

# COWARAMUP BAY COASTAL MANAGEMENT PLAN



Prepared June 2019  
by Litoria Ecoservices  
for the Shire of Augusta Margaret River

*We acknowledge the traditional owners of Cowaramup Bay and the Capes Region – the Wadandi people. This plan recognises their continuing connection to land, water and culture and the cultural significance of the Gracetown coast.*

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## **1. INTRODUCTION**

### **1.1 BACKGROUND**

Cowaramup Bay is an iconic and unique part of the Cape to Cape landscape. It has a diverse range of biodiversity values and is on the edge of a township surrounded on four sides by National and Marine Parks. It is much loved and heavily used by locals and visitors alike. It has been identified by agencies and the community that a plan is required to ensure that recreational useage and visitation is managed such that the important and unique environmental, cultural and recreational values of the area are maintained. The plan has been initiated and funded by the Shire of Augusta Margaret River.

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

Litoria Ecoservices prepared the plan over a four month period between February and June 2019, following consultation with local residents, community and agency stakeholders and relevant Shire staff. This Cowaramup Bay Coastal 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 site, namely:

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

The objectives are to:

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

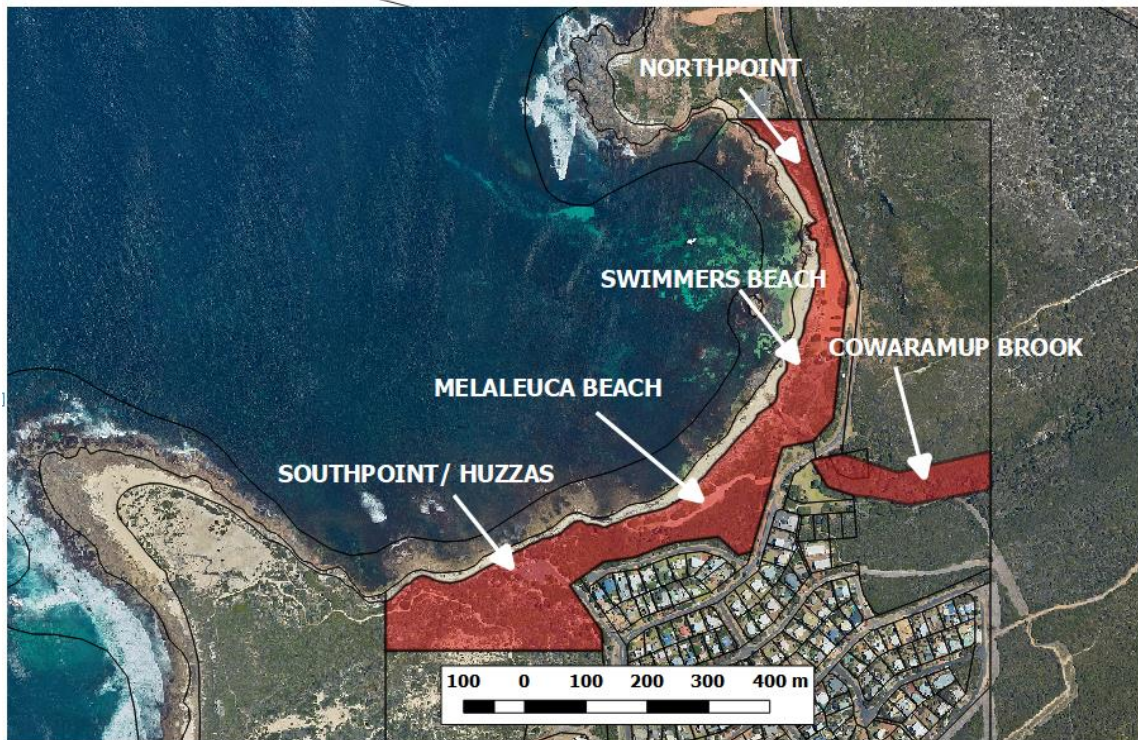
Key elements of the development of the plan involved:

- 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 winter growing and spring flowering season) would mean some species were unlikely to be recorded during the site assessment.

### **1.3 THE STUDY AREA**

The plan is focused upon Shire Reserve 27618 west of Bayview Drive and along the Cowaramup Brook to the Reserve boundary. The area is shown on Figure 1.



**Figure1 – Project Area**

The total project area covers a 1.4 km stretch of the coastal foreshore approximately 17.8 ha in area and includes five distinct nodes:

- Zone 1 - South Point/Huzzas;
- Zone 2 - Melaleuca Beach;
- Zone 3 - Swimmers Beach;
- Zone 4 - Cowaramup Brook to the National Park boundary; and
- Zone 5 - Northpoint boat ramp and carpark area.

Cowaramup Bay is a granite basement overlain by limestone. The granite basement is exposed on the beach and on the headland at the northern end of the bay, which forms North Point. The southern end of the bay, and forming Cowaramup Point, is Tamala Limestone. Here limestone cliffs and coastal slopes rise to over 20 metres in elevation. The middle of the bay exhibits low fore dunes and is dominated by the mouth of Cowaramup Brook which enter the bay at this point.

As a small north-west facing bay Cowaramup Bay is relatively sheltered, but open to wave action when swells and waves come from specific directions, particularly in winter. At such times, the beach is 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.

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

SUPPLIED BY ISZACC WEBB, TRADITIONAL OWNER WITH UNDALUP ASSOCIATION:

Kaya, Nala Maat Kaya Noonduk (Hello, Our Family Welcomes You) to Wadandi Boodja (Saltwater People's Country) – we all come together on Boodja (Country). Whilst on Wadandi Boodja we ask that you respect the land by walking softly and take the time to listen to Boodja as she Wongi (Talks). We respect the presence of the Demmala Goomala (Ancestors) whose Djanga (Spirits) reside on Boodja and whose djenna (feet) walk the land and whose Djanga Korda (heart spirit) flows through all creation.

We can all benefit from the powerful sense of belonging that is offered by the cultural sounds, rhythm, spirit, art and people. This empowers us all to continue the ancient tradition of reciprocity (an exchange of mutual benefit).

By showing respect and acknowledgement to our Aboriginal people and through working together, we can learn and educate each other and ourselves about the connection that we all have to Mother Earth.

It is up to all of us to listen to the land, understand the connection to Country that we all have and realise how urgent it is to work together to make better decisions on how we can create that balance, ensuring sustainability for the generations to come, in order to protect and preserve the beauty of Boodja.

The Wadandi people have a complex and holistic framework of understanding in their role of looking after Country. The Dreamtime is the heart of the spirituality of the Wadandi people and the traditional mythologies taught from the Elders, provided a blue print for respect and utilisation of resources in a sustainable way. It is a relationship between the people, the land and all its creatures. Throughout Wadandi Boodja there are many creation stories, in particular the 'Waugal' (hairy face snake) being one of the most influential creative spirits that transformed the landscape creating hills, lakes, rivers and animals, infusing it with a living spirit.

Sharing this knowledge is important for others to have the understanding of, and connection to our land, to care for, respect and learn from the Wadandi land and sea management practices, as together we can all explore ways to keep "Caring for Country".

Boodja – Land, Country, Mother Earth – is our most important resource. No matter what culture or religion – all of us rely on Nala Boodja, Our Country.

*"Whilst living, travelling, visiting and holidaying on Wadandi Boodja (Saltwater People's Country) we ask that you respect the area and walk softly on the country, taking the time to listen to Boodja (Country) as she Wongi (Talks) of the Season, and leave nothing but footprints".*

Our vision is to share the culture, traditions, knowledge and history of the Wadandi people with the broader South West communities; to impart an understanding of the importance of Boodja (Country) and to teach the significance of and respect for the Wadandi Elders and Traditional Custodians

Aboriginal Culture is the oldest living culture and the longest continuing religion in the world. To Aboriginal people the land is life. We are connected spiritually to the land, water, flora and fauna. *"These are written into the country of place names and songlines. They are our kinship that connects us through cultural lore."*

***"We don't own the land, the land owns us"***

The Wadandi people have a long association with the environment of the South West and its natural resources. We utilise the Country's natural resources according to our lore (learning and knowledge of tradition) to look after Country. "The inter-dependence of all life within Country constitutes a harsh but essential lesson – those who destroy their Country ultimately destroy themselves." (Hill, Bradby & Pearce, 1997). Therefore maintenance of biodiversity has always been linked to the health of the local Wadandi people both spiritually and physically.

*Cowaramup Bay in the Capes region where the community of Gracetown resides, is a Cultural significant Aboriginal Heritage Site, known for the associated history of the area, many choose not to discuss, with many Cultural sites, bushfood areas that are of high importance to the local Aboriginal people of the South West. The site holds many important values with connection to the Boodja, (Country), water and the Wadan, (Ocean) with the Wadandi people.*

The Wadandi people have always valued the natural resources within our Country as having spiritual meaning, providing sustainable diet and for their healing capabilities. In more recent times, natural resources have also been valued for the educational and employment opportunities they create. It is also important to note that Aboriginal environmental knowledge associated with natural resources is another key cultural value.

### **Wadandi Cultural Custodian, Iszaac 'Waalitj' Webb**

## **1.5 ECOLOGICAL VALUES**

Cowaramup Bay and Gracetown have exceptional biodiversity values due to the fact that the area is surrounded by National and Marine Park. Much of the vegetation within the Reserves is in good to very good condition and a broad range of wildlife is frequently encountered even within the house sites.

One of the dominant vegetation communities within the Bay with Rottneest Island Teatree or Moonah (*Melaleuca lanceolata*) dominating the canopy is considered as a Priority Ecological Community (PEC) and as such is important for protection and restoration. This community is prone to disturbance by fire and access in and around plants removes understorey and young plants to replace mature plants

The Granite vegetation communities within and surrounding the Cowaramup Bay coast are diverse and vulnerable to disturbance from access and fire. The open and sparse nature of the vegetation on the granite outcrops of Northpoint make these areas vulnerable to unconstrained pedestrian access. These areas are slow to recover from disturbances.

A number of threatened flora species are found in and around the Bay including orchid species such as Giant Spider Orchid (*Caladenia excelsa*)

The Cowaramup Brook is an important feature of the bay influencing the native vegetation, wildlife habitat and the marine environment of the Bay. Upstream of the project area, the Cowaramup Brook is considered to be in A Grade condition for several kilometres as it passes through the National Park. As it leaves the National Park and enters the Shire Reserve of the bay the brook drops down to B Grade foreshore. This is however, improving with past and

current revegetation projects restoring foreshore vegetation and it is a realistic goal to raise this section of the brook to A Grade within the life of the plan.

The bay is home to a range of wildlife including relatively common species which form part of the character of the Bay and Gracetown such as Bobtails resident in backyards, priority species such South West Carpet Pythons and Quenda which are regularly spotted around town and in backyards. It is also home to threatened species such as the critically endangered Western Ringtail Possum. It is noted that feral cats and foxes are regularly sighted around town and represent a threat to these species.

The shelter provided by the northwest facing bay provides an important and unique refuge within the Cape to Cape coast for a range of shorebirds particularly around the western end of Melaleuca Beach. This area provides seaweed build up in Autumn/ Winter and protection amongst the rocks and surrounding vegetation for resting/ roosting. Species utilising this area include Cormorants, Reef Egrets, Pied and Sooty Oyster Catchers, Silver and Pacific Gulls, Terns and the less common Hooded Plover. Even more aquatic species such as Black Swans and Black Ducks have been sighted here.

The waters of the bay contain a range of marine values appreciated by the community both for observation and appreciation eg) snorkelling and for fishing eg) herring fishing at Melaleuca Beach. These values are recognised and (partially protected) through the recognition of the Cowaramup Bay as a 'Recreation Zone' within the Capes Ngari Marine Park Management Plan. Many in the community believe that this protection does not go far enough and would like to see strongly restrictions in place within the bay.

The primary threats to ecological values of the bay represent increasing access and recreational pressure and climate change.

Increasing populations within Cowaramup and Margaret River (and the potential future doubling of the Gracetown townsite through Landcorp proposals) coupled with growing tourism exposure and numbers result in increasing demand and pressure for recreational access to all aspects of Gracetown and Cowaramup Bay. Given the protection offered by the unique northwest facing bay, the spectacular scenery and surf and one of the few boatramps in the Capes, Gracetown will continue to attract increasing visitation both from locals and visitors. It is essential that these visitors are managed and directed in a way that minimised the impact on the beauty and ecological values of the area.

Climate change represents a threat to many aspects of the Bay's ecology through changing rainfall patterns, rising temperatures and most notably in the coastal environment, rising sea levels. Conservative scenarios predicated by the latest Intergovernmental Panel on Climate Change (IPCC) Report on Climate Change predicts sea level rises of between 0.28 and 0.65m by 2090 (with additional rises possible depending on ice sheet movements). Recent monitoring of Fremantle sea level has shown rises of 20cm since 1915 at a rate of 1.38mm/year with the past 30 years showing an average rise of approximately 3.0mm/year.

Predicted sea level rise in the coming decades has the potential to seriously impact on the existing shoreline and while this prospect requires consideration, it is beyond the scope and time horizon of this report. This is covered 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 will accentuate coastal erosion during the horizon of this report

## **1.6 PREVIOUS WORK**

It is important to recognise that this plan has been prepared with reference to a significant body of existing plans and reports that have already been completed in relation to Gracetown and Cowaramup Bay. Furthermore, many community and Shire driven projects have already achieved much throughout Cowaramup Bay in terms of Coastal protection, awareness raising and restoration. Many of these projects are on going and the current condition of Cowaramup Bay and engagement of the local community is a credit to the locals.

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

- Augusta – Margaret River Coastal Management Plan, 2005;
- Shire of Augusta Margaret River, City of Busselton Coastal and Foreshore Facilities Asset Management and Expansion Plan, 2012
- Capes Regional Boating Strategy, 2011
- Gordon’s Geotechnical Consultants Huzzas Cliff Report, 2005
- Limestone Cliff Stability Assessment, 2017
- Coastal Hazard and Risk Management and Adaptation Plan, 2015
- Coastal Monitoring Program, 2018
- Arborist’s Report – Melaleuca Beach Picnic Area, 2019
- Swimmers Beach Park – Landscape Concept Plan, 2016
- Rehabilitation Plan for Swimmers Beach, Gracetown, 2017
- Cowaramup Creeks Action Plan, 2008
- Leeuwin Naturaliste Capes Area Parks and Reserves Management Plan 81, 2015

## 2. METHODOLOGY

### 2.1 COMMUNITY CONSULTATION

The development of this plan builds upon a strong history of community involvement in management of Cowaramup 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 or 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 walks held on Saturday the 6<sup>th</sup> April 2019; and
- community submissions received during the preparation of the plan.

A site walk was conducted with Undalup Representative Iszacc Webb on the 20<sup>th</sup> February prior to commencing work on the preparation of the plan.

Subsequently representatives from the following groups/ organisations were contacted:

- Undalup Association Inc.
- Department of Biodiversity Conservation and Attractions;
- Gracetown Progress Association;
- Cowaramup Bay Boardriders;
- Shire of Augusta Margaret River;
- Surfing WA; and
- DFES.

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 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 of the consultation included:

- 1 There is a demand for more information and understanding of aboriginal cultural values;
- 2 The ‘low key’ nature of infrastructure and facilities is valued by the community;
- 3 Environmental protection and improvement of the brook is a high priority.
- 4 Cowaramup Brook is much loved by locals and it is important that the cultural and environmental values of this area are protected. Foreshore revegetation is supported;
- 5 Strong support exists for dune stabilisation including fencing and revegetation;
- 6 More focus is required on the cliff risk area around Huzzas including consistent signage, fencing and revegetation;
- 7 The unique biodiversity values of the Bay and it being surrounded by National and/or Marine Park is significant and should be a focus of awareness raising
- 8 Carparking pressures are experienced in most areas during peak season/ ideal surfing and or fishing conditions – containment of inappropriate parking is required as is provision of overflow areas;

- 9 Safe pedestrian and bicycle linkage from town through to North Point is required
- 10 Call for support for disabled access to the water at Swimmers Beach, and
- 11 Melaleuca Beach is very important to locals and should be protected and enhanced including protection of the large established Rottnest Island Tea Trees.

## **2.2 ON-GROUND ASSESSMENT**

The on-ground assessment was undertaken by Drew McKenzie during April, May and June 2019. The assessment involved the collection of detailed information on the following aspects:

- Coastal and Foreshore Erosion;
- Vegetation condition and potential for revegetation;
- Dominant vegetation species;
- Infrastructure present;
- Priority environmental weed presence;
- Track and trail status;
- Pedestrian access;
- Recreational uses and issues; and
- Baseline photo -point monitoring.

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

#### **3.1 SOUTHPOINT/ HUZZAS ZONE**

The limestone cliff face dominating this zone is exposed to wind large swells and stormwater and groundwater movement from above. It is noted that this section of the bay is considered in detail as part of the 2017 ‘Limestone Cliff Stability Assessment’ by Golder Associates. The report identifies parts of this zone as a high cliff fall risk areas and contains specific recommendations in relation to managing this risk.

This zone is very popular among surfers as an access and parking point for the adjacent South Point and Huzzas breaks. These are particularly popular and highly used during Winter when the Bay represents a refuge from strongly southerly and south westerly winds and very large swells. Huzzas is a very popular break for young and beginner surfers offering one of the best beginner waves on the coast. The walking path through this zone is very popular and provides spectacular views across the bay. It forms part of the Cape to Cape Track.

This zone contains important memorials and significance to the community due to the lives lost in the cliff collapse of 1996.

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

Vegetation through this zone ranges from very good through to degraded condition. The condition of vegetation is largely determined by the level of recent and historical access the area receives. This area contains a range of coastal species and vegetation with large portions of this zone dominated by Moonah or Rottnest Island Teatree. The Moonah dominated vegetation community is listed as a “Priority Ecological Community” or PEC. Parts of the Huzzas cliffs are identified as an important roost zone for shore birds.

Key management issues through this zone include:

- Continued pedestrian access through and onto the vulnerable and high risk cliff areas;
- Need to protect and enhance native vegetation cover and condition for cliff stability, amenity and habitat;
- Small but highly visual areas of grassy weeds in open degraded areas around the memorials and carpark;
- Uncontrolled access to and degradation of the dunes behind the coastal track including large areas of litter and debris
- Water flow from the path at Volunteers Rest and from the Huzzas carpark down the adjacent cliff faces which is adding to instability
- Improved cliff risk signage along the top and bottom of the cliff
- Protection of existing Rottnest Island Tea Tree around picnic area and pathway and implement succession planting
- Need for interpretive signage at the Huzzas lookout focused on surfing etiquette
- Illegal camping and beach fires around Huzzas

- Desire from the Cowaramup Bay Boardriders to install a judging/ viewing platform along the Southpoint track (it is understood that this is currently being considered by the Shire in detail)



Effective brushing and reveg. Of high cliff risk zone



High risk areas in need of brushing, revegetation and signage to address continuing access



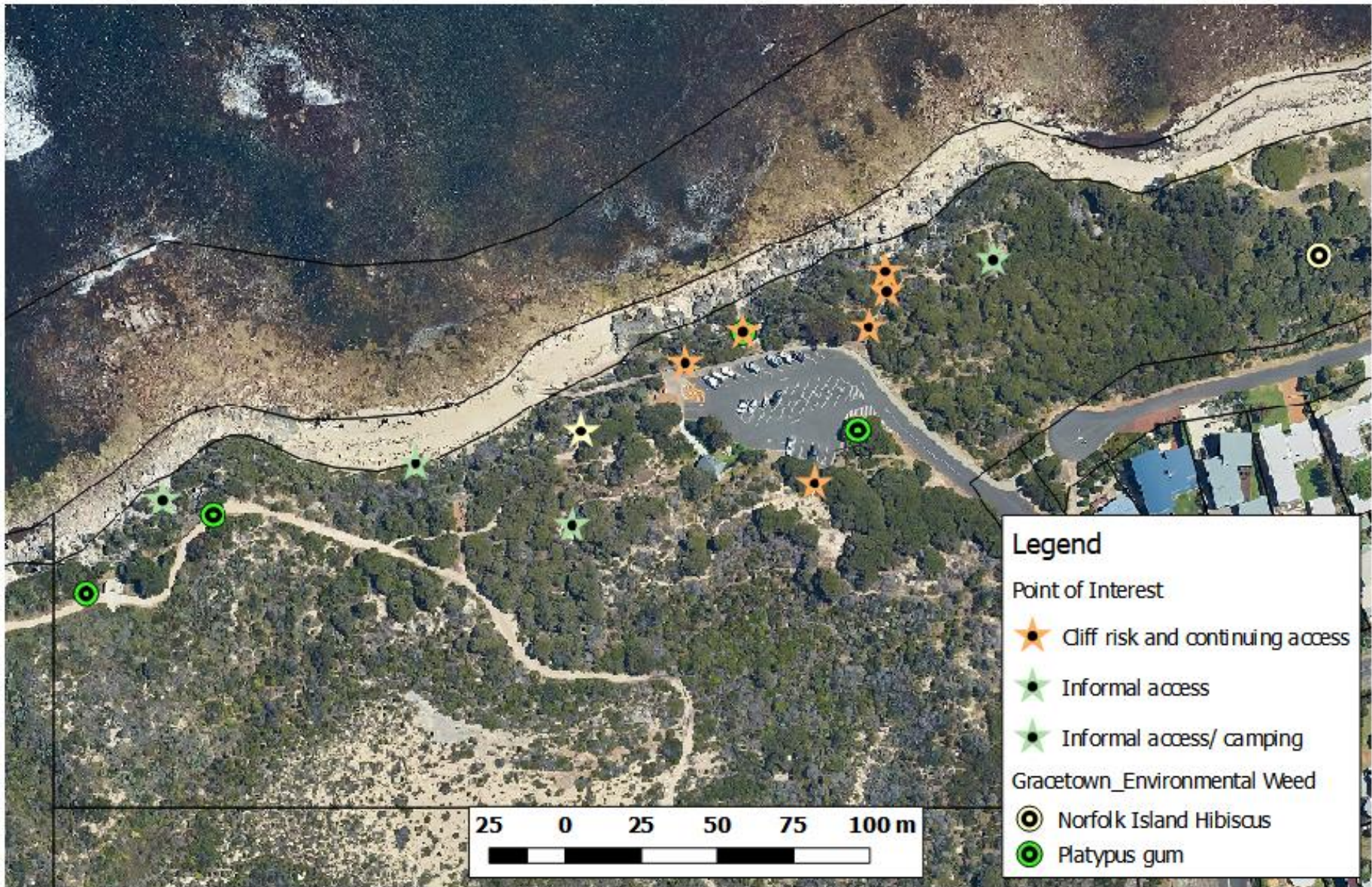
Iconic Melaleuca 'archway'



Litter and rubbish left in the dunes



Cliff base areas in need of brushing



**Figure 2. Zone 1 Management Issues**

### **3.2 MELALEUCA BEACH**

This area is made up of a narrow beach, low foredunes with a low limestone largely vegetated cliffs to the south. It is a protected, generally low energy beach which accumulates masses of seaweed during Autumn and Winter attracting fish and shorebirds. It is an area where Hooded Plovers are commonly sighted. This area contains a range of coastal species and vegetation with large portions of this zone dominated by Moonah or Rottnest Island Teatree. The Moonah dominated vegetation community is listed as a “Priority Ecological Community” or PEC.

This zone also represents an attractive, protected recreational and open space area and is popular among families for fishing, swimming, dog walking and picnicing. It is much loved amongst locals and contains several low key beach access tracks, a small informal carpark, picnic tables and rustic stairs linking the Picnic area and beach to Percy street. This zone represents a designated dog exercise area. The Cape to Cape Track runs through the picnic area and up the Percy St stairs.

Vegetation through this zone ranges from very good through to degraded condition. The somewhat degraded nature of the dunes are a reflection of historical access and the impact of coastal erosion. Parts of the Percy St vegetation are degraded from recent attempts to prune and damage vegetation to maintain/ expand views across the bay. Other vegetated areas around the picnic area are somewhat degraded with minimal understorey and the presence of grassy weeds. This area contains a range of coastal dune and coastal heath species and vegetation with portions of this zone dominated by Moonah or Rottnest Island Teatree.

It is noted that the condition of and potential management options in relation to the Melaleucas within the picnic area were the subject of an arborist’s report undertaken in January 2019 by Arbor Guy.

Key management issues through this zone include:

- Erosion and damage of beach access
- Need for support, propping and succession and understorey planting of /around the Melaleucas in the picnic area
- Address pooling of water within middle of carpark
- Illegal camping in carpark
- Need for continued dune rehabilitation and revegetation
- Succession planting, understorey revegetation within the vegetation communities surrounding the open space/ picnic area and the cliff zone along Percy St.
- Previous damage to vegetation adjacent Percy St to enhance views
- Presence of priority environmental weeds eg) Norfolk Island Hibiscus
- Potential conflict between dog exercise area and important shorebird zone



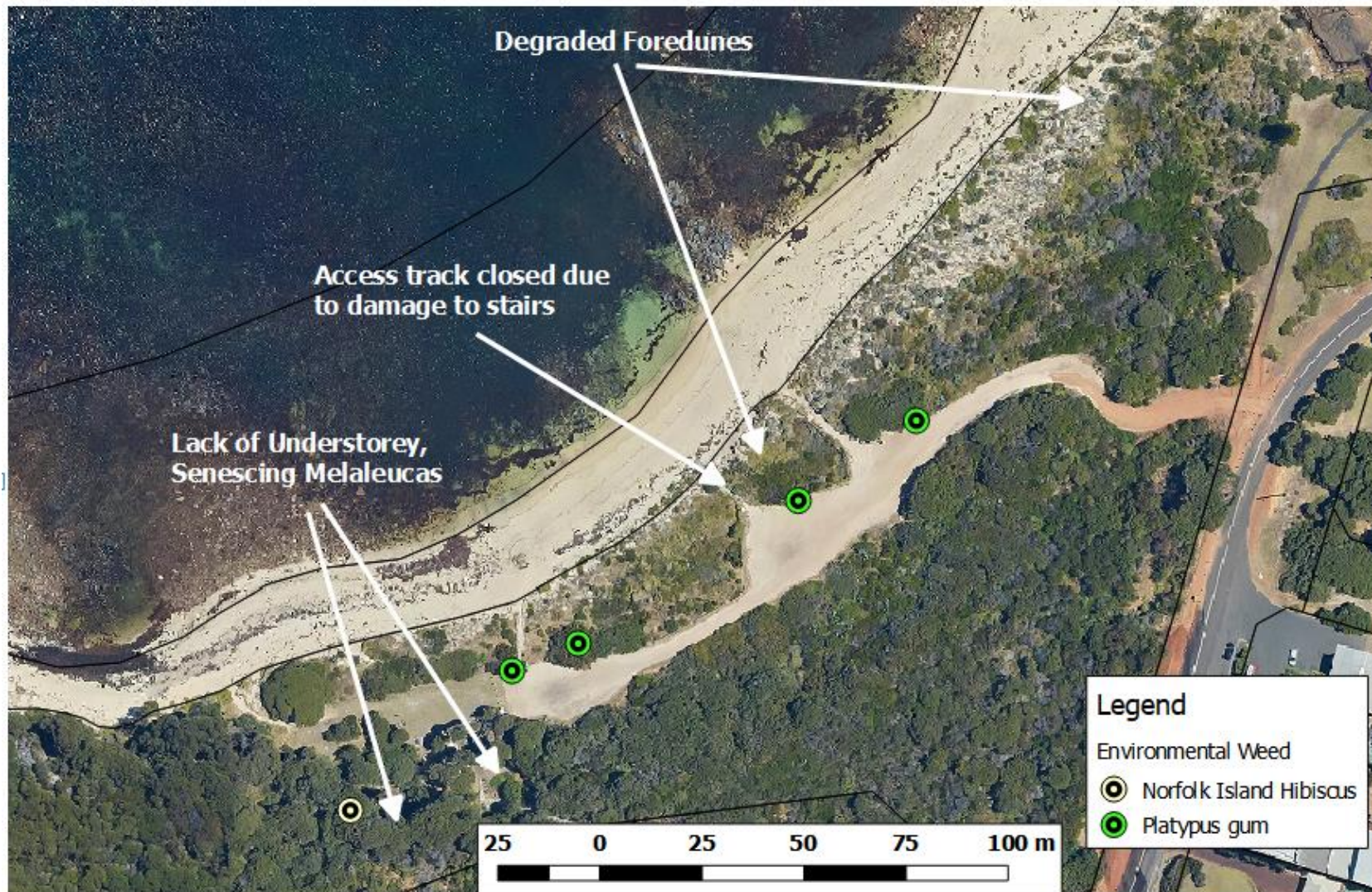


Figure 3. Melaleuca Beach Management Issues



Effective brushing and reveg. Of high cliff risk zone



The Melaleuca Beach foreshore



Fencing to protect the foredunes



Melaleuca beach is a refuge for shorebirds

### **3.3 COWARAMUP BROOK**

The lower 400m of the Cowaramup Brook lies within Shire Reserve and links upstream to the Leeuwin Naturaliste National Park. It contains important Aboriginal heritage sites and a unique landscape feature and vegetation mix within the Bay. The riparian vegetation dominating the bulk of the foreshore edge is buffered upstream by adjoining vegetation. Downstream, the foreshore vegetation is adjoined by open space areas with little or exotic plantings and coastal/dune vegetation downstream of Bayview Rd.

The brook represents a unique aspect of the Bay and a highly valued walk for locals. In the past, portions of this area have been used for informal camping and had picnic tables in place. Several years ago the southern bank was subject to a successful revegetation program and last year community led revegetation commenced in portions of the northern foreshore. Some portions of the brook foreshore have experienced and are considered prone to erosion following flooding last winter and diversion of flows due to a build up of significant volumes of woody debris.

Vegetation along the brook is dominated by Peppermint, Marri and Karri. This area represents confirmed habitat for the critically endangered Western Ringtail Possum.

It is noted that this zone previously formed part of the assessment and report prepared for the Cowaramup Creeks Action Plan from 2008.

Key management issues through this zone include:

- Woody debris within brook representing potential for the creation of erosion
- Control of priority woody, grassy and geophyte environmental weeds
- Potential for revegetation on the north side of the brook
- Sensitive management and maintenance of pathway
- Increasing unauthorised vehicle access of the Western Power track above the brook



Build up of debris effectively damming the channel



Bare and eroding banks needing revegetation



Successful revegetation from 2018



Open space area planted to non natives and weed species

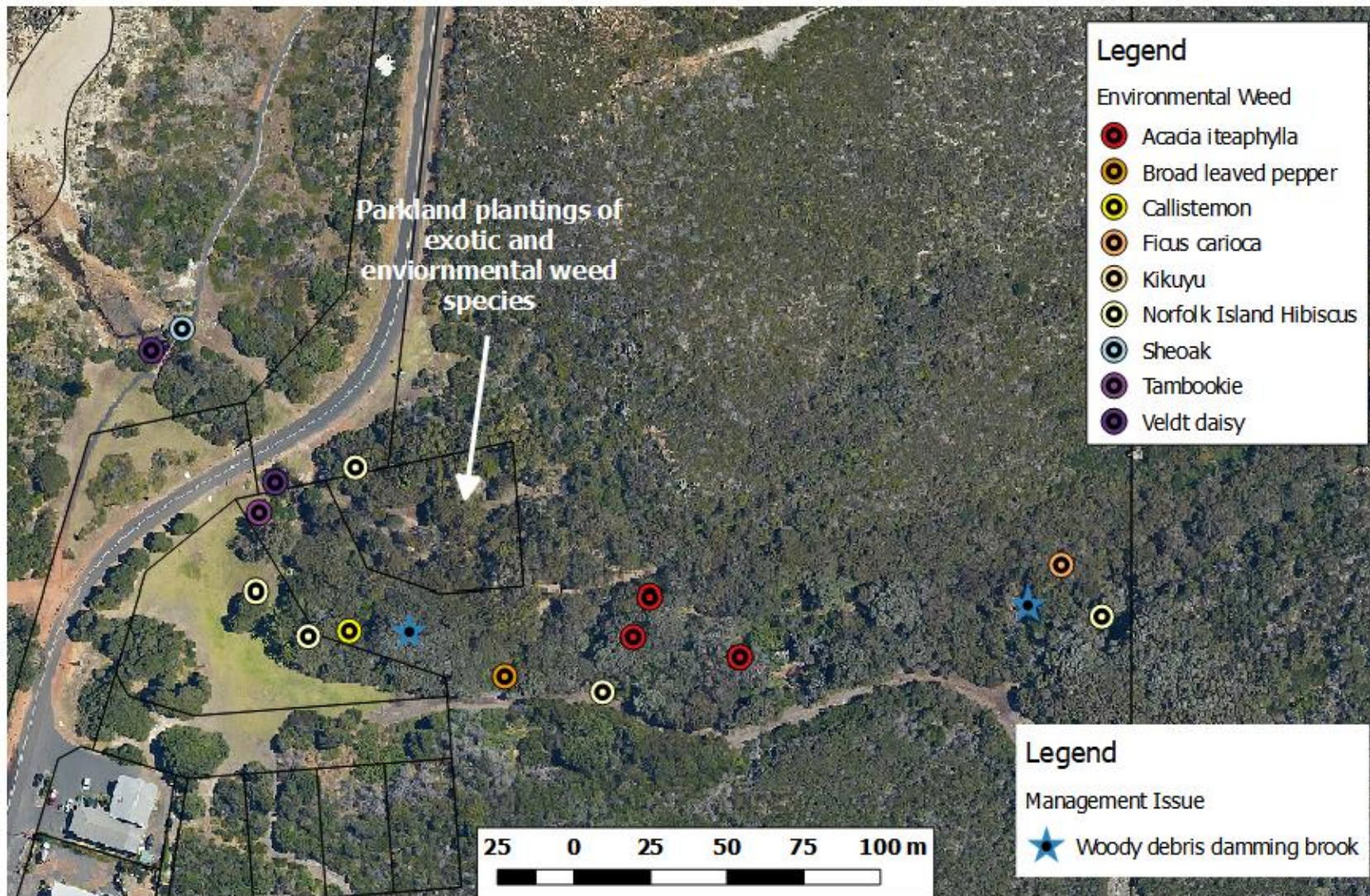


Figure 4. Cowaramup Brook Management Issues

### **3.4 SWIMMERS BEACH**

This zone is dominated by degraded sand dunes on the beachfront with the large carpark located directly behind the foredunes. Behind the dunes north and south of the carpark, granite outcrops dominate. The foredunes extending north from the carpark gradually improve in condition towards Northpoint at which point they are considered to be in excellent condition.

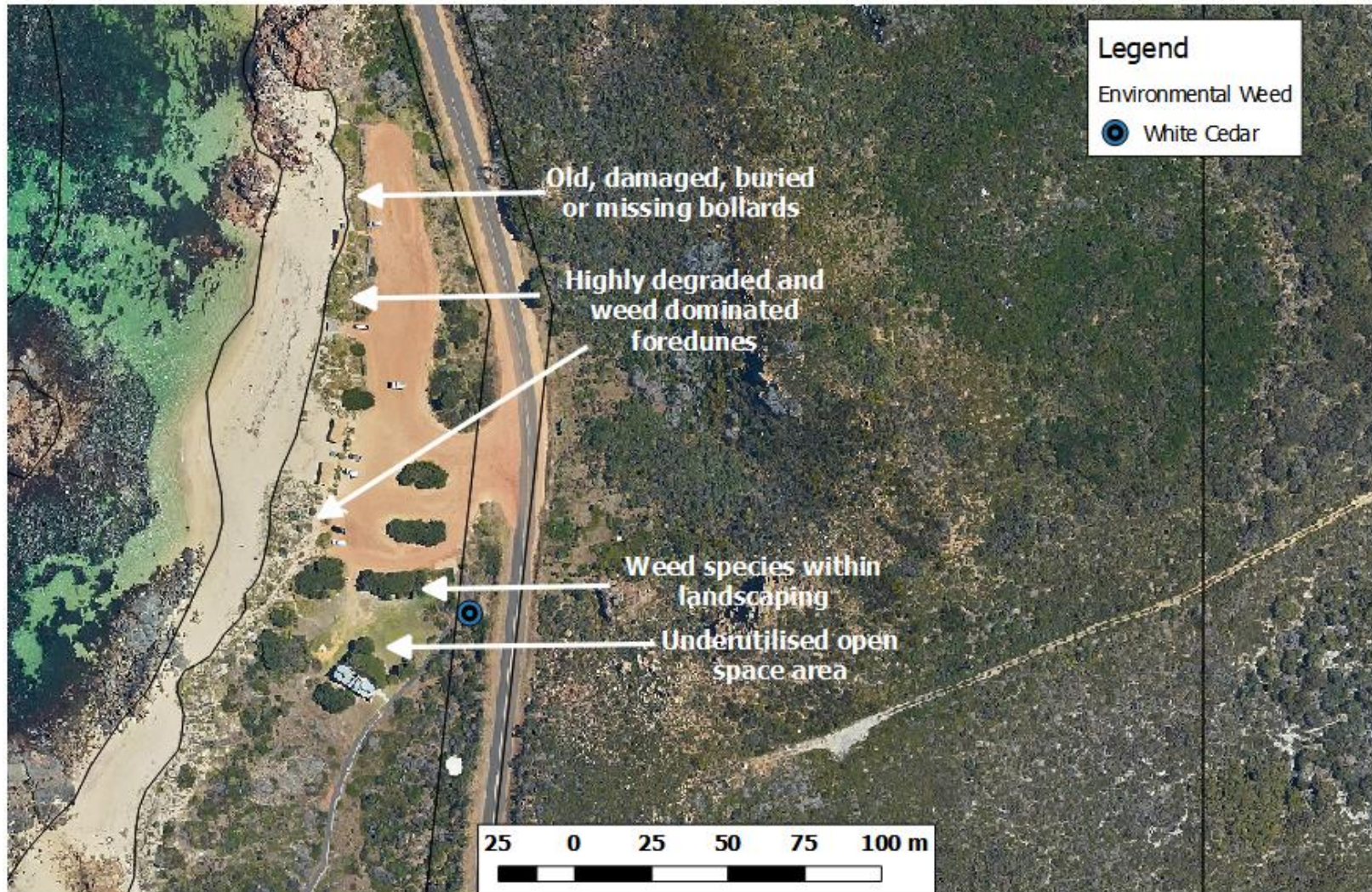
This zone represents the most popular swimming beach in the bay and hosts Vac Swim classes over the Christmas holidays and the Bay swim at Easter. The carpark is currently not formalised into marked bays and is not bituminised. It is noted that the carpark acts as an informal overflow parking bay for some boatramp users and northpoint surfers. It also has the toilet block and open space area south of the carpark.

The degraded dunes are dominated by weed species such as Sea Spurge, Dune Onion Weed and Rose Pelargonium. The vegetation around the open space and picnic area represents a mix of native coastal species and a range of introduced landscape and weed species.

It is noted that there has previously been a landscape concept plan prepared for the open space area surrounding the toilets and a basic revegetation plan for the dunes.

Key management issues through this zone include:

- Degraded, weed dominated dunes
- Old, half buried bollards
- Underutilised open space area around the toilets
- Presence of priority environmental weeds
- Need for safe pedestrian access between cars and dunes
- Access required around the granite rock to the north of the carpark – including for Cape to Cape track walkers
- Need for disabled access into the water
- Demand for increasing parking and overflow parking from northpoint



**Figure 5. Swimmers Beach Management Issues**

### 3.5 NORTHPOINT

Northpoint is a granite dominated landscape with iconic exposed granite outcrops and shallow soils supporting signature granitic plant species with a healthy strip of coastal heath and native foredune vegetation between the carpark and the beach. Two small but unique springs occur within this zone creating ancient and unique small patches of wetland/ riparian species within a zone of dominated by coastal heath and granite species.

Northpoint represents a major focus for surfers with the world class righthand break considered one of the premier breaks within the region. It has received increasing exposure in recent years through media and social media coverage and its recent addition as a backup break for the World Championship Tour's Margaret River Pro. The area is popular for launching boats and jetskis. The point and beach area is popular among fishermen and represents part of the Cape to Cape Track.

This zone contains a relatively recently upgraded boatramp, carpark facilities, footpaths and informal lookouts.

Escaped fires and burns have been an issue within this zone with parts of the granite and surrounding vegetation still recovering from previous burns. It is noted that the peaty wetlands burnt very hot and for vastly extended period during recent fires.

Key management issues through this zone include:

- Crowded and overloaded carpark on good surf and fishing days
- Braided tracks from carpark out to Northpoint jump off
- Lack of toilets and evidence of toileting in the surrounding vegetation
- Parking pushing on to boatramp beach and off the top track
- Eroding path from the top track to boatramp beach
- Degraded spring area near the trailer parking bays
- Priority environmental weed present near Bayview Drive
- Need for safe pedestrian access along the edge of Bayview Drive to northpoint carpark and uphill to the 'top' carpark
- Concerns were raised about charter group operators and clientele crowding up the limited carspaces available to independent recreational users.



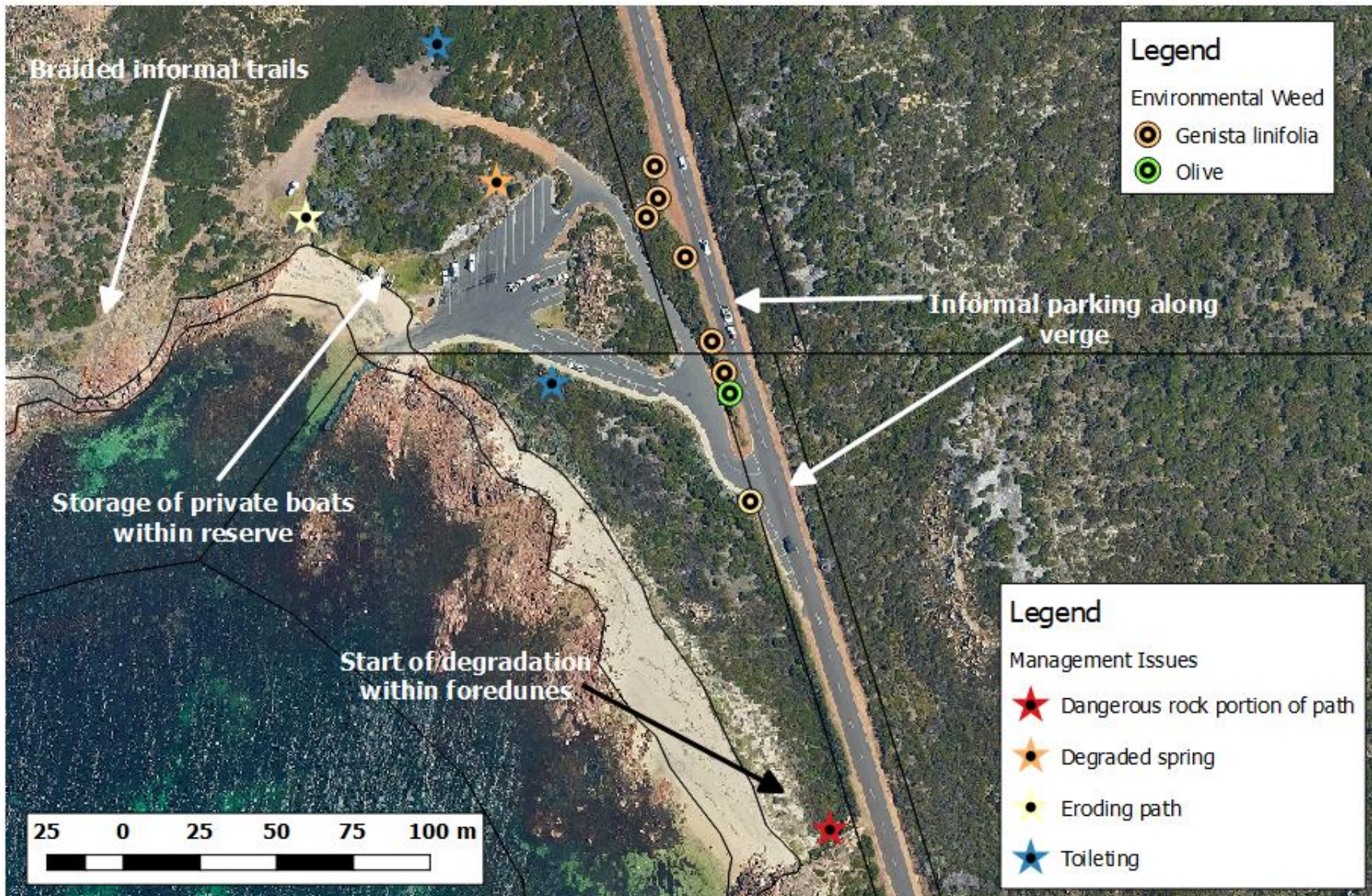


Figure 6. Northpoint Management Issues



Eroding track from top car park



Rocks needing steps



Storage of private boats in reserve



Area alongside Bayview Dr for proposed foot/cycle path



Degraded dunes towards at the southern end



Degraded.bare spring area

#### 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 RECCOMENDATIONS</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 running of seasonal or annual Aboriginal Cultural walks through the bay 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 aboriginal monitors present during the work.	H
IV	Consider, implement and respond to Coastal Management and Monitoring recommendations detailed within the 'Shire of Augusta Margaret River Coastal Monitoring Program' 2018 in relation to Cowaramup Bay.	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 school groups, Cowaramup Bay Boardriders, school students and aboriginal youth networks.	H
VI	Change the vested purpose of Reserves 27618 from "Recreation" to "Conservation and recreation" to more accurately reflect the current value and management intent of the area.	M
VII	Consider projected sea level rise in all future projects and ensure investment in infrastructure is placed well back from the current high water mark.	H
VIII	Support and assist the 'Friends of Gracetown and Cowaramup Bay' 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	Develop/ update a series of interpretive signs to be placed at key viewing locations around the bay (including on DBCA tenure) that covers 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 systems that underpin the recreational and environmental values of the Bay.	H
X	Seek funding to run a series of conservation based interpretive walks aimed at providing locals with a better understanding of the bay's natural environment and high it can be protected and restored.	H
XI	Continue photo-point monitoring at key locations.	H
XII	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
XIII	Investigate Land for Wildlife listing for the reserve to recognise the important biodiversity values and the significance of this to the local community.	H
XIV	Continue the close collaboration between DBCA and the Shire with regard to the Bay in order to support consistent management cross tenure.	H

<b>ZONE 1 – SOUTHPOINT/ HUZZAS</b>		
<b>#</b>	<b>RECOMMENDATIONS</b>	<b>PRIORITY</b>
1.1	Implement the recommendations of the Limestone Cliff Stability Assessment in relation to the Huzzas/Southpoint Zone	H
1.2	Continue revegetation and brushing activities with the community along the ocean side of the south point track and at the base of the Huzzas track at key high risk locations still being accessed.	H
1.3	Brush entrance tracks to dunes behind and surrounding the carpark to address the network of tracks, degraded areas and litter hotspots.	M
1.4	Ensure rangers regularly patrol for illegal camping and fires	H
1.5	Install interpretative signage at the Huzzas lookout reinforcing safe surf etiquette aimed at reducing conflict and risk within Huzzas surfbreak	H
1.6	Protect the existing areas of the Rottnest Island TeaTree community around the carpark and south point track by: <ul style="list-style-type: none"> <li>• Careful arboricultural management of parkland/ edge trees;</li> <li>• Maintenance of the archway over the South Point trail;</li> <li>• Succession and understorey planting</li> </ul>	H
1.7	Encourage and promote overflow parking on the wide cleared fire buffer alongside Salter St.	M
1.8	Assess and implement consistent signage along the top and bottom of the Huzzas cliffline to ensure warnings are consistent and up to date.	H
1.9	Undertake staged control of priority environmental weeds within this zone including: <ul style="list-style-type: none"> <li>• Norfolk Island Hibiscus;</li> <li>• Platypus gums; and</li> <li>• Annual grasses amongst revegetation</li> </ul>	M
1.10	Address surface and stormwater flow currently directed/entering high risk cliff areas at Huzzas carpark and Volunteers rest	H
1.11	Educate the community about geotechnical dangers and management implications for the Huzzas cliff	H
1.12	Investigate the community suggestion of creating/ identifying a path around the Huzzas cliff at the base.	M

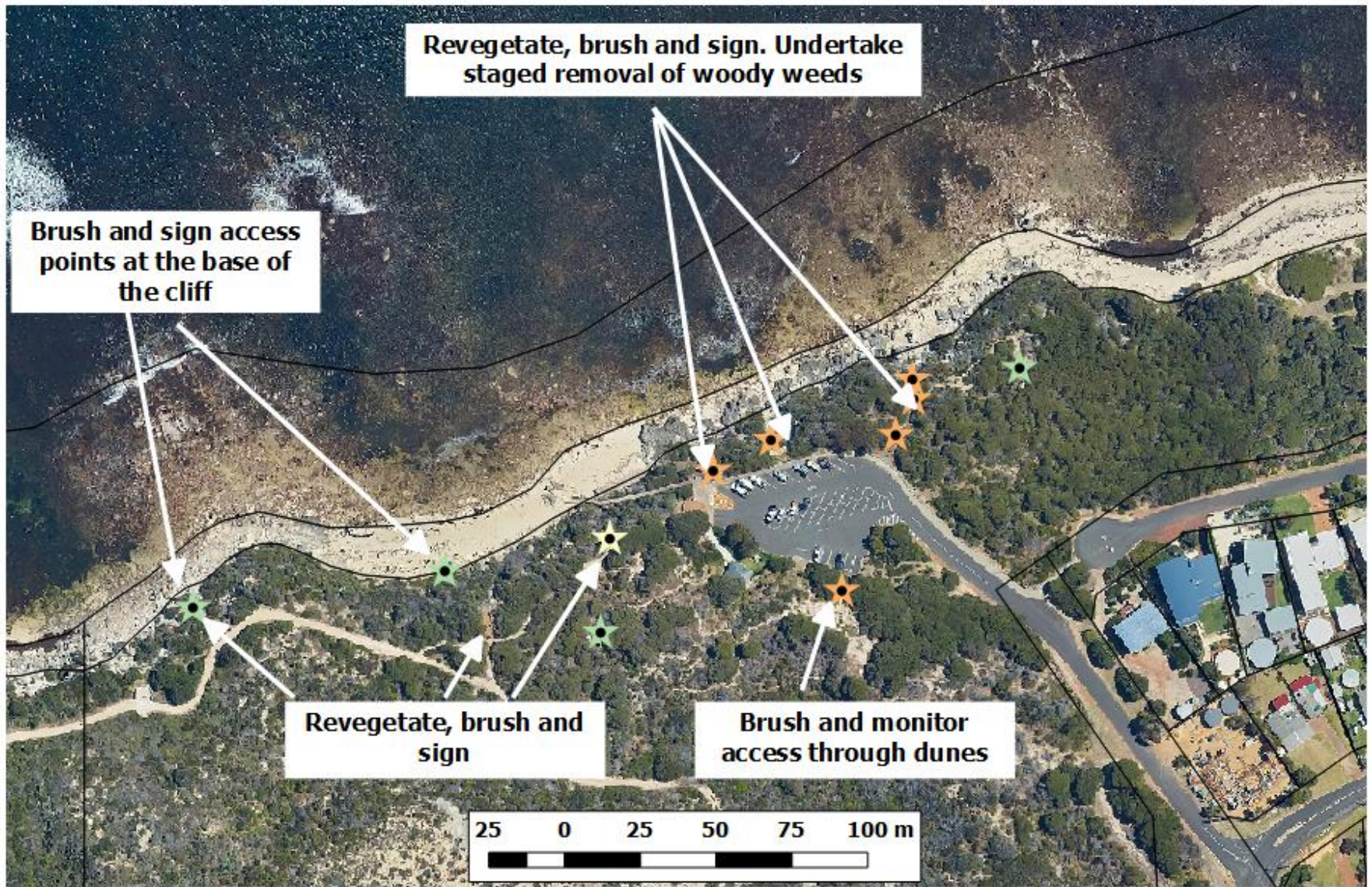
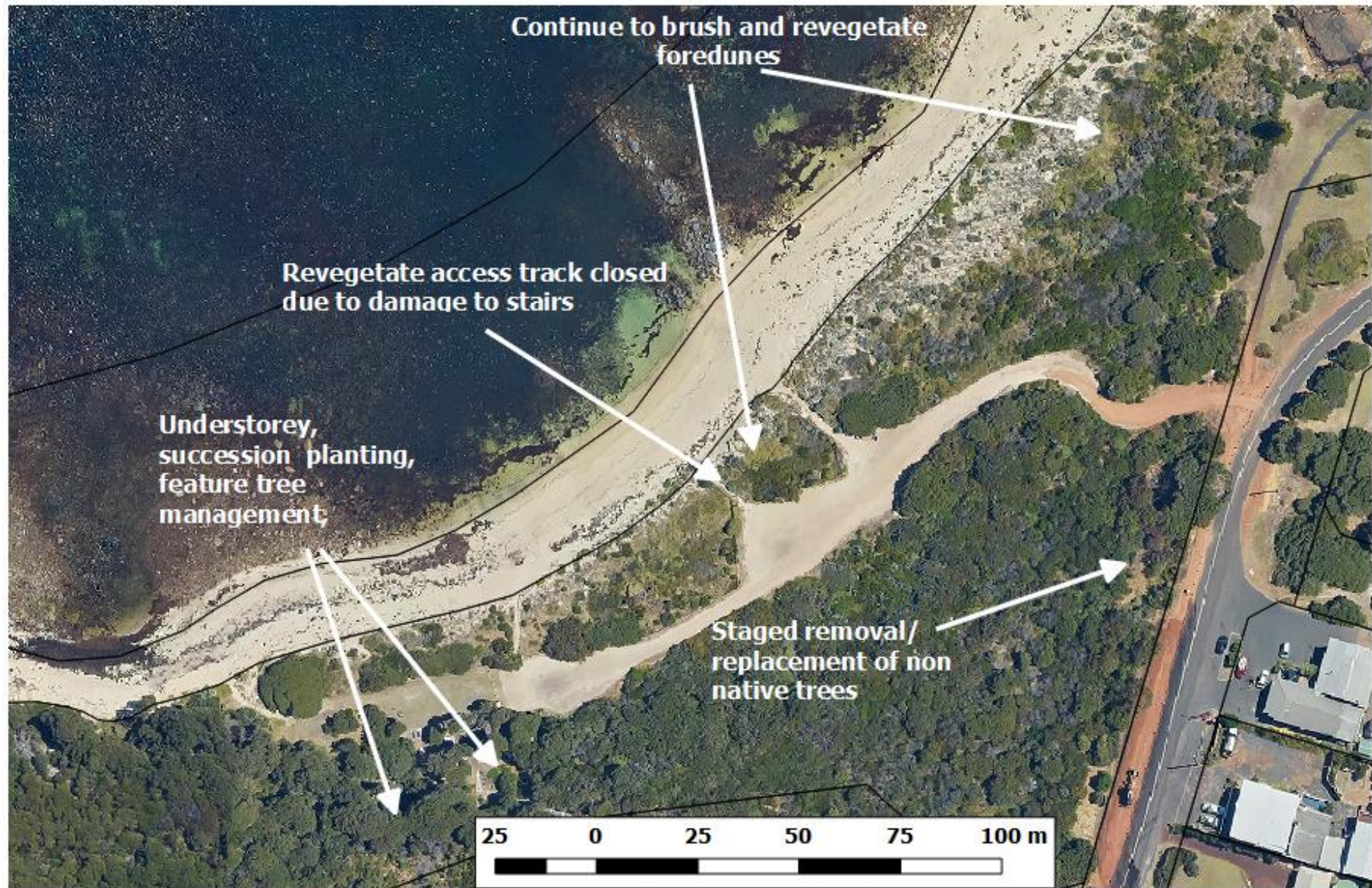


Figure 7. Huzzas Recommendations

<b>ZONE 2 MELALEUCA BEACH</b>		
<b>#</b>	<b>RECOMMENDATIONS</b>	<b>PRIORITY</b>
2.1	Repair and maintain foredune fencing	H
2.2	Continue dune stabilisation and revegetation activities along the foredune including brushing, transplanting pigface and spinifex runners and strategic planting of a small range of hardy native dune species	H
2.3	Revegetate and stabilise the closed pedestrian access track.	H
2.4	Protect and support the existing old Rottnest Island Teatrees within the picnic area including propping, arboricultural maintenance, understorey planting, succession planting etc as detailed within the ArborGuy report of January 2019.	H
2.5	Undertake succession planting of Rottnest Island Teatree and understorey species within the Rottnest Island Teatree community between the dunes and Percy street	M
2.6	Undertake control of priority environmental weeds within this zone including: <ul style="list-style-type: none"> <li>• Norfolk Island Hibiscus</li> <li>• Foredune weeds</li> <li>• Platypus Gum</li> <li>• Non natives in front of the shop</li> </ul>	H H L L
2.7	Monitor the native vegetation along Percy St for regeneration and any additional damage – use of photopoint monitoring is recommended	M
2.8	Address the pooling and build up of water within the middle of the car park.	M
2.9	Ensure rangers regularly patrol for illegal camping and fires	H
2.10	Investigate shifting the Dog Exercise Area slightly towards Swimmers Beach to protect the important Shorebird feeding and roosting/ rest area at the western end of Melaleuca Beach.	H



**Figure 8. Melaleuca Beach Recommendations**

<b>ZONE 3 COWARAMUP BROOK</b>		
<b>#</b>	<b>RECOMMENDATIONS</b>	<b>PRIORITY</b>
3.1	Undertake control of the isolated occurrences of priority environmental weeds within this zone including: <ul style="list-style-type: none"> <li>• Flinders Range Wattle</li> <li>• Norfolk Island Hibiscus</li> <li>• Arum lily</li> <li>• Edible fig</li> <li>• Tambookie grass</li> <li>• Japanese pepper</li> <li>• Freesias</li> </ul>	H
3.2	Continue revegetation and infill planting along the northern foreshore between the brook and the trail on the northern side to stabilise and improve habitat values of this zone	M
3.3	Undertake staged replacement of exotic plantings in the parkland area north of the trail with WA Peppermint and Rottneest Island Teatree	M
3.4	Realign the woody debris built up at key locations within the brook to protect vulnerable banks	H
3.5	Continue to manage the trail in a low key manor without widening, landscaping or opening up the entrance	H
3.6	Gate or physically restrict unauthorised vehicle access to the Western Power access track above Cowaramup Brook	H



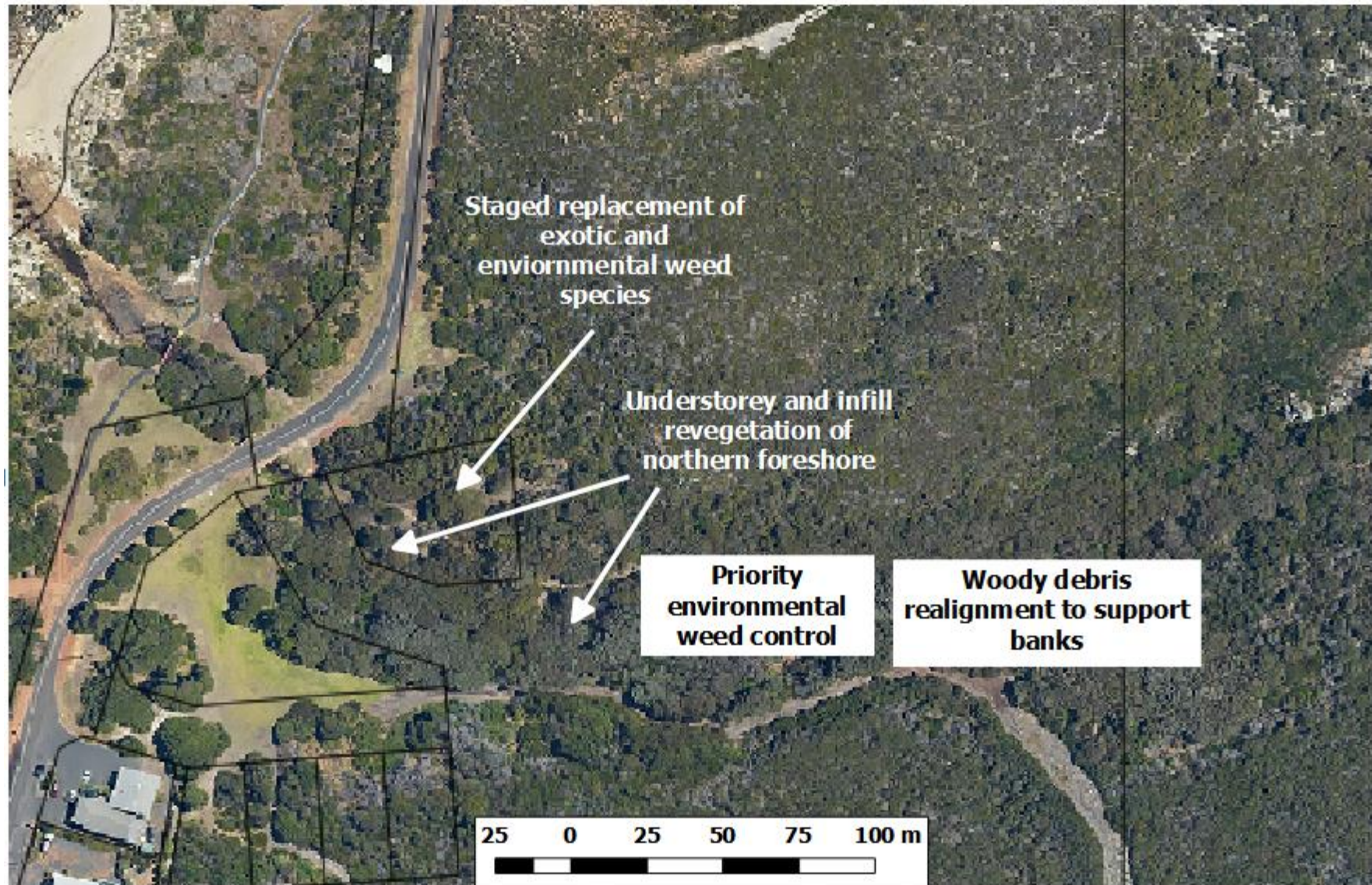
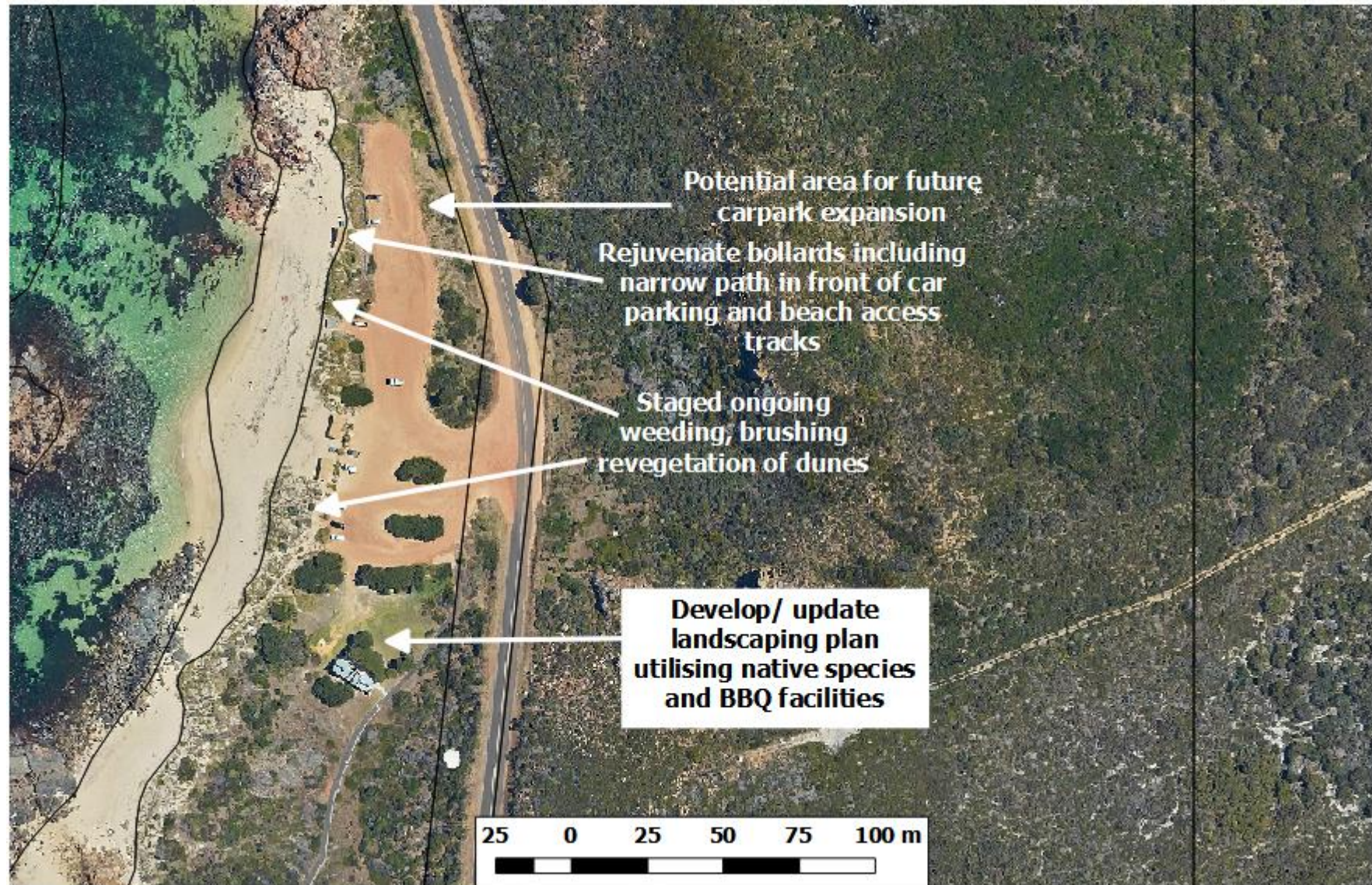


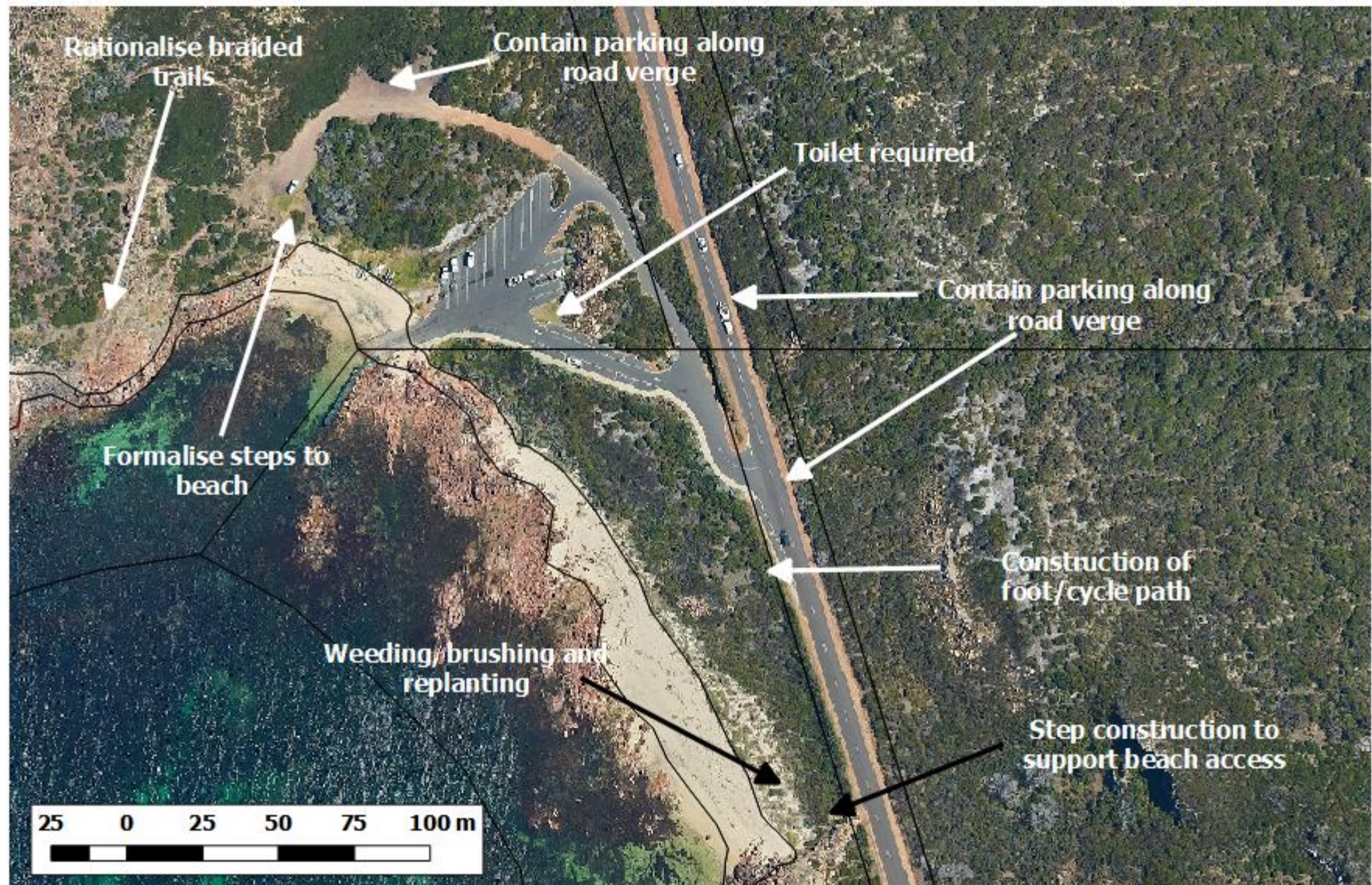
Figure 9. Cowaramup Brook Recommendations

<b>ZONE 4 – SWIMMERS BEACH</b>		
<b>#</b>	<b>RECOMMENDATIONS</b>	<b>PRIORITY</b>
4.1	Retain the informal nature of the carpark	M
4.2	Rejuvenate and expand the existing bollards protecting the dune vegetation including along the short beach access ways and including placing shade cloth on the carpark edge to capture sand.	H
4.3	Placement of a second set of bollards on the carpark side of the existing bollards to create a safe space that children can move through the carpark with the risk of moving behind cars	M
4.4	Consolidation and rejuvenation of regulatory and interpretive signage in this area in a location that does not block the ocean views	H
4.5	Continue dune revegetation and rehabilitation program through this zone including: <ul style="list-style-type: none"> <li>• Staged, gradual removal and replacement of sea spurge, dune onion weed and rose pelargonium;</li> <li>• Brushing;</li> <li>• Replanting with local coastal natives and transplanting of cuttings</li> </ul>	H
4.6	Consider the existing degraded area between the carpark and Bayview Dr as a potential future area for carpark expansion and overflow parking for Northpoint	M
4.7	Provide for disability access to the water through this zone – including the provision of a community beach access wheelchair at the shop and investigation of matting and or hand rail/ supports at the granite rock end of the beach.	H
4.8	Prepare a landscape plan in conjunction with the community in order to update the existing lawn area and toilet block adjoining Swimmers Beach. This may include installing a BBQ and picnic table within the picnic area and low key native landscaping in this zone – potential to utilise this area for interpretation of local coastal plant species especially bushfood and species used in rehabilitation – these plants could also be used as a source of seed or cutting material for direct transplanting or nursery growing. Draft concept plans for the area prepared by Topio Landscape Architecture exist and may assist.	H
4.9	Undertake control of priority environmental weeds within this zone including: <ul style="list-style-type: none"> <li>• White Cedar</li> <li>• Foredune weeds</li> </ul>	H



**Figure 10. Swimmers Beach Recommendations**

<b>ZONE 5 - NORTHPOINT</b>		
<b>#</b>	<b>RECOMMENDATIONS</b>	<b>PRIORITY</b>
5.1	Address the eroding informal access from the top (western most) carpark down onto 'boatramp beach'	H
5.2	Monitor pedestrian access into the burnt Melaleuca's and address if regeneration is inhibited	M
5.3	Install bollards to prevent vehicle access and parking on 'boatramp beach' and adjoining foredunes	H
5.4	Undertake planting and bush regeneration of the small spring and wetland vegetation above the boatramp beach that was disturbed and degraded during the carpark construction	H
5.5	Investigate the installation of a small composting toilet within this zone to service the boatramp and carpark	M
5.6	Consider the network of braided trails across the sensitive granite outcrop vegetation communities with the community and consider low key options for protecting this area including interpretive signage (potential options include marking chosen trails with low key timber ground levels markers or marking with driftwood.)	H
5.7	Undertake dune rehabilitation and revegetation/ brushing in the degraded dune section at the very southern end of this zone.	H
5.8	Consider increased signage of the Cape to Cape Track through this zone especially around the granite outcrop towards swimmers beach to ensure pedestrian traffic is focused on appropriate paths and where possible directed away from the road verge.	M
5.9	Undertake control of priority environmental weeds within this zone including: <ul style="list-style-type: none"> <li>• Flaxleaf broombush along Bayview Drive edge; and</li> <li>• Olive</li> </ul>	H
5.10	Install a short ~5m section of steps to assist traffic around the granite outcrop towards swimmers beach.	H
5.11	Address the safety and encroachment issue of parking along the edge of Bayview drive during good surf days – in conjunction with traffic/ road advice.	H
5.12	Encourage overflow parking into the Swimmers Beach car park	H
5.13	Ensure rangers regularly patrol for illegal camping and fires	H
5.14	Contact charter boat operators regarding options regarding parking congestion on busy days	M



**Figure 11. Northpoint Recommendations**

**APPENDIX 1: SPECIES LIST**

Common Name	Scientific Name	Huzza's	Cow. Brook	Melaleucas	Swimmers'	Northpoint
Red-eyed wattle	<i>Acacia cyclops</i>					
Flinder's Range wattle*	<i>Acacia iteaphylla</i>					
Shark's tooth wattle	<i>Acacia littorea</i>					
-	<i>Acacia rostellifera</i>					
Golden Wreath Wattle	<i>Acacia saligna</i>					
Western Karri Wattle	<i>Acacia subracemosa</i>					
Prickle lily	<i>Acanthocarpus preissii</i>					
WA Peppermint	<i>Agonis flexuosa</i>					
Marram Grass*	<i>Ammonphila arenaria</i>					
Dune cabbage*	<i>Arctotheca populifolia</i>					
Astartea	<i>Astartea scoparium</i>					
Parrotbush	<i>Banksia sessilis</i>					
Winged Boronia	<i>Boronia alata</i>					
Sea Rocket*	<i>Cakile maritima</i>					
Native willow	<i>Callistachys lanceolata</i>					
Bottlebrush	<i>Callistemon sp.</i>					
Pigface	<i>Carpobrotus virescens</i>					
She Oak*	<i>Casuarina sp.</i>					
Centella	<i>Centella asiatica</i>					
Karri oak	<i>Chorilaena quercifolia</i>					
Fleabane*	<i>Conyza sp.</i>					
Marri	<i>Corymbia calophylla</i>					
Spotted Gum*	<i>Corymbia maculata</i>					
Lemon scented Darwinia	<i>Darwinea citriodora</i>					
Flax lily	<i>Dianella revoluta</i>					
Veldt daisy*	<i>Dimorphotheca ecklonis</i>					
Southern diplolaena	<i>Diplolaena dampieri</i>					
Coastal hopbush	<i>Dodonea aptera</i>					
Ruby saltbush	<i>Enchylaena tomentosa</i>					
Karri	<i>Eucalyptus diversicolor</i>					
Tuart	<i>Eucalyptus gomphocephala</i>					
Platypus gum*	<i>Eucalyptus platypus</i>					
Sea spurge*	<i>Euphorbia paralias</i>					
Native cherry	<i>Exocarpus sparteus</i>					
Knotted club rush	<i>Ficinia nodosa</i>					
Fig*	<i>Ficus cairoca</i>					
White fumitory*	<i>Fumaria capreolata</i>					
Heart leaf Poison	<i>Gastrolobium bilobum</i>					
Gazania*	<i>Gazania sp.</i>					
Native Wisteria	<i>Hardenbergia comptoniana</i>					
Cut leaf hibbertia	<i>Hibbertia cuneiformis</i>					

Common Name	Scientific Name	Huzza's	Cow. Brook	Melaleucas	Swimmers'	Northpoint
-	<i>Hibbertia grossulariifolia</i>					
Tree Hovea	<i>Hovea elliptica</i>					
Tambookie*	<i>Hyparrhenia hirta</i>					
Jacksonia	<i>Jacksonia horrida</i>					
Norfolk Island Hibiscus*	<i>Lagunaria patersonia</i>					
Hare's tail Grass*	<i>Lagurus ovatus</i>					
Sword Sedge	<i>Lepidosperma effusum</i>					
Coastal sword sedge	<i>Lepidosperma gladiatum</i>					
-	<i>Lepidosperma squamatum</i>					
Square sedge	<i>Lepidosperma tetraquetrum</i>					
Coastal beard heath	<i>Leucopogon parviflorus</i>					
Cushion Bush	<i>Leucophyta brownii</i>					
Zamia	<i>Macrozamia reidlei</i>					
Burr medic*	<i>Medicago sp.</i>					
Chenille Honeymyrtle	<i>Melaleuca huegleii</i>					
Rottneest Island Teatree	<i>Melaleuca lanceolata</i>					
White Cedar*	<i>Melia azedarach</i>					
Nitre bush	<i>Nitraria billardierei</i>					
Coastal Rosemary	<i>Olearia axillaris</i>					
Cape Leeuwin wattle	<i>Paraseranthes lophantha</i>					
Rose Pelargonium*	<i>Pelargonium capitatum</i>					
Kikuyu*	<i>Pennisetum clandestinum</i>					
Cape Gooseberry*	<i>Physalis peruviana</i>					
Coastal Pimelea	<i>Pimelia ferruginea</i>					
Plantain*	<i>Plantago sp.</i>					
Bracken fern	<i>Pteridium esculentum</i>					
Berry saltbush	<i>Rhagodia baccata</i>					
Thick-leaved Fan-flower	<i>Scaevola crassifolia</i>					
Brazilian Pepper*	<i>Schinus terebinthifolia</i>					
Black berry nightshade*	<i>Solanum nigrum</i>					
Hairy Spinifex	<i>Spinifex hirsutus</i>					
Basket bush	<i>Spyridium globulosum</i>					
Cocky's Tongue	<i>Templetonia retusa</i>					
Sea Spinach*	<i>Tetragonia decumbens</i>					
Coast Bonefruit	<i>Threlkelidia diffusa</i>					
Dune onion weed*	<i>Trachyandra divaricata</i>					
Soapbush	<i>Trymalium odoratissimum</i>					
Twiggy mullian*	<i>Verbascum virgatum</i>					
Swish bush	<i>Viminaria juncea</i>					
Balga	<i>Xanthorrea pressii</i>					

**APPENDIX 2: RECOMMENDED REVEGETATION SPECIES**

Common Name	Scientific Name	Huzzas	Cow. Brook	Melaleucas*	Swimmers*	Northpoint
Red-eyed wattle	<i>Acacia cyclops</i>					
Shark's tooth wattle	<i>Acacia littorea</i>					
-	<i>Acacia rostellifera</i>					
Western Karri Wattle	<i>Acacia subracemosa</i>					
Prickle lily	<i>Acanthocarpus preissii</i>					
WA Peppermint	<i>Agonis flexuosa</i>					
Astartea	<i>Astartea scoparium</i>					
Parrotbush	<i>Banksia sessilis</i>					
Winged Boronia	<i>Boronia alata</i>					
Native willow	<i>Callistachys lanceolata</i>					
Pigface	<i>Carpobrotus virescens</i>					
Centella	<i>Centella asiatica</i>					
Karri oak	<i>Chorilaena quercifolia</i>					
Marri	<i>Corymbia calophylla</i>					
Lemon scented Darwinia	<i>Darwinea citriodora</i>					
Flax lily	<i>Dianella revoluta</i>					
Southern diplolaena	<i>Diplolaena dampieri</i>					
Coastal hopbush	<i>Dodonea aptera</i>					
Ruby saltbush	<i>Enchylaena tomentosa</i>					
Karri	<i>Eucalyptus diversicolor</i>					
Native cherry	<i>Exocarpus sparteus</i>					
Knotted club rush	<i>Ficinia nodosa</i>					
Heart leaf Poison	<i>Gastrolobium bilobum</i>					
Native Wisteria	<i>Hardenbergia comptoniana</i>					
Cut leaf hibbertia	<i>Hibbertia cuneiformis</i>					
-	<i>Hibbertia grossulariifolia</i>					
Tree Hovea	<i>Hovea elliptica</i>					
Sword Sedge	<i>Lepidosperma effusum</i>					
Coastal sword sedge	<i>Lepidosperma gladiatum</i>					
Square sedge	<i>Lepidosperma tetraquetrum</i>					
Coastal beard heath	<i>Leucopogon parviflorus</i>					
Cushion Bush	<i>Leucophyta brownii</i>					
Chenille Honey Myrtle	<i>Melaleuca huegleyi</i>					
Rottneest Island Teatree	<i>Melaleuca lanceolata</i>					
Coastal Rosemary	<i>Olearia axillaris</i>					
Cape Leeuwin wattle	<i>Paraseranthes lophantha</i>					
Coastal Pimelea	<i>Pimelia ferruginea</i>					
Berry saltbush	<i>Rhagodia baccata</i>					
Thick-leaved Fan-flower	<i>Scaevola crassifolia</i>					
Hairy Spinifex	<i>Spinifex hirsutus</i>					



Common Name	Scientific Name	Huzzas	Cow. Brook	Melaleucas*	Swimmers*	Northpoint
Basket bush	<i>Spyridium globulosum</i>					
Cocky's Tongue	<i>Templetonia retusa</i>					
Coast Bonefruit	<i>Threlkelidia diffusa</i>					
Soapbush	<i>Trymalium odoratissimum</i>					
Swish bush	<i>Viminaria juncea</i>					

**APPENDIX 3: PHOTOPOINT MONITORING LOCATIONS**



**APPENDIX 4: PROPOSED THREE YEAR ON-GROUND WORKS PLAN**

<b>PRIORITY ENVIRONMENTAL WEED CONTROL</b>				
<b>#</b>	<b>RECOMMENDATIONS</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
W1	Undertake minor woody weed 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>• Edible Fig;</li> <li>• Flaxleaf Broom</li> <li>• Flinders Range wattle;</li> <li>• White Cedar;</li> <li>• Broad-leaved Pepper Tree</li> </ul>	\$500	\$150	\$150
W2	Undertake annual Geraldton Carnation Weed control around the coastal reserves to protect the Leeuwin Naturaliste National Park the coastal Shire Reserves. (Note this was not observed within the actual project area)	\$500	\$250	\$150
W3	Undertake annual Arum lily control around the coastal reserves to protect the Leeuwin Naturaliste National Park the coastal Shire Reserves. (Note this was not observed within the actual project area due to the seasonality of the site assessment)	\$250	\$150	\$100
W4	Undertake perennial grass (eg Tambookie), Veldt Daisy and Freesia control around Cowaramup Brook	\$130	\$65	-
W5	Undertake staged annual coastal weed replacement at Swimmers Beach including Sea Spurge, Dune Onion Weed and Rose Pelargonium	\$500	\$500	\$500
W6	Undertake annual revegetation support weed control targeting disturbance weeds and annual grasses	\$200	\$200	\$200
<b>PRIORITY BRUSHING ACTIONS*</b>				
B1	Supply and place brush around the new and establishing revegetation plantings around the Huzza Cliff plantings on the water side of the carpark and Southpoint track	\$1800	\$1800	\$1800
B2	Supply and place brushing at the pedestrian accessed locations at the base of the Huzzas cliff	\$900	\$900	\$900
B3	Supply and place brushing with revegetation on the Melaleuca dunes	\$900	\$900	-
B4	Supply and place brushing with revegetation on the Swimmers Beach dunes	\$900	\$900	\$900

<b>PRIORITY REVEGETATION ACTIONS*</b>				
<b>#</b>	<b>ACTIONS</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
R1	Annual community revegetation planting between the cliff and the Huzzas carpark/ Southpoint track.	\$700	\$700	\$350
R2	Revegetation and infill planting/cutting transplant along the Melaleuca Beach dunes.	\$300	\$300	\$150
R3	Annual progressive revegetation and infill planting/cutting transplant along the dunes in front of Swimmers Beach.	\$300	\$300	\$300
R4	Revegetation and infill planting/cutting transplant at the degraded pocket of dunes at the southern end of the Northpoint Zone.	\$150	\$150	\$150
R5	Annual revegetation and in-fill along Cowaramup Brook – predominantly between the brook and the trail.	\$500	\$500	\$500
R6	Minor infill planting within the Northpoint spring	\$150	\$150	
<b>PRIORITY FENCING ACTIONS</b>				
<b>#</b>	<b>RECOMMENDATIONS</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
F1	Improve fencing/ pedestrian barrier at key points along the Southpoint track including volunteers rest and near the shark warning device	\$1000		
F2	Repair damaged fencing along Melaleuca Beach	\$1000		
F3	Replace/ replicate bollards around the Swimmers Beach carpark to contain vehicle and pedestrian traffic		\$5000	
F4	Replace and increase fencing/ pedestrian guidance around the vegetated dune portions of Swimmers Beach		\$5000	
F5	Install bollards to prevent vehicle parking on vegetated area above the boatramp beach	\$1000		

\*Costing assumes community/volunteer planting

\*Costing assumes predominantly contractor control

\*Costing assumes community/volunteer placement of brush