshore lies within a 'Cultural complex' filled with multitude of very significant cultural sites are found within the Prevelly Gnarabup foreshore and in the areas immediately surrounding it. The diversity, number and significance of the cultural sites either registered or unregistered within this zone is unique and unprecedented within the Capes Region, making it one of the most culturally significant areas within the region.

This range of sites include ceremonial sites, women's sites, birthing sites and burial sites. Some of the incredibly significant sites in and immediately surrounding the study area include but are not limited to:

**Wooditjup Bilya** (the Margaret River)

This is the only river within the Wadandi- Pibbelman nation that was created by Merbin (Magic) and not by the Waugal (the rainbow serpent or hairy face snake)

### **Wainilyinup** (or the Sorrow Dying place)

A hugely significant site known as the “Sorrow Dying place”. This site is named after Ederit who, after returning from the beach area now known as Longreef, came back to the old people and said “the wind has spoken to me” “spirits come to Boodja (the country), the women’s faces are red like the setting sun” “there a plenty of houses thick like the shells in my hand” “the country begins to die, I will go now and remember the country that my people once knew” Ederit then went and sat on the ‘shining rock’ near Wainilyup and fasted and refused to eat and eventually died in that place. His grandmothers followed and also passed away at the site. Soon after Ederit’s death the mudlark bird appeared in the area which is now known as Ederit to the Wadandi people as a reminder of the story of the ‘Sorrow Dying place’. This now also represents the reburial site for Ngooraroot.

### **The coastal limestone reefs and headlands of Cape Mentelle, Surfers Point and Gnarabup and Waljin Mia** (Rainbow Cave)

The headlands and reefs of this portion of the coast were created and shaped by the battle between Wallgin (the ocean spirit) and Ngilgi (the land spirit) who fought over Waljin. The huge holes within the reef flats were created by their footsteps as they fought and the headlands formed as the battle collapsed cave systems. Eventually Wallgin sung up ocean magic and pushed Ngilgi back onto the land as the sea began to rise and take over the land. As this happened Ngilgi grabbed Waljin and pulled her through the sky. The flowers fell out of her hair creating the colours of the rainbow. Ngilgi then pulled her through the roof of the cave known as **Waljin Mia** and turned her into the stone inside the cave ensuring that she could never be moved into the cave. **Waljin Mia** remains an incredibly important Women’s Place and birthing cave on the ridge behind Prevelly overlooking the ocean and situated between Boodjidup Brook and the river.

### **Coastal Dunes**

The sand dunes along the coast were frequently used as burial sites for elders.

During the course of the consultation, the cultural custodians stressed the intrinsic linkages and connections between environment and culture and even recreation.

The custodians emphasised that the plants, animals and landscape of this significant foreshore and surrounds are considered part of the Wadandi people’s kinship, family and identity. The Wadandi are intrinsically and spiritually tied to this landscape through songs, through stories and through dance, and have been so for many tens of thousands of years.

*“These are written into the country by place names and songlines. They are our kinship that connects us through cultural lore.” “We don’t own the land - the land owns us”*

## **1.5 PREVIOUS WORK AND EXISTING PLANS AND DOCUMENTS**

It is important to recognise that this plan has not been prepared in isolation, and builds upon a significant body of existing plans and reports that have already exist in relation to the Prevelly and Gnarabup foreshore. This plan draws heavily on the knowledge of and insights of local community members and stakeholders who have contributed both through the consultation

phase of this process and a long history of initiation and implementation of projects to protect and restore the foreshore and its values.

Reports and plans considered in the preparation of this plan include:

- Prevelly Foreshore Reserve Management Plan, 1993
- Augusta – Margaret River Coastal Management Plan, 2005;
- Capes Regional Boating Strategy, 2011
- Rivermouth to Gas Bay Concept Plans, 2011
- Coastal Infrastructure Asset Management Plan, 2012
- Report of an Aboriginal Heritage Survey of Margaret River to Gas Bay, 2012
- Shire of Augusta Margaret River, City of Busselton Coastal and Foreshore Facilities Asset Management and Expansion Plan, 2012
- Gas Bay to Cape Mentelle DCP Revision, 2012
- Coastal Condition Assessment Report, 2013
- Coastal Condition Assessment Report, 2016
- Limestone Cliff Stability Assessment, 2017
- Geoscience Limestone Stability Assessment Report, 2019
- Gnarabup Coastal Planning and Adaptation Conceptual Design Report, 2020
- Gas Bay Public Toilet Investigation, 2020

## **1.6 CLIMATE CHANGE AND SEA LEVEL RISE**

Climate change represents a threat to many aspects of the area's ecology and coastline through changing rainfall patterns, rising temperatures and, most notably in the coastal environment, rising sea levels. The latest Intergovernmental Panel on Climate Change (IPCC) modelling of scenarios compatible with achieving the long-term temperature goal set out in the Paris Agreement predict sea level rises of between 0.43 and 0.84m by 2100 (with additional rises possible depending on ice sheet movements).

Recent monitoring of Fremantle sea level has shown a mean rate of increase of 1.7 mm/year during the period of 1897-2018. It is noted that, within this longer term average, the past 30 years has shown a considerably greater average rise of approximately 3.0mm/year.

Projected sea level rise in the coming decades will significantly impact on the existing shoreline. Whilst this prospect requires very serious consideration and provides important context for the recommendations within this plan, a detailed assessment of the ramifications of these projections sit outside of the scope of this plan. This issue is addressed in detail by the Shire's Coastal Hazard and Risk Management and Adaptation Plan, 2015 and the Shire's Coastal Monitoring Program, 2018, both prepared by Shore Coastal.

It is noted that the long period tides and the 18.6 year nodal cycle is projected to peak around 2023 and that this is likely to accentuate and contribute more to coastal erosion during the life of this plan than longer term Climate Change induced sea level rise.

## **1.7 SENSE OF PLACE**

It is important to note that recent consultation with the community undertaken by the Shire as part of the Strategic Community Plan 2040 has identified that the local environment,

biodiversity and coastal vegetation dominating the Shire reserves of Gnarabup and Prevelly are very important to the local community. This process identified the following as the place statement for Prevelly Gnarabup:

*“Prevelly and Gnarabup, a unique coastal community where raw bushland meets wild ocean and a pristine Margaret River.”*

The place statement underscores the value and importance of the natural environment and foreshore reserves of Prevelly and Gnarabup to the local community and helps describe the attraction of the area to people.

## **1.8 INFRASTRUCTURE PLANNING**

It is important to note that this plan is not a large scale beach infrastructure management plan and as such recommendations on significant infrastructure planning sit outside the scope of the document. It is also noted that infrastructure planning is the focus of a number of existing reports and documents including:

- Coastal Infrastructure Asset Management Plan, 2012
- Shire of Augusta Margaret River, City of Busselton Coastal and Foreshore Facilities Asset Management and Expansion Plan, 2012
- Gas Bay to Cape Mentelle DCP Revision, 2012
- Gas Bay Public Toilet Investigation, 2020

It is also noted that a process currently underway and well advanced by the Shire, the “Strategic Community Plan 2040”, is charged with considering aspects of community infrastructure and long-term planning around this.

It is, however, within the scope of the plan to make recommendations on low-key infrastructure such as signage, pathways and access infrastructure such as beach stairways and fencing.

## **1.9 DOG USE**

Whilst dog use within the plan area is an important issue and consideration for the foreshore, it was noted that the Shire is currently in the process of amending dog use areas across the Shire and that that process is considered the most appropriate mechanism for addressing any changes to dog use areas that are required. Observations from this assessment and views from this community consultation process have been communicated to that other process for consideration.

## **1.10 LIMESTONE AND COASTAL RISK**

It is important to note that Coastal and Cliff Risk is a significant issue throughout much of the Capes coastline and in particular, limestone areas such as much of the Prevelly Gnarabup Foreshore. Several assessments of the coastal cliff risk through this zone have previously been undertaken and these issues need to be reassessed on a regular basis. Whilst some issues associated with potential Coastal Cliff Risk have been noted during the assessment, it is important to note that this was not a focus of the assessment and not part of the assessor’s skill set and recommendations within this report may need to be revisited in light of future coastal cliff risk assessments.

## 1.11 ECOLOGICAL VALUES

The Prevelly and Gnarabup area is surrounded by National Park to the North, East and South and with Marine Park to the West. As such it has exceptional biodiversity values. The vegetation within the Foreshore Reserves is largely in good to very good condition and it is improving. A broad range of wildlife is frequently encountered throughout these .

One priority flora species was identified during the assessment: the Priority 4 *Banksia sessilis* var. *cordata*.

The Margaret River is an important feature of the plan area with different vegetation, wildlife habitat and ecosystems to the remaining portion of the foreshore. Upstream of the project area, the southern bank of the Margaret River foreshore is considered to be almost exclusively graded as A Grade condition for several kilometres. Through the plan area it is considered to be in a mix of A, B and C grade condition.

The area supports a broad range of native wildlife including a number of significant species such as the critically endangered Western Ringtail Possum and priority species such South West Carpet Python, Quenda and Brushtailed Phascogale which are regularly spotted within the area. It is noted that feral pests such as feral cats and foxes are also regularly sighted in the area.

The plan area offers important habitat and refuge within the Cape to Cape coast for a range of shorebirds. Several areas provide patches of seaweed build up in Autumn and Winter and protection amongst the rocks and surrounding vegetation for resting and roosting. Species utilising this area include Cormorants, Pied and Sooty Oyster Catchers, Sanderlings, Silver and Pacific Gulls, Terns, Hooded Plovers and Red capped Dotterels. The rivermouth zone contains resident population of Osprey with nearby nesting. It is noted that the foreshore represents nesting sites for a number of shorebirds including Hooded Plovers and Red-capped Plovers. Furthermore, the Gnarabup to Grunters zone portion of the site is recognised as a Nationally Important site for Sanderling with regular sightings across 2017, 2018, 2019 and 2020 of more than 30 individuals (Birdlife Australia 2020). The Sanderlings that feed on the Prevelly Gnarabup foreshore are one the many migratory shorebirds that utilise the Capes as part of their essential habitat but actually breed 12,000 kms away in Northern Siberia by following the East Asian – Australasian Flyway.

The coastal waters immediately west of the foreshore contain a broad range of marine values appreciated by the community for observation and appreciation, surfing, swimming, snorkelling, diving, boating and fishing. It is noted that whilst ocean swimming has long been appreciated in Gnarabup and Prevelly, especially with the long standing Prevelly Penguins, this pursuit has undergrown a phenomenal increase in popularity in Gnarabup (and other parts around Australia) over the last five or ten years. This boom has resulted in a significantly greater number of people taking a direct interest in the health and management of the marine ecosystem directly offshore from the foreshore. Whilst this area is represents part of the Ngari Capes Marine Park, it is only afforded minimal protection through its classification as Margaret River Special Purpose Zone (Surfing). Many in the community believe that this protection does not go far enough and would like to see strongly restrictions in place within the at least the Gnarabup lagoon.

Increasing populations and visitors throughout the Shire of Augusta Margaret River including significant development proposals within the Shire and Gnarabup itself are likely result in significantly increasing demand and pressure for recreational access to all aspects of Prevelly Gnarabup foreshore and the surrounding Leeuwin Naturalise National Park and Capes Ngari Marine Park. It is essential that this projected useage is managed and directed in a way that minimises the impact on the ecological, cultural, amenity and recreational values of the area.

### **1.12 ACCESS RATIONALISATION AND COASTAL FENCING**

Given the expanse of the study area (over 5.5 km of coastal foreshore covering approximately 156 ha of reserve) and the significant visitation received, one of the biggest threats to both existing native vegetation and the re-establishment of naturally regenerating or planted native vegetation represents unrestricted pedestrian access. It is also important to note that, whilst the powerful winter storms and swells result in the majority of the coastal erosion, the impact of these storms and swells is exacerbated by the reduced vegetation cover and degraded nature of the dunes that result from uncontrolled pedestrian access.

Although from an aesthetic and amenity perspective fencing along our natural and coastal reserves is less than ideal, it is considered an important tool in the management of these important coastal reserves in light of the pressures and useage it receives.

### **1.13 PRIORITY ENVIRONMENTAL WEEDS**

Overall, the foreshore reserves are fortunate to be relatively free from extensive infestations of high priority environmental weeds. However, there are a number of weeds they do represent priorities as detailed below:

Isolated high priority environmental weeds:

A number of high priority environmental weeds were recorded within the foreshore but these largely represented isolated populations still at very manageable levels. These species include:

- Arum lily;
- African lovegrass;
- Hottentot Fig;
- Norfolk Island Hibiscus;
- Agapanthus;
- Victorian teatree;
- Wavy gladioli;
- Flaxleaf Broom; and
- Veldt Daisy.

Introduced dune coloniser species

There are another suite of introduced species that are generally relatively common within many coastal areas of the Capes and do in many instances play a role in stabilising coastal dunes in the absence of or in addition to local native coastal species. Species that fall within this category include:

- Sea spurge;

- Marram grass;
- Dune onion weed;
- Sea Spinach; and
- Rose Pelargonium.

It is noted Sea spurge and Dune Onion Weed are targeted when encountered by the Margaret River Coastal Residents during the course of their work. The other species are not generally considered a priority except in some locations where they are actively excluding native species.

#### Pyp grass (*Erhata villosa*)

Pyp grass was originally introduced to a number of locations throughout the foreshore as a dune stabiliser, although effective at this, Pyp grass is now recognised as an aggressive invasive species that should generally be a priority for control. Efforts over the last several years has been successful in containing and reducing the density of the two main infestations of this species within the foreshore. It is critical that the gains made with respect to the control of this species is followed through on over the life of this plan with consistent and continued investment in contractor control. It is noted that portions of the Rivermouth population remain very dense and control needs to be staged in order to support and allow for native vegetation recovery and replacement.

## 2. METHODOLOGY

### 2.1 COMMUNITY CONSULTATION

The development of this plan builds upon a strong history of community involvement in management of the foreshore between Rivermouth and Gas Bay. The process incorporated a range of opportunities for community input and consultation in relation to the development of the plan.

Consultation undertaken during the preparation of the plan included:

- ‘one-on-one’ conversations with key stakeholders and residents who were identified as having a specific interest in the area;
- discussions with locals and visitors encountered during site work;
- input and comments received during the community site meetings held on Saturday the 22<sup>nd</sup> May 2021, Sunday the 23<sup>rd</sup> May and Thursday the 10<sup>th</sup> June 2021; and
- community submissions received during the preparation of the plan.



A site walk was conducted with Undalup Representatives Iszacc and Nadine Webb on the 22<sup>nd</sup> of November.

Stakeholder representatives from the following groups/organisations were contacted for comment:

- Undalup Association;
- Margaret River Coastal Residents Association;
- Nature Conservation Margaret River Region;
- White Elephant Cafe;
- ‘Hooked Up’;
- Surfriider Foundation – Margaret River Branch;
- Margaret River Recreational Surfers;
- Surf Lifesaving WA;
- Margaret River Nippers;
- Margaret River Marine Rescue;
- Prevelly Penguins;
- Bushtucker Tours;
- Josh Palmateer Surfing Academy;
- Swimming Women;
- Margaret River Stand Up Paddling.

The purpose of the stakeholder consultation was to share information with groups identified as having a specific interest in the area. This included an overview of the process behind the preparation of the plan and detailing the objectives of the plan, the scope of the plan and seeking information on relevant values and management issues. The consultation phase provided an important insight into the views of the community and valuable feedback on year-round usage and issues impacting the bay.

Key feedback from the consultation included:

- 1 There is a strong interest in the protection and understanding of aboriginal cultural values;
- 2 The biodiversity (including shorebirds) and landscape/visual amenity values are very important to the community;
- 3 Strong support exists for dune stabilisation and vegetation protection works including fencing, brushing and revegetation;
- 4 Strong concern exists over the presence, location and function of the Sewage Treatment Plant;
- 5 Very significant concerns exist around future development and population growth especially around Gnarabup Headland and impacts on amenity and biodiversity;
- 6 There is a strong call for additional toilet facilities in areas not currently serviced eg Gas Bay carpark, Grunters carpark;
- 7 There is significant concern amongst stakeholders around ‘user conflicts’ especially in high use location like Gnarabup;
- 8 Concerns exist around the management of coastal hazard and risk management;
- 9 The provision of additional carparking facilities is a contentious issue with opinions varying greatly within the community;
- 10 There is a strong push for greater spearfishing controls in at least parts of the Gnarabup lagoon.

The cultural custodians consulted on the preparation of the plan were very supportive of the work and projects being driven by the Margaret River Coastal Residents Association which in recent time this has included collaboration with the Undalup Rangers.

The area that Undalup has taken a particular interest in is Wainielyup (or the Wallcliffe Caves) where they have undertaken re-burials and instigated changes to commercial tourism access in the area and rehabilitation works.

Undalup want to continue to care for and manage this site including:

- Undertaking further bush regeneration works including removal of priority environmental weeds and revegetation planting; and
- Preparation and installation of interpretive signage so that any visitors to the area are aware of the significance of the site and what is and isn’t appropriate.

## **2.2 ON-GROUND ASSESSMENT**

The on-ground assessment was undertaken by Drew McKenzie during predominantly late Autumn, Winter and Spring 2021. The assessment involved the collection of detailed information on the following aspects:

- Coastal and foreshore erosion;
- Coastal condition assessment;
- Areas requiring revegetation and rehabilitation;
- Dominant vegetation species;
- Infrastructure present;
- Priority environmental weed presence and impact;
- Track and trail status;
- Pedestrian access;
- Recreational uses and issues; and
- Baseline photo-point monitoring.

## 2.2.1 COASTAL CONDITION ASSESSMENT

During the original coastal condition assessment in 2013, the study area was divided into sections with similar natural values and management requirements and a methodology was developed in order to assess the condition of each section. This initial assessment served as a baseline for tracking changes over time and the assessment was updated in 2016 using the same methodology. An important part of this project was to revisit this assessment five years on with a consistent methodology and compare the changes.

The methodology involved surveying each section and grading them as A - D as follows (see examples in photos below):

- A.** Continuous native vegetation cover - native vegetation is continuous (>70%), there are very few exposed areas, weeds may be present in very low numbers.
- B.** Mainly native vegetation - native vegetation covers most of the area (<70%), there are only scattered exposed areas, weeds may be present but generally sparse.
- C.** Patchy native vegetation - native vegetation is patchy (10 – 70%) and may be interspersed with scattered exposed areas throughout or large areas of open ground within the site. Weeds are present and may be abundant. Erosion may be occurring.
- D.** Sparse native vegetation - native vegetation occurs very infrequently with only small patches of vegetation present (< 10%), Weeds may dominate and erosion may be present.

Figure 2 shows the coastal condition mapping in 2016 alongside the condition mapping undertaken in 2021. Whilst the scope of the assessment area broadened in 2021 it should be noted that the condition rating has improved across significant portions of the study area.

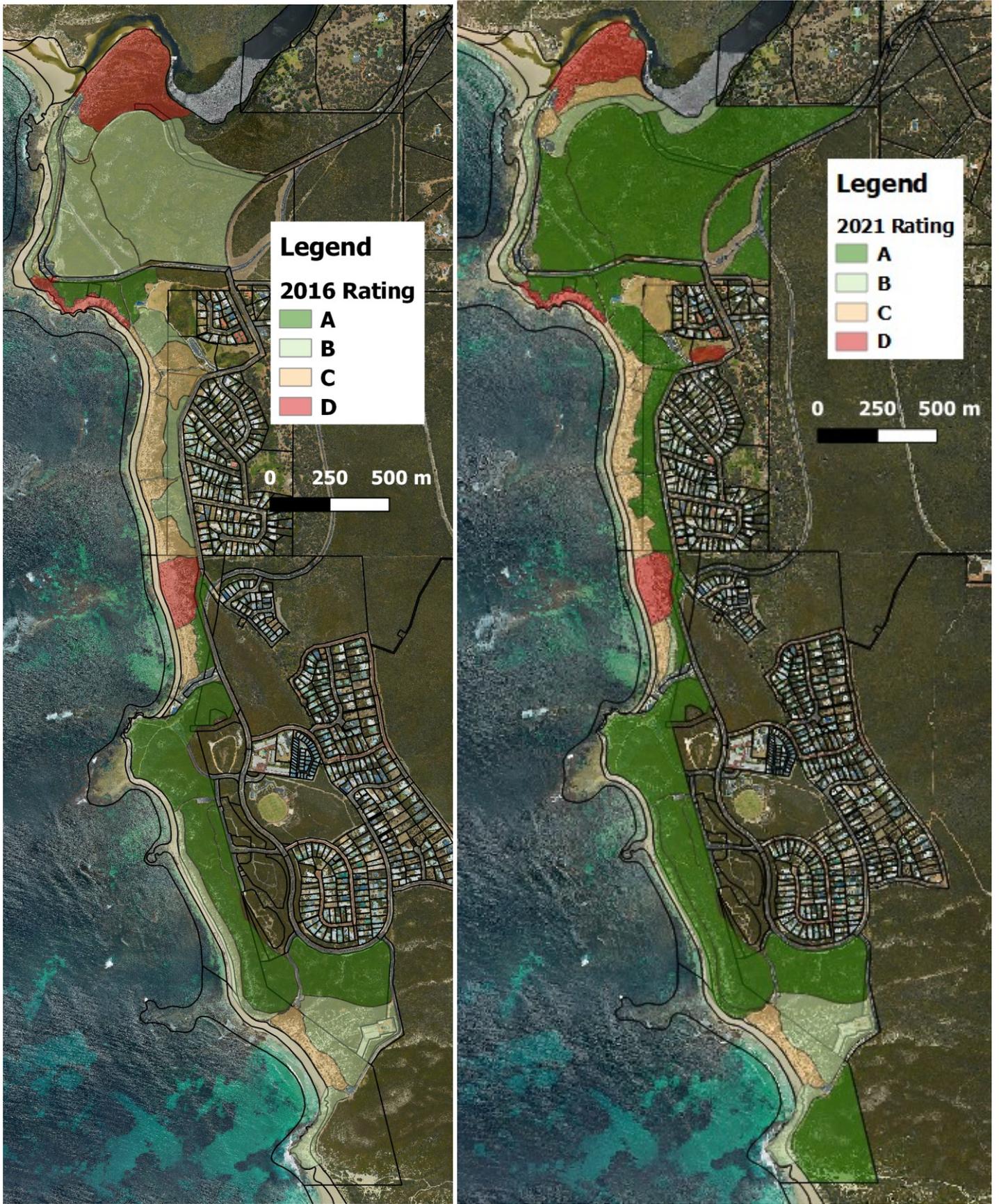


Figure 2. Coastal Condition comparison 2016 - 2021

### **3 DESCRIPTION OF THE FORESHORE ZONES**

#### **3.1 ZONE 1: RIVERMOUTH AND SURROUNDS**

This area is highly diverse and spans the estuarine areas of the reserve foreshore from Wallcliffe House through to the high energy surf zone in front of and adjacent to the Rivermouth. It ranges from the vertical limestone cliffs and caves of Wainielyup through to granite rocks, rockpools and foreshore immediately south of the Rivermouth. This area also contains diverse range of native vegetation including paperbark wetlands, coastal heath, Pyp grass dominated dunes and areas of dune colonisers on the shoreward front. This zone includes the two very significant cultural sites of Wainielyup and Wooditjup Bilya.

This zone is very popular among surfers and is considered an important wave in the development and progression of many high profile local surfers and a learning ground for many. The rivermouth is also popular for general beachgoers, visitors to the region and represents a major river crossing for Cape to Cape Track hikers. It is the primary point of access for people wishing to recreate in the Margaret River including swimmers at the mouth and people paddling craft upstream. It is an important node for commercial operators including the Surf School, Canoe hire and guided tour starting point. It is the only beach within the precinct that is patrolled by Lifesavers, but only during the summer period.

The high level of useage of this area is reflected in the provision of a formalised, bitumenised carpark, basic toilet block including change rooms, picnic tables and lookout through this area.

Vegetation through this zone ranges from very good through to degraded condition. The central block has improved since 2016 and is now considered as A grade condition rating. However the portions adjoining the rivermouth and adjacent estuary have been heavily degraded by excessive pedestrian access, water erosion (including both wave and river) and the dominance of the introduced Pyp grass through much of this section.

Key management issues through this zone include:

- Unauthorised storage of watercraft on public foreshore;
- Impacts of high water levels during large swells and prior to mouth opening;
- Dune fencing to protect vegetation and guide access;
- Control and containment of the Pyp grass;
- Illegal digging open of the rivermouth seasonally (of greatest concern in late Spring/ Early Summer);
- Illegal camping in carpark during the summer months;
- Regular concerns over water quality within the river during summer leading to occasional beach closure;
- Increase awareness of National Park tenure north of the rivermouth; and
- The significant cultural heritage values of Wooditjup Bilya and Wainielyup.



Potential for weed establishment in strategic firebreaks



Pyp grass dominated dunes



Wainielyup foreshore and potential for regeneration



Impacts of carpark overflow on vegetation



Minor blowout in need of stabilisation



Rivermouth fence: replace and realign

### 3.2 ZONE 2: SURFERS POINT PRECINCT

This area is made up of a narrow beach, with or without a limestone wave cut platform, elements of exposed granite, low foredunes grading rapidly into a low limestone ridge/cliff. Despite the world renowned powerful surfing waves offshore, this beach stretch contains some relatively sheltered limestone and granite enclosed swimming holes. The vegetation in this area is dominated by a range of dune colonisers on the shoreward front and transitions to closed heath further inland.

This zone is world famous for surfing and wind/kite surfing and is the site of the annual World Surf League event the 'Margaret River Pro'. It receives significant visitation primarily from surfers, kite/wind surfers, fishermen, general beachgoers and tourists and is especially popular for picnicking on sunset during summer. It also contains a sheltered reef lagoon and popular rockpools along the shore. As an iconic focal point for visitation, it contains significant infrastructure including well developed carparks, toilet block and change rooms, picnic tables and bbqs. Several stairways to the beach and lookout shelters are also present.

Vegetation through this zone ranges from excellent condition heath land through to degraded patches of foredune. The degraded nature of portions of the dunes and shoreward most vegetation is generally a reflection of historical access and the impact of coastal erosion. Extensive revegetation and planting efforts are not considered necessary within this zone and brushing and control of inappropriate access is considered the primary method of addressing the isolated areas of degradation.

Key management issues through this zone include:

- Recent damage to and loss of foreshore dune fencing near Fraggie Rock
- Illegal camping in carpark areas
- Historical degradation and continued access to areas under regeneration between Surfers Point and Rivermouth
- Additional fencing and access definition required at the northern Fraggie Rock beach access point.
- Presence of priority environmental weeds and introduced tree species eg) Arum, *Carpobrotus edulis*, Platypus gums.



Degraded cliff risk area in front of southsides that is still having pedestrian access



Weedy area in front of Surfers Point lawn



Continued dune access behind fencing



Continued and historical unofficial beach access north of Surfers point





Fraggle Rock zone in need of foredune fencing reinstatement



Fraggle Rock Beach Access Track delineation required

### 3.3 ZONE 3: RIFLEBUTTS TO GNARABUP BOATRAMP

This portion of the foreshore is dominated by the Gnarabup lagoon and the dune system between the beach and Mitchell Drive. Whilst underlain by limestone (and granite) the sandy nature of the shoreline through this stretch makes it vulnerable to wind/wave erosion and damage by pedestrian traffic.

The area represents a much loved and appreciated stretch of foreshore for surfers, beach goers, walkers, children and ocean swimmers. The lagoon provides relatively safe swimming opportunities along the entire length making this area sought after for families and swimmers. The coastal path through this area is incredibly popular and is highly utilised by both locals and visitors alike. The foredunes here have suffered intense erosion events in recent years and the secondary and back dunes have been the subject of significant regeneration and stabilisation program including ongoing control of Pyp grass.

This area contains some important infrastructure including the popular picnic and playground area at Riflebutts which includes toilets, maintained lawn areas and BBQs. The coastal path is another important piece of coastal infrastructure which is under threat from erosion in parts. Several paths traverse the dunes from Mitchell Drive to the beach and provide important access to the beach for local residents and beachgoers utilising the small nodal carparks along this stretch.

Vegetation along this stretch is dominated by core primary and secondary dune species and the vegetation cover has increased and improved significantly over recent years due to post fire recovery and dune protection actions by the Margaret River Coastal Residents Association (MRCRA). This area represents confirmed habitat for the critically endangered Western Ringtail Possum with scat and dreys identified during the site assessment. The area also experiences regular nesting of shorebirds such as red capped plovers.

Key management issues through this zone include:

- Foredune erosion represents an issue along almost this entire stretch;
- Continued Pyp grass control;
- Coastal path realignment and repair;
- Need for additional interpretive signage along the coastal path;
- Opportunity for disabled beach access through here;
- Damage to beach access stairs etc;
- Isolated Arum infestations establishing in swales and depressions;
- Demand for expanded and rejuvenated playground/picnic/BBQ/shade area at Riflebutts;
- Potential for expanded use of overflow carparking at Riflebutts;
- Need for continued dune stabilisation and regeneration works;
- Call for restrictions on spearfishing within the lagoon;
- Need for protection and awareness raising with respect to regular shorebird nesting; and
- Control of priority woody weeds and *Carpobrotus edulis*.



Potential for sign consolidation, replacement and rejuvenation and increased interpretative signage.



Community planting of pigface cuttings



A Grade portions of the coastal dunes between Mitchell Drive and the coastal path





Coastal Path: beach steps in need of attention, fencing needing extension to the beach and ringlock needs replacing



Duplicated beach access fencing.



Potential location of shade shelter and picnic table



Western Ringtail Possum scat under dune Moonahs.

### **3.4 ZONE 4: GNARABUP HEADLAND TO GRUNTERS**

This zone is dominated by the limestone cliffs and headlands of Gnarabup and Grunters and the ridge in between. The narrow, steep sandy beach of Longreef or Back Beach occurs between the two headlands with a well defined in excellent condition occurring behind the foredune. This beach is largely sheltered from high energy waves by offshore reefs and the lagoon immediately offshore.

This zone is popular with families, divers, swimmers, fishermen and despite not designated as such, Longreef is considered by many as an unofficial dog beach. It contains the lookout at Gnarabup and a well defined network of trails through the headland. From the Gnarabup headland, south to Grunters this zone is much less developed nature and has more remote feel to the landscape. Very minimal infrastructure and no dwellings, carparks or roads are visible from the beach.

The vegetation through this zone is almost entirely considered as A Grade condition rating and is largely dominated by coastal heath.

This area is considered important for shorebird feeding, resting and nesting including Hooded Plover nesting. It is regularly observed supporting more than 30 Sanderling and is recognised as a Nationally Important site for Sanderling.

Key management issues through this zone include:

- Degraded, eroding and heavily accessed dunes at Long Reef;
- Water erosion down the Long Reef access track;
- Long Reef stairs in need of extension and stabilisation;
- Isolated patches of Arum lily and other priority environmental weeds through this zone;
- Pedestrian access below the Gnarabup lookout represents a health and safety, cliff risk and environmental risk;
- Eroding and extremely rugged limestone path west of the Gnarabup lookout;
- Significant offlead dog use through this area and important Hooded Plover and other shorebird nesting area;
- Eroding and incised minor access point originating from the southern end of Seagrass Place needs stabilisation and formalisation.



Run down existing stairs to the White Elephant from the Oceanview Rd carpark



Erosion and access below the Gnarabup headland lookout



Gnarabup Headland track erosion





Long Reef beach access fencing and stairs



Long Reef beach access track erosion



Long Reef - degraded pedestrian accessed dunes and limestone



Seagrass Place track

### **3.5 ZONE 5: GRUNTERS THROUGH TO GAS BAY**

This zone stretches south from the limestone headland of Grunters, through the sandy beach and dunes of ‘Sewers’ Beach and into the granite dominated foreshore of Gas Bay and onto the start of Boodjidup Beach.

This zone is very popular with surfers of all levels with advanced breaks such as Grunters and Gas popular among competent and experienced surfers and Sewers, ‘Geachies’ and Inside Grunters popular for a wider range of competencies including learners - especially Inside Grunters. It is noted that Gas is often utilised for both surfing and bodyboard competitions by Surfing WA and the Margaret River Boardriders. In addition, Sewers and Inside Grunters are often utilised by Learn to Surf and Surf Coaching businesses. This stretch is also popular with fishermen/women and families.

This zone contains carpark facilities at Grunters and Gas Bay and well developed paths and stairs to the beach at Grunters, Sewers and Gas and a well developed lookout over Sewers. Notably there are no toileting facilities within this whole stretch despite the level of useage it receives. This area also contains the Gnarabup Sewage treatment plant operated by Water Corporation. In addition to this treatment facility, the dunes behind Sewers are utilised for the disposal of the treated sewage and as such contain some important Groundwater monitoring bores used for essential and statutory monitoring of the functioning of the facility.

This area is also considered important for shorebird feeding, resting and nesting including Hooded Plover nesting. It is regularly observed supporting more than 30 Sanderling and is part of the stretch recognised as a Nationally Important site for Sanderlings.

Key management issues through this zone include:

- Extremely crowded and overloaded carparks at Gas and Grunters during particular surfing condition;
- Evidence of toileting in the vegetation surrounding Gas and Grunters carpark;
- Serious dune degradation north of the Grunters beach access stairs;
- Degraded dune area and lack of access direction behind Gas;
- Water rrosion, rutting and incision of the Gas path and minor beach access tracks to Sewers Granite rocks;
- Isolated priority environmental weeds present in this zone include Arum, Sea Spurge;
- Abundance of beach access tracks onto the granite rocks at the south end of Sewers beach;
- Maintenance and extension of the Sewers Beach steps required;
- Continued pedestrian access and sand boarding in the dunes behind ‘Sewers’ beach;
- Increase awareness of National Park tenure south of the Gas Bay headland;
- Increased awareness and protection of the significant shorebird populations required through this zone;
- Concerns raised about the operation and potential overloading of the STP.

**Figure 6. Zone 5 Management Issues**



Degraded area proposed for new lookout



Degradation caused by carpark overflow



Significant tracts of excellent condition coastal heath



Eroded and incised beach access track



Beach access track to be kept as part of process



Pockets of isolated Arum represent a priority



Disturbance to the foreshore reserve from vehicle access involved in the STP GW Bore monitoring/ maintenance



Significant dune stabilisation and revegetation works in the dunes behind Sewers.

Sewers beach access stairs

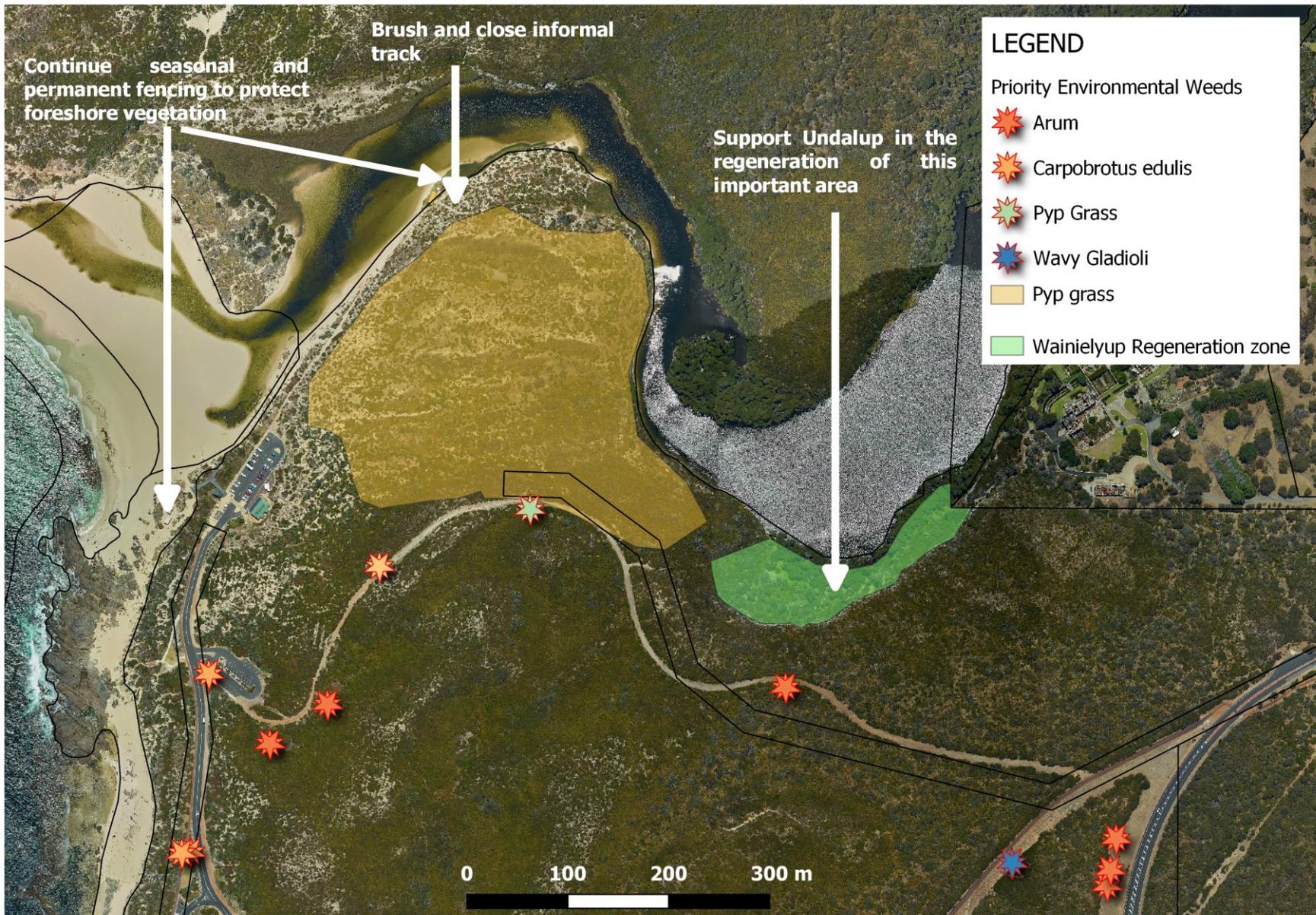
#### 4 MANAGEMENT RECOMMENDATIONS

The following recommendations have been developed based on the objectives of the plan, site assessment, literature reviews and community consultation. The recommendations are broken into the five management zones with overarching strategic recommendations up front.

<b>OVERARCHING STRATEGIC MANAGEMENT ACTION RECOMMENDATIONS</b>		
<b>#</b>	<b>RECOMMENDATION</b>	<b>PRIORITY</b>
I	Acknowledge and note the significant Aboriginal Cultural values and sites located within and around the area and consider during all future management decisions.	H
II	Explore with Traditional Owners potential options for expanded Aboriginal Cultural interpretation and awareness raising to increase understanding and respect amongst the community.	H
III	Ensure Traditional Owners are consulted during the planning stages of on-ground work and where appropriate, obtain Reg 10 approvals and/or have indigenous monitors present during disturbance related work.	H
IV	Consider, implement and respond to Coastal and Cliff Risk Management Recommendations in relation to the Prevelly Gnarabup Foreshore.	H
V	Involve the community in the implementation of this plan as much as possible to increase community capacity and ownership of projects and utilise the community's skills and knowledge. Key groups to involve include the MRCRA, school groups, commercial operators, boardriders, Indigenous youth networks and the Undalup Rangers.	H
VI	Review the vested purposes and classification of the four reserves that make up the study area to more accurately reflect the current conservation and foreshore protection values of the reserves.	M
VII	Consider projected sea level rise in all future projects and ensure that any significant investment in infrastructure is placed well back from the current high water mark.	H
VIII	Continue to support and assist the Margaret River Coastal Residents Association in their important role of involving the community in coastal issues and in the implementation of a range of aspects of this management plan.	H
IX	Whilst extensive interpretative signage exists around Surfers Point and the Rivermouth, relatively limited interpretative signage is currently in place through the remainder of the zone. The potential exists to develop a series of interpretive signs to be placed at key viewing locations through the foreshore covering a broad range of topics such as Indigenous heritage, geology/ geotechnical, the marine system, local flora and fauna and shorebirds in order to increase locals and visitors understanding of the cultural, environmental and recreational values of this iconic stretch of foreshore. Key areas for additional interpretation include the Prevelly Gnarabup coastal path, Gnarabup headland, Long Reef, Grunters lookout and Gas Bay lookout.	H
X	Continue photo-point monitoring at key locations.	M
XI	Control high priority environmental weeds adjacent to the project area known to represent a risk to the project area eg) Geraldton Carnation Weed and Arum Lily	H
XII	Promote awareness, including interpretative signage, of the values and threats to resting, feeding and nesting shorebirds throughout the foreshore.	H

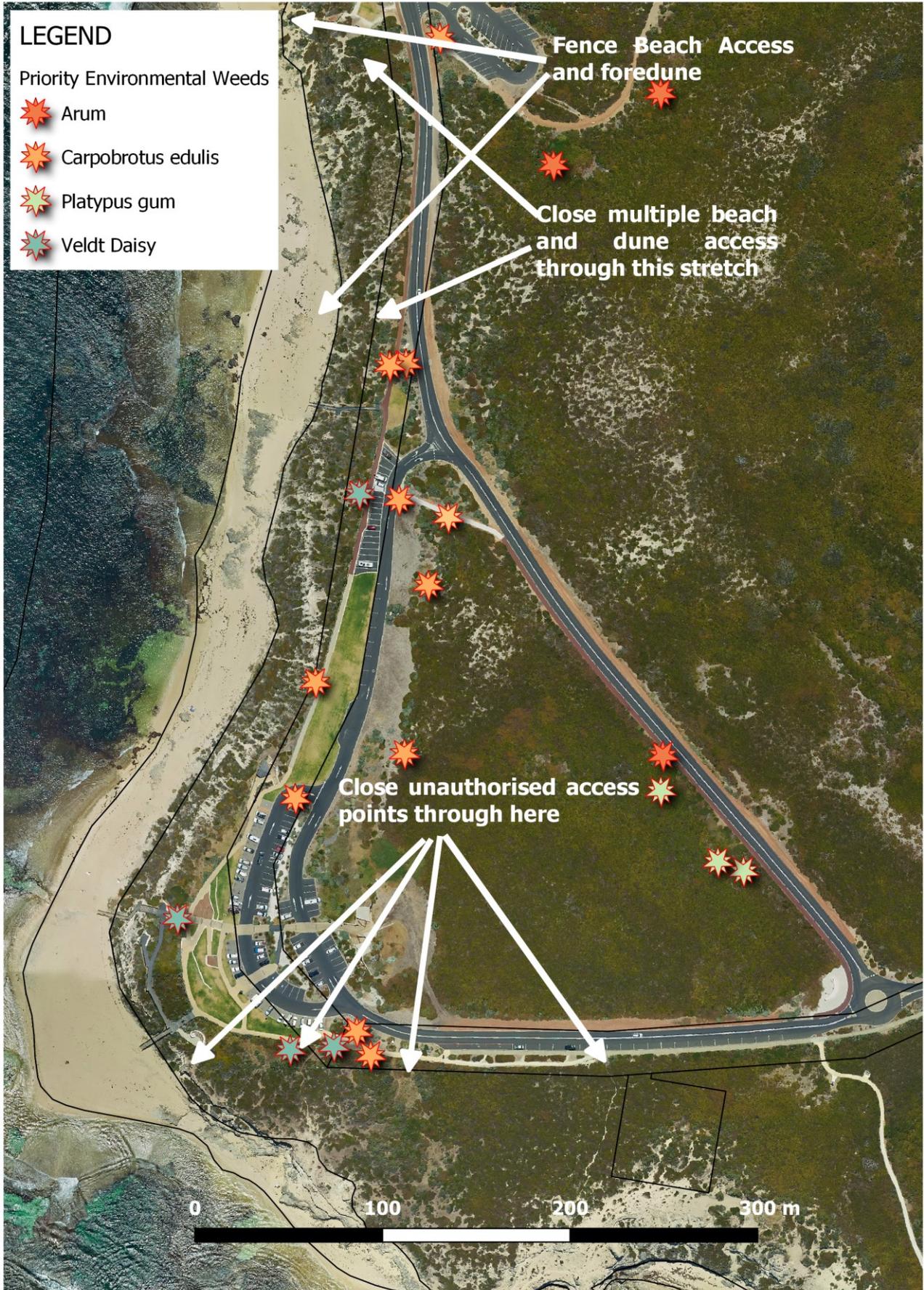
XIII	Allocate appropriate resources to undertake regular inspections and repairs of beach accessways and stairs	H
XIV	Identify or create/recreate stands of appropriate local provenance Pigface that can be used as 'cutting orchards' for ongoing planting/ transplanting and seed collection	H

<b>ZONE 1: RIVERMOUTH PRECINCT</b>		
<b>#</b>	<b>RECOMMENDATIONS</b>	<b>PRIORITY</b>
1.1	Consider the potential for community environmental interpretative art on the poles of the shade shelters and the Rivermouth toilets	H
1.2	Rationalise the tracks including additional fencing of the zone in front of the beach access ramp to the shade shelters to guide traffic and protect dune vegetation	H
1.3	Consider fencing the zone behind the toilets to prevent access and encourage regeneration	M
1.4	Strategic weeding (especially of thick Rose Pelargonium) and revegetation of small patches in front of the Rivermouth carpark.	H
1.5	Continue to raise awareness of the cultural sensitivities and significance of ‘Wainielyup’ and Wooditjup Bilya.	H
1.6	Support Undalup in their management and regeneration of the Wainielup foreshore including interpretive signage, targeted priority environmental weed control and revegetation.	VH
1.7	Continue the strategic, staged control of Pyp grass through the northern portion of this zone with the aim of containment and gradual reduction in extent at a pace with which native dune vegetation can replace it.	H
1.8	Undertake staged control of the isolated occurrences of high priority environmental weeds within this zone including: <ul style="list-style-type: none"> <li>• Purple Groundsel,</li> <li>• Dune Onion Weed,</li> <li>• Sea Spurge, and</li> <li>• Rose Pelargonium.</li> </ul>	H
1.9	Realignment and maintenance of the fencing of the dunes upstream from the carpark. Including fencing and creation of secondary ‘high water’path	H
1.10	Brush and plant the emerging path over the dunes behind the canoe storage area	H
1.11	Brush and plant the eroding dune sections immediately upstream of the carpark	H
1.12	Address the unauthorised storage of canoes and kayaks on the foreshore in this zone.	M
1.13	Ensure rangers regularly patrol for illegal camping, fires and dogs on the beach in this zone	H
1.14	Consider providing commercial operators access to power to avoid generator use and impacts on amenity.	M
1.15	Consider installing a mobile phone ‘local booster aerial’ to address the “black hole” in coverage which often exists in the Rivermouth carpark which represents a potential safety issue.	H
1.16	Consider providing a second fenced ‘high water’path through the dunes to the east facing foreshore. Exact location subject to consultation with Wadandi cultural custodians.	H
1.17	Promote awareness and incorporate signage around the shorebird values of this zone and the location of the National Park to the north.	H



**Figure 3. Zone 1- Key Recommendations**

<b>ZONE 2: SURFERS POINT PRECINCT</b>		
<b>#</b>	<b>RECOMMENDATIONS</b>	<b>PRIORITY</b>
2.1	Repair and reinstate foredune fencing between Surfers Point and the 'Fraggle Rock' access track.	H
2.2	Undertake brushing and planting of multiple points of informal access from the established footpath shorewards between Surfers Point and 'Fraggle Rock'	H
2.3	Brush multiple informal/ historical access points near the beach edge to support regeneration and deter additional pedestrian traffic.	H
2.4	Brush and potentially fence to prevent access to informal trails emerging south from the Fraggle Rock picnic area.	M
2.5	Undertake control of the isolated occurrences of high priority environmental weeds within this zone including: <ul style="list-style-type: none"> <li>• <i>Carpobrotus edulis</i>;</li> <li>• Platypus gums;</li> <li>• Arum lily;</li> <li>• Dune Onion Weed;</li> <li>• Veldt Daisy.</li> </ul>	H
2.6	Ensure rangers regularly patrol for illegal camping in this zone.	M
2.7	Strategic weeding (especially of Rose Pelargonium) and revegetation of small patches in front of the Surfers Point picnic area.	M
2.8	Undertake brushing of multiple points of informal access from the established footpath shorewards between Surfers Point and Riflebutts.	H
2.9	Consider providing commercial food/ drink operators access to power to avoid generator use and impacts on amenity.	M



**Figure 4. Zone 2 - Key Recommendations**

<b>ZONE 3: RIFLEBUTTS TO GNARABUP BOATRAMP</b>		
<b>#</b>	<b>RECOMMENDATIONS</b>	<b>PRIORITY</b>
3.1	Undertake control of the isolated occurrences of high priority environmental weeds within this zone including: <ul style="list-style-type: none"> <li>• <i>Carpobrotus edulis</i></li> <li>• Platypus gums</li> <li>• Arum lily</li> <li>• Broom</li> <li>• Wavy Gladioli</li> <li>• Dune Onion Weed</li> <li>• Veldt Daisy</li> </ul>	H
3.2	Continue revegetation, brushing and stabilisation of the swale and secondary dune through vulnerable portions of the central part of this zone.	H
3.3	Continue undertaking the seasonal fencing of the foredune and promote the value of this to the community	M
3.4	Remove and/or maintain portions of the beach access track fencing installed post 2011 fires that is either: <ol style="list-style-type: none"> <li>1. No longer necessary due to vegetation recovery;</li> <li>2. Redundant following boardwalk installation; or</li> <li>3. Broken and dysfunctional.</li> </ol>	H
3.5	Extend funnel fencing / stabilise beach entry at beach access points to facilitate/ direct pedestrian traffic and protect the dunes.	H
3.6	Ensure that the follow up control of the Pyp grass infestation continues through this zone to capitalise on previous efforts and investment.	H
3.7	Install shade/ sun shelter and picnic table at the Georgette Way carpark to support this zone	H
3.8	Address erosion of the steps onto the beach at several access points to the beach.	H
3.9	Remove/ replace old faded/ rusty signage around the main Gnarabup carpark and coastal path and where possible consolidate multiple individual elements of signage installed over many years.	M
3.10	Consider an additional beach access track/ steps on the northern side of the boatramp to minimise potential clashes and safety issues between swimmers and boats.	M
3.11	Investigate options to expand and improve the playground and picnic facilities within the popular Riflebutts zone	H
3.12	Continue to investigate the potential for providing/ supporting disability beach access at Riflebutts	H



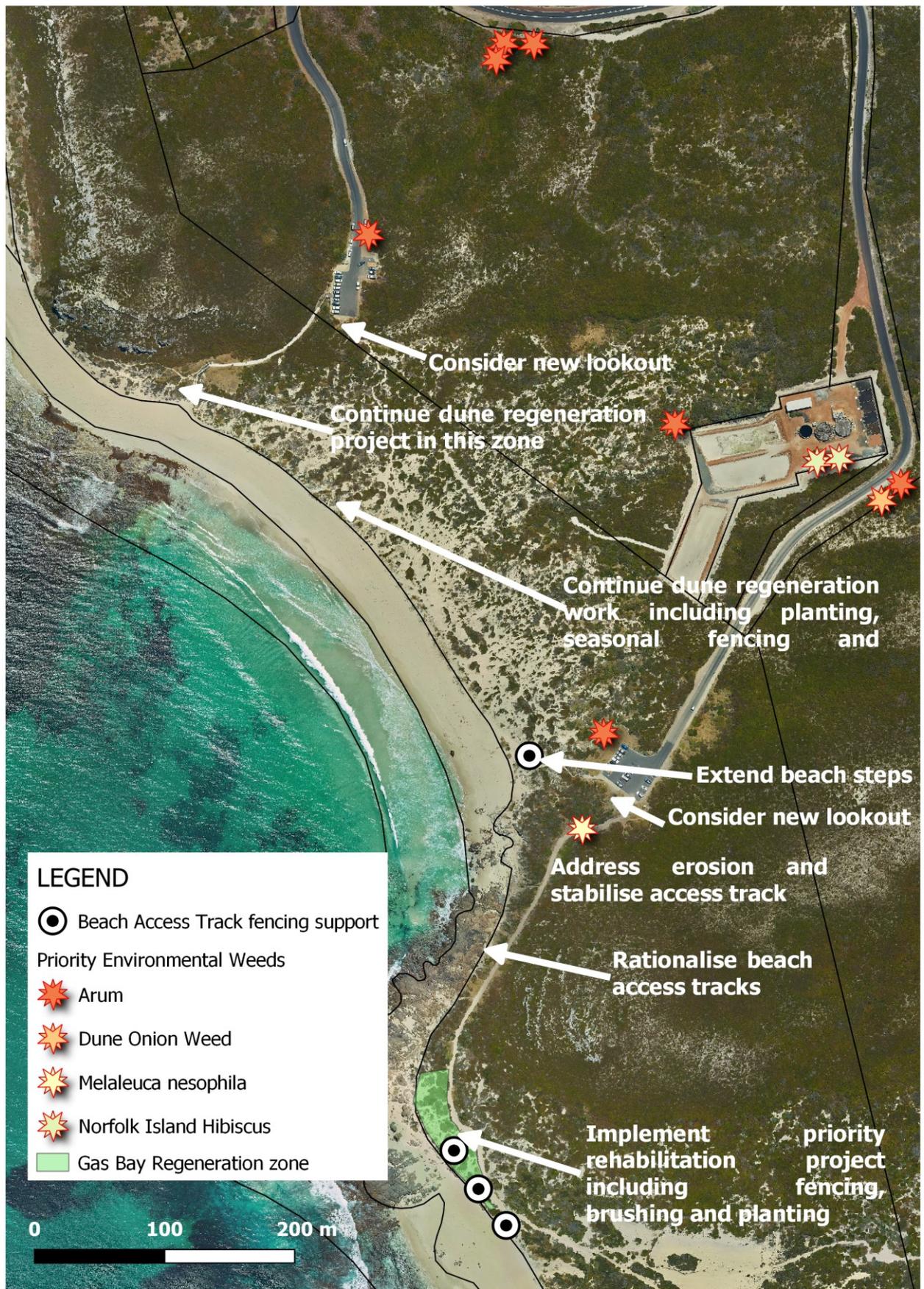
**Figure 5. Zone 3 - Key Recommendations**

<b>ZONE 4: GNARABUP HEADLAND TO GRUNTERS</b>		
<b>#</b>	<b>RECOMMENDATIONS</b>	<b>PRIORITY</b>
4.1	Install water diversion bars along the Long Reef beach access track to address erosion and install fencing/ brush at the start of the informal trail off the beach access track	M
4.2	Extend seasonal fencing along the Long Reef foredune to address pedestrian access exacerbated dune erosion and degradation	H
4.3	Continue and extend brushing along the Long Reef dunes.	H
4.4	Address erosion on the track and replace/ rejuvenate the old concrete steps and rusted handrails from the Ocean View Rd carpark down to the White Elephant Café.	H
4.5	Close the informal trails from the Gnarabup Lookout and around the limestone ledge below the lookout.	VH
4.6	Address the erosion to the trail west of the Gnarabup Lookout.	H
4.7	Continue to monitor and support existing regeneration effort in the foredunes north of the Grunters stairs.	H
4.8	Control the isolated but increasing Arum along the Seagrass PI beach access track and behind the Long Reef foredune.	VH
4.9	Address the erosion and incision occurring through the steep portions of the Seagrass PI beach access track using a mixture of water bars, earthen/ coit log and timber steps	H
4.10	Undertake control of priority environmental weeds within this zone including: <ul style="list-style-type: none"> <li>• Isolated Platypus Gums</li> <li>• Victorian teatree</li> <li>• Dune Onion Weed</li> <li>• Continued Sea Spurge patrol and control</li> </ul>	H
4.11	Increase ranger presence to deter illegal camping, fires and off lead dogs outside of appropriate zoning	H
4.12	Promote awareness of and education around the shorebird values of this zone	H



**Figure 6. Zone 4 - Key Recommendations**

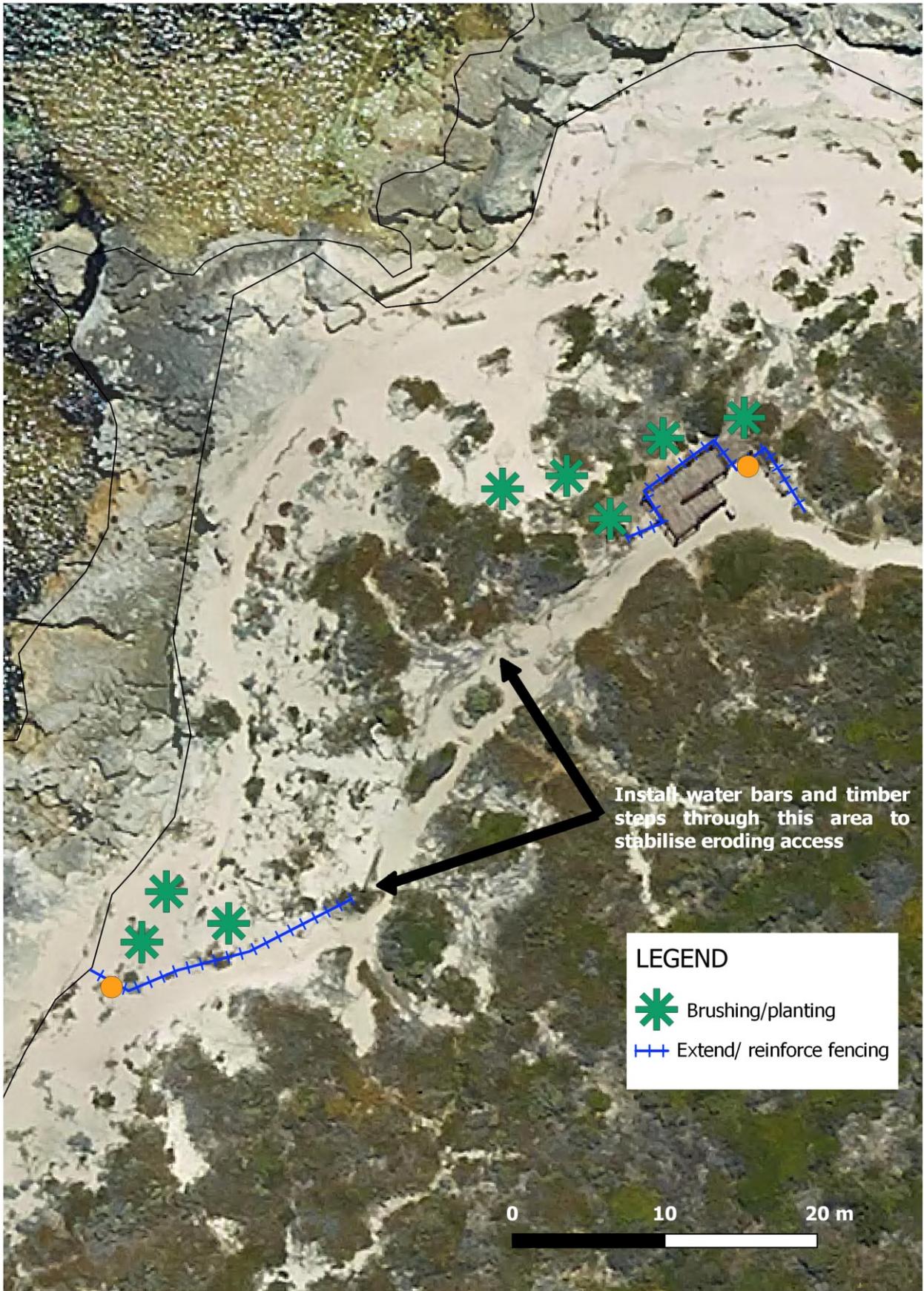
<b>ZONE 5: GRUNTERS TO GAS BAY</b>		
<b>#</b>	<b>RECOMMENDATIONS</b>	<b>PRIORITY</b>
5.1	Install minor 'water bars' into the main path south of the Gas Bay carpark to divert water from the path and secondary beach tracks and prevent further erosion	H
5.2	Rationalise and harden/ support retained beach access tracks regenerate closed minor beach access tracks between Gas Bay car park and Gas Pt using brush.	M
5.3	Regenerate closed minor beach access tracks between Gas Bay car park and Gas Pt using brush.	M
5.4	Rationalise and regenerate tracks to be closed through the dunes to Gas Point. Primary regeneration methods to include fencing, brushing, pigface and spinifex plantings. Exact location of retained beach access tracks to be determined in consultation with local boardrider groups.	H
5.5	Install seasonal and more permanent fencing to guide and rationalise access around Gas Point.	VH
5.6	Install low key seasonal fencing at the vegetation line of sewers beach to deter access into the dunes and dunal vegetation.	M
5.7	Extend steps and funnel fencing to Sewers Beach and provide a hardened platform at the base in order to address the existing eyesore and safety hazard and protect the dunes in this area.	H
5.8	Continue to maintain and monitor the Grunters foredune rehabilitation and fencing project including additional brushing and planting where necessary.	H
5.9	Continue dune regeneration project along Sewers Beach foreshore.	H
5.10	Consider the installation of a lookout and viewing platform at the Southern end of carpark in infrastructure planning.	M
5.11	Control the isolated but increasing Arum around the Gas Bay car park and along Gas Bay Rd, Wallcliffe Rd and Breeze Cove.	VH
5.12	Undertake control of priority environmental weeds within this zone including: <ul style="list-style-type: none"> <li>• Arum Lily;</li> <li>• Norfolk Island Hibiscus; and</li> <li>• Continued Sea Spurge control and patrol.</li> </ul>	H
5.13	Increase ranger presence to deter illegal camping, fires and offlead dogs.	H
5.14	Review the appropriateness of the current location and operation of the Sewage Treatment Plant in line with the community and Shire's ambition for the area.	H
5.15	Additional fencing, brushing and regeneration around the Gas Bay carpark lookout/ viewing platform.	H
5.16	Promote awareness and incorporate signage around the shorebird values of this zone and the location of the National Park to the south.	H



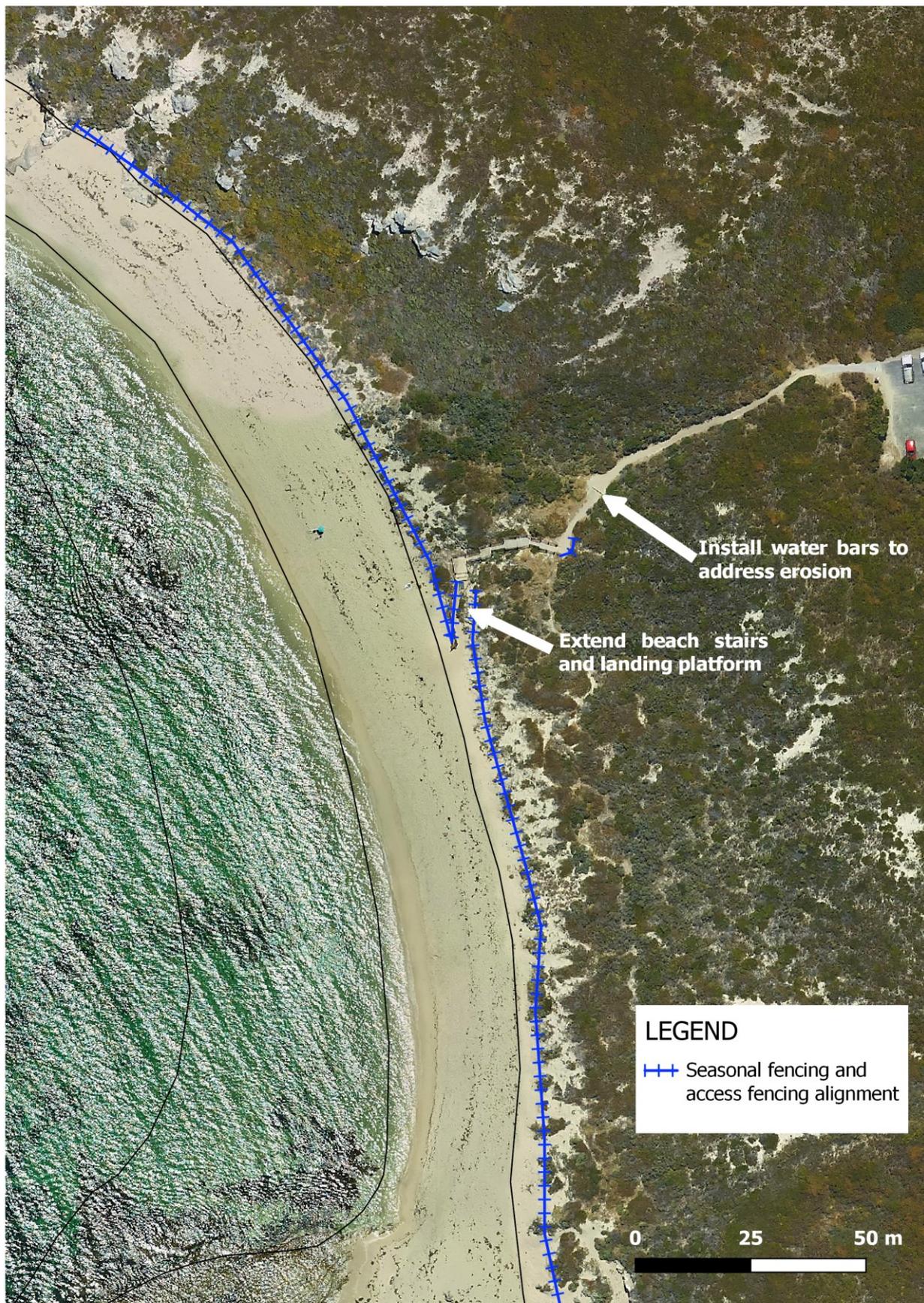
**Figure 7. Zone 5 – Key Recommendations**



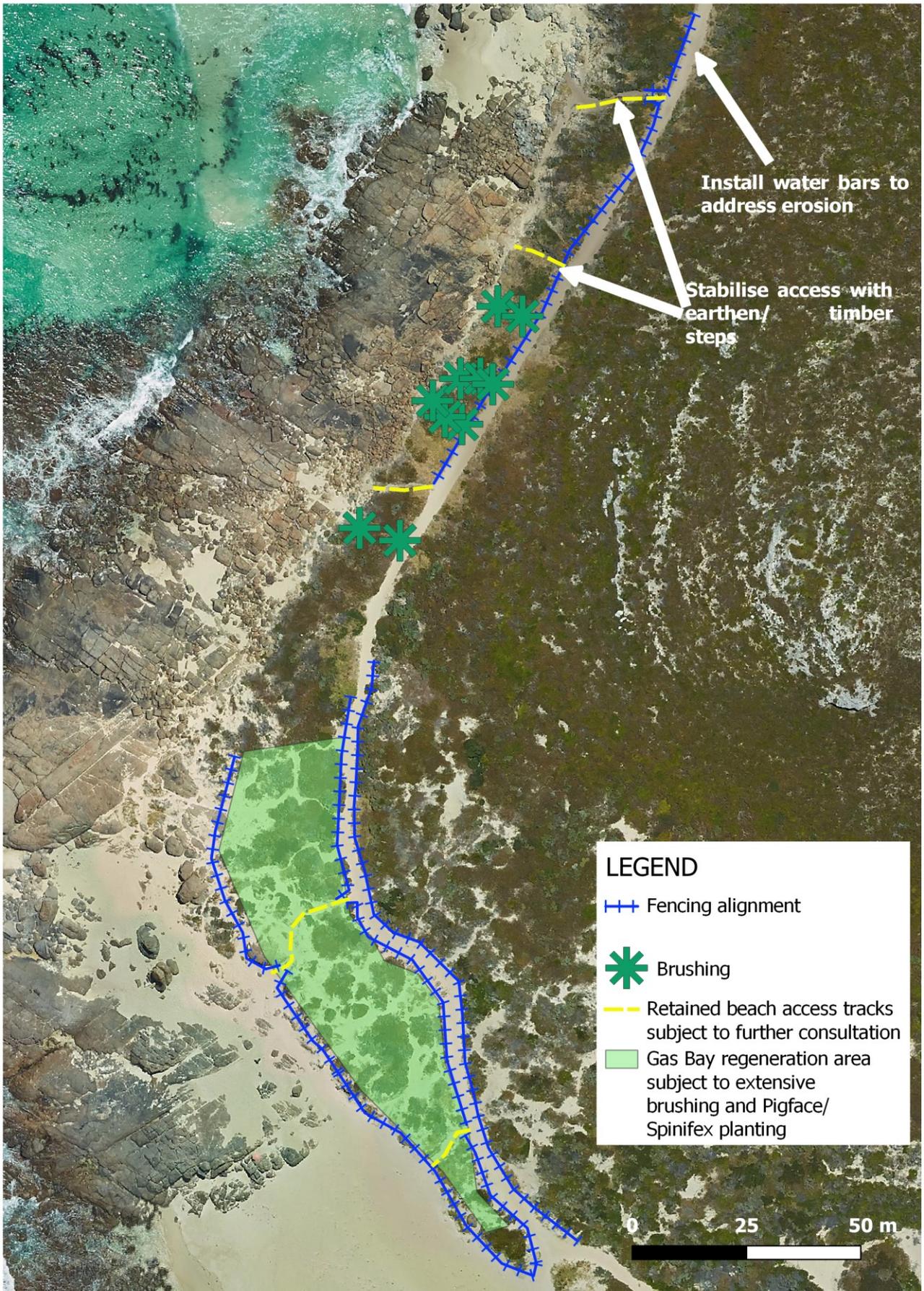
FIGURE 8: RIVERMOUTH



**FIGURE 9: GNARABUP HEADLAND**



**FIGURE 10: LONGREEF**



**FIGURE 11: GAS BAY**

**APPENDIX 2: PROPOSED THREE YEAR ON-GROUND WORKS PLAN**

#	ACTIONS	2022/23	2023/24	2024/25
<b>PRIORITY ENVIRONMENTAL WEED CONTROL</b>				
W1	Undertake control of the woody weed/ non local plants within the bushland control and annual follow up of all species identified within the plan especially: <ul style="list-style-type: none"> <li>• Norfolk Island Hibiscus;</li> <li>• Victorian Teatree</li> <li>• Flaxleaf Broom</li> <li>• <i>Melaleuca nesophila</i>;</li> <li>• Platypus gums</li> </ul>	\$1250	\$150	\$150
W2	Undertake perennial grass, geophyte and herbaceous weed control including annual follow up of all species identified within the plan especially: <ul style="list-style-type: none"> <li>• <i>Carpobrotus edulis</i>;</li> <li>• Dune Onion Weed;</li> <li>• Veldt Daisy;</li> <li>• Agapanthus;</li> </ul>	\$1250	\$250	\$150
W3	Undertake annual Arum lily control along the foreshore to ensure the relatively isolated occurrences noted within this report are not allowed to re-establish	\$500	\$250	\$250
W4	Undertake annual Geraldton Carnation Weed and Arum control around the coastal reserves to protect the Foreshores. (Note GCW was not observed within the actual project area, but is known from surrounding private, Shire and DBCA lands)	\$500	\$250	\$250
W5	Undertake ongoing Pyp grass control, containment and replacement program in the Rivermouth zone	\$2500	\$2500	\$2500
W6	Undertake ongoing Pyp grass control and replacement program in the Prevelly Gnarabup Dunes	\$1500	\$1000	\$500
<b>PRIORITY BRUSHING ACTIONS*</b>				
B1	Supply and place brushing at degraded dune areas of the Rivermouth	\$3000	\$3000	\$2000
B2	Supply and place brush to support the Grunter Dune rehabilitation project	\$3000	\$1500	\$1500
B3	Supply and place brushing at degraded open and vulnerable portions of the Prevelly Gnarabup Dunes	\$6000	\$6000	\$6000
B4	Supply and place brushing with revegetation on the Sewers closed beach access tracks	\$1500	\$1500	-
B5	Supply and place brushing with revegetation on the Gas Bay Rehabilitation project areas	\$6000	\$3000	\$3000

#	ACTIONS	2022/23	2023/24	2024/25
<b>PRIORITY REVEGETATION ACTIONS*</b>				
R1	Ongoing planting/cutting transplant along the degraded portions of the Rivermouth dunes	\$300	\$300	\$300
R2	Ongoing planting/cutting transplant along the degraded portions of the Fraggie Rock and Surfers Point	\$200	\$200	\$200
R3	Ongoing planting/cutting transplant along the degraded portions of the dunes along the coastal path	\$300	\$300	\$300
R4	Ongoing planting/cutting transplant along the degraded portions of the Long reef dunes	\$200	\$200	\$200
R5	Ongoing planting/cutting transplant along the degraded portions of the 'Sewers Beach' dunes	\$300	\$300	\$300
<b>PRIORITY FENCING ACTIONS</b>				
F1	Repair/replace damaged dune fencing at Fraggie Rock	\$1500	-	-
F2	Replace/ realign the fence upstream of the Rivermouth carpark	\$2500	-	-
F3	Extend fencing/ pedestrian guidance at the southern Riflebutts and Lakeview Cr. beach access tracks	\$500	-	-
F4	Extend fencing/ pedestrian guidance at the southern Sewers beach access track	\$500	-	-
F5	Fence the shoreward edge of the Gas/ Boodjidup Beach access track in the Gas regeneration zone including the beach access tracks	\$500	-	-
F6	Install bollards to prevent vehicle parking on vegetated verge etc at Gas Bay carpark and the southern Rivermouth carpark	\$1000	-	-
F7	Continue/ extend seasonal fencing of the fore dune edge at Sewers Beach, Longreef, Gnarabup, Prevelly, Rivermouth	\$4000	\$3000	\$3000

\*Costing assumes community/volunteer planting

\*Costing assumes predominantly contractor control

\*Costing assumes community/volunteer placement of brush