

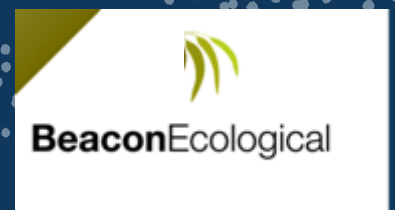


Barwon Coast Biodiversity Strategy 2025- 2035

BARWON COAST COMMITTEE OF MANAGEMENT INC.



DRAFT March 2026



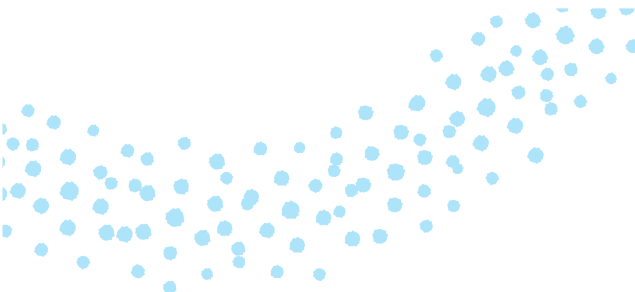
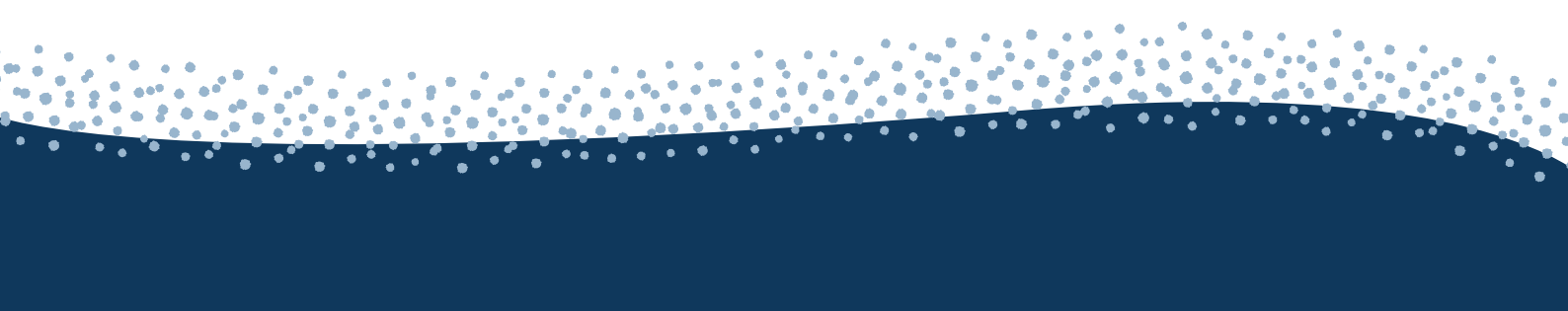


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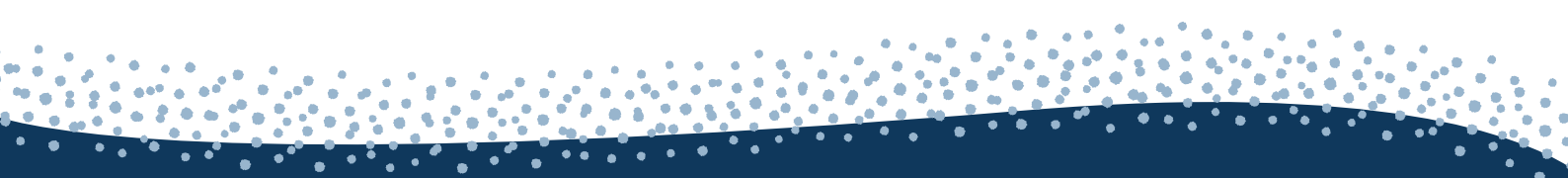
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Barwon Coast acknowledges and respects the Wadawurrung People as the original custodians of the marine and coastal environment of the southern Bellarine Peninsula and their unique ability to care for Country and deep spiritual connection to it. We honour Elders past and present whose knowledge, and wisdom has ensured the continuation of culture and traditional practices. We are committed to working with the Wadawurrung people to care for the coast.

Beacon Ecological would like to acknowledge the following for their contribution to the project:

- **Brett Diehm** (Team Leader Natural Resource Team, **Nicolas Tod-Jackson** (Open Space Coordinator), **Paul Gangell** (General Manager Operations) and **Gareth Smith** (CEO) from Barwon Coast Committee of Management Inc.).

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Fauna Camera Monitoring: Craig Grabham and Peter Crowcroft (Otway Ecology)

Photography: Luke Hynes

Report: Luke Hynes

Cover Photo: Coastal Dune Scrub vegetation at Bancoora Beach.

Beacon Ecological acknowledges and pays respect to the past, present and future Traditional Custodians and Elders of this nation, particularly the Wadawurrung people on whose land the field work was completed, and the continuation of cultural, spiritual and educational practices of Aboriginal and Torres Strait Islander peoples.



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DISCLAIMER

The author advises that the information presented in this report, including any management advice, has been prepared with all due diligence and care, and based on the best available knowledge and research.

However, the author takes no responsibility for any loss, injury or financial damage resulting from the reliance and/or application of management advice provided in the report.

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SUMMARY

The Barwon Coast Biodiversity Strategy 2025-2035 guides on-ground management to protect and enhance ecological values within Barwon Coast managed land over the next ten years. This plan updates, reviews and builds on the previous *Barwon Coast Vegetation Management Plan* (Mark Trengove Ecological Services 2013).

Methodology

Barwon Coast managed land was traversed to assess the condition of ecological values and identify challenges or threats to ecological values. Fauna camera monitoring was also carried out.

Local community environmental groups that work within Barwon Coast managed land were consulted to determine the effectiveness of the previous *Barwon Coast Vegetation Management Plan* (Mark Trengove Ecological Services 2013) where applicable, discuss results and contribute to management objectives.

Barwon Coast Vegetation Management Plan (Mark Trengove Ecological Services 2013) review

Overall, the majority of objectives have been met particularly those related to weed control with a significant decrease in weed cover across the study area. Other key management objectives that have been met include issues relating to pest animals, vegetation assessment and monitoring, education and protection, Hooded Plover management, Moonah Woodland restoration and revegetation of decommissioned campsites.

Ecological Values

The Barwon River estuary is a part of the internationally significant RAMSAR wetland *Port Philip Bay (Western Shoreline) and Bellarine Peninsula*.

Barwon Coast managed land supports high ecological values including two nationally significant ecological communities listed under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act 1999):

- *Natural Temperate Grassland of the Victorian Volcanic Plain (critically endangered)*; and,
- *Subtropical and Temperate Coastal Saltmarsh (vulnerable)*.

The study area supports habitat for the nationally significant Hooded Plover *Thinornis cucullatus* and the adjacent Thompsons Creek and Lake Connewarre support habitat for many additional nationally significant water birds.

Patches of vegetation supporting Moonah *Melaleuca lanceolata* canopy are considered to meet the thresholds for the *Coastal Moonah Woodland Flora and Fauna Guarantee Act 1988* (FFG Act 1988) listed community.



Seven flora species listed under the *FFG Act 1988* were noted within the study area including Coast Bitterbush *Adriana quadripartita*, Coast Fescue *Poa billardierei*, Coast Twin-leaf *Roepera billardierei*, Coast Wirilda *Acacia uncifolia*, Dune Poa *Poa poiformis* var. *ramifer*, Marsh Saltbush *Atriplex paludosa* subsp. *paludosa* and Grey Mangrove *Avicennia marina* subsp. *australasica*.

Large areas of relatively intact native vegetation were noted including vegetation with affinities to Ecological Vegetation Classes (EVC).

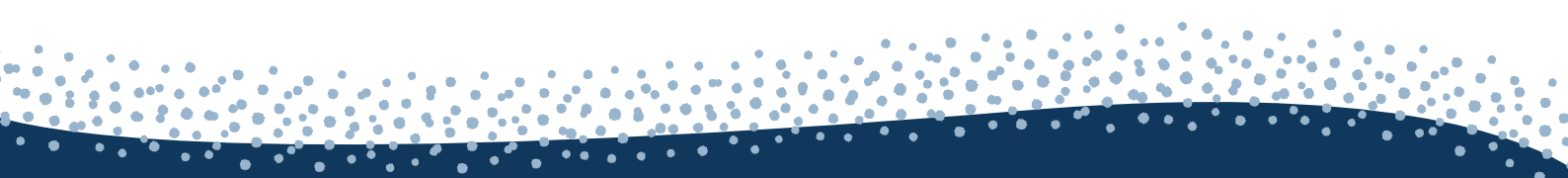
Management Recommendations

Barwon Coast is responsible for the management of 22 kilometres of coast divided into 17 management precincts. Management precincts have been prioritised using ecological values, vegetation condition and community group input to allow for accurate allocation of resources. Ten-year objectives have been set for overall issues across the entire management area and more detailed objectives for individual management precincts as appropriate.

Monitoring and Evaluation

Monitoring will be implemented to assess changes in vegetation composition over time as well as how well objectives are being achieved using the following methods:

- Vegetation monitoring using quadrat and belt transect assessments will continue to be implemented. Ongoing fauna camera monitoring is recommended.
- Management precinct objectives and works plans are to be reviewed annually to ensure that resources are sufficient to achieve objectives.
- This plan is to be reviewed in 2035 to ensure objectives are completed and new objectives set.



1 INTRODUCTION

Barwon Coast is delegated by the Minister for Environment, under the *Crown Land (Reserves) Act 1978*, to manage 22 km of coastal Crown land including the beaches and foreshores of Collendina (Emergency marker COL065), Ocean Grove, Barwon Heads, 13th Beach, Black Rock, Bancoora and Breamlea.

The coastal Crown land reserves that Barwon Coast manages comprises important ecological communities providing habitat for many flora and fauna species, and is characterised by sandy beaches, dune systems, cliffs, shore platforms, and two estuaries. The coastal and near-shore marine environments are also rich in Wadawurrung Traditional Owner cultural heritage, reflecting a long history of use and an abundance of natural resources. This includes shell middens, artefact scatters and other significant cultural heritage sites. This area also supports important areas of recreation and visitation including four caravan parks managed by Barwon Coast.

The Barwon Coast Biodiversity Strategy is in accord with the *Barwon Coast Coastal and Marine Management Plan (CMMP) 2020/2025* and reviews and build on the previous *Barwon Coast Vegetation Management Plan* (Mark Trengove Ecological Services 2013).

1.1 VISION

The vision of the strategy is taken from the highest priority guiding principle from the *Barwon Coast Coastal and Marine Management Plan (CMMP) 2020/2025*:

The protection and restoration of the natural environment within Barwon Coast managed marine and land through effective resource management.

1.2 BARWON COAST COASTAL AND MARINE MANAGEMENT PLAN (CMMP) 2020/2025 OBJECTIVES

This strategy also ties in with the *Natural Values* objectives detailed in the *Barwon Coast Coastal and Marine Management Plan (CMMP) 2020-2025*:

Ten Year Objectives

- *Protect and restore native vegetation along the coast.*
- *Protect native species and biodiversity.*
- *Safeguard the dune system.*
- *Maintain populations of threatened and significant (locally indigenous) native vegetation. This includes include Coastal Moonah, Coast Wirilda, orchids and associated dune and woodland vegetation communities' locations include Ocean Grove Dunes, Bukareeyoo, Barwon River Estuary, the Barwon Bluff and Thirteenth Beach precincts.*

- Reduce the extent of priority pest plants and invasive vegetation.
- Maintain a breeding population of Hooded Plovers.
- Reduce the level of informal human access to the dunes.

1.3 BARWON COAST BIODIVERSITY 2025-2035 STRATEGY OBJECTIVES

The objectives for this strategy are as follows:

- Define clear goals for biodiversity conservation and enhancement efforts within Barwon Coast managed precincts.
- Identify key biodiversity values and areas of concern within the Barwon Coast context.
- Develop actionable strategies and initiatives to mitigate biodiversity loss, enhance values and promote sustainable practices.
- Establish monitoring and evaluation frameworks to track progress and effectiveness of biodiversity initiatives.
- Mapping and documentation of Barwon Coast planning precincts.

1.4 BARWON COAST BIODIVERSITY 2025-2035 STRATEGY SCOPE

The strategy covers all lands, waters, and ecosystems directly managed or influenced by Barwon Coast Committee of Management Inc., within the six Barwon Coast Planning precincts. Key components of the strategy include:

- Review and update of the *Barwon Coast Vegetation Management Plan* (Mark Trengove Ecological Services 2013) to inform development of the Biodiversity Strategy.
- Inclusions to adequately consider fauna values and related actions into the Biodiversity Strategy.
- Develop a Mature Tree Strategy for our Caravan Parks that provides long term direction to how canopy trees are removed and replaced. This will require species selection and priorities for each caravan park with consideration to visitor amenity and safety whilst protecting and enhancing biodiversity values.
- Overarching Ten (10) year prioritised action plan for each precinct, with actions and measurable objectives that are consistent with Barwon Coast Coastal and Marine Management Plan.

1.5 STUDY AREA

The study area comprises coastal crown land from Ocean Grove in the east at Bonnyvale Road through to Thompsons Creek in the west (Figure 1). The majority of the study area is within the Otway Plain Bioregion with a strip of Victorian Volcanic Plain in the centre.

The eastern end of the study area comprises sandy dune systems to the Barwon River estuary. Sandy dune systems dominate the Barwon Heads and 13th Beach areas with the exception of limestone cliffs at the Barwon Bluff and small sections of limestone dominated headlands. The end of 13th beach to Bancoora beach supports basalt rocky shoreline before shifting to sandy dunes with a wetland complex in the rear of the dune system. The dune system continues to Thompsons Creek with saltmarsh vegetation communities on the estuary bank to the north. The majority of the study area is dominated by relatively intact native vegetation with some small areas dominated by introduced vegetation in recreation areas.

The study area also supports Riverview Family Caravan Park, Riverside campground, Barwon Heads Caravan Park and Breamlea Caravan Park.



Figure 1. Barwon Coast Managed land.

1.6 ADJACENT VALUES

Relatively intact coastal dune vegetation managed by the City of Greater Geelong is present to the east of Barwon Coast managed land from Collendina to Point Lonsdale known as Buckley Park Foreshore Reserve. High density residential development is present in the Ocean Grove township and Barwon Heads township. Adjacent to 13th Beach is the Barwon Heads Golf Club, Murtagurt Swamp managed by Parks

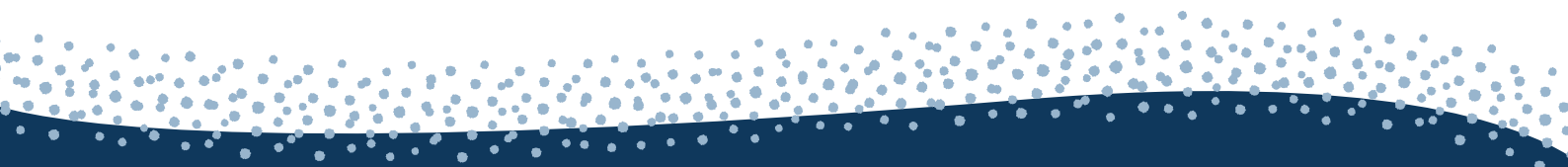


Victoria and private pasture. The Barwon Bluff Marine Sanctuary and Lake Connewarre complex (Port Phillip Bay and Bellarine Peninsula Ramsar site) are adjacent to Barwon Heads and the Barwon Bluff.

The Black Rock treatment plant managed by Barwon Water is adjacent to Bancoora Beach and then the Breamlea Flora and Fauna Reserve and Karaaf Wetland system behind Breamlea. Relatively intact coastal vegetation is present to the east, beyond Thompsons Creek managed by the Great Ocean Road Coast and Parks Authority (GORCAPA).

Any works programs must be undertaken with a cross-tenure approach, collaboratively working with the appropriate adjacent land managers.

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2 STRATEGY CONTEXT AND GUIDING PRINCIPLES

2.1 STRATEGY CONTEXT

This strategy applies to Barwon Coast managed land and is in accordance with relevant federal and state legislation and policy (Table 1).

Table 1. Relevant legislation and policy applicable to the Barwon Coast Biodiversity Strategy 2025 – 2035

Level	Legislation	Strategies, plans and policies
Federal Australian Government	• <i>Environment Protection and Biodiversity Conservation Act 1999</i>	• <i>Australia's Biodiversity Strategy 2010 - 2030</i> • <i>Australia's Strategy for Nature 2019-2030</i> • <i>Australian Weeds Strategy 2017-2027</i> • <i>Australian Pest Animal Strategy 2017-2027</i> • <i>Weeds of National Significance National Alert List for Environmental Weeds</i>
State Victorian Government	• <i>Marine and Coastal Act 2018</i> • <i>Catchment and Land Protection Act 1994</i> • <i>Flora and Fauna Guarantee Act 1988</i> • <i>Planning and Environment Act 1987</i> • <i>Local Government Act 1989</i> • <i>Environment Protection Act 1970</i> • <i>Crown Land (Reserves) Act 1978</i> • <i>Aboriginal Heritage Act 2006</i>	• <i>Protecting Victorias Environment – Biodiversity 2037</i> • <i>Invasive Plants and Animals Policy Framework</i> • <i>Guidelines for the removal, destruction or lopping of native vegetation</i> • <i>Marine and Coastal Policy 2020</i> • <i>Marine and Coastal Strategy 2022</i>
Regional Corangamite Catchment Management Authority City of Greater Geelong Wadawurrung Traditional Owners	• <i>Greater Geelong Planning Scheme</i>	• <i>Corangamite Catchment Regional Catchment Strategy 2021-2027</i> • <i>Corangamite Waterway Strategy 2014-2022</i> • <i>The City of Greater Geelong Environment Strategy 2020-30</i> • <i>City of Greater Geelong Biodiversity Strategy</i> • <i>Paleert Tjaara Dja. Lets make Country good together 2020-2030. Wadawurrung County Plan (Wadawurrung Traditional Owners Aboriginal Corporation 2020)</i>

Level	Legislation	Strategies, plans and policies
Aboriginal Corporation		
Local Barwon Coast	• Nil	• <i>Barwon Coast Coastal and Marine Management Plan 2020 – 2025</i> • <i>Bancoora Adaptation Plan: technical Reporting (Alluvium 2025)</i> • <i>Barwon Coast Foreshore Coastal Hazard Exposure (Water Technology 2025)</i> • Barwon Coast Biodiversity Strategy 2026-2036 • <i>Barwon Coast Mature Tree Strategy.</i>

Notes: Legislation refers to laws, which serve to legally prohibit certain actions and ensure others are carried out. Strategies are plans of action, which acts as a guide towards making sure legislation is complied with.

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2.2 MANAGEMENT PRINCIPLES

The following management principles were developed and adapted from the relevant strategies, plans and policies detailed in Table 1. These principles guide the management actions developed in this plan, particularly with regard to prioritisation of resources to managed invasive species at a management precinct scale.

Biosecurity Approach: Australia's federal and Victorian state government have adopted a biosecurity approach to pest plant and animal management. Informed by the pest invasion curve (Figure 2), this approach adopts a risk- based strategy to intervention featuring four key responses: prevention, eradication, containment and asset protection.

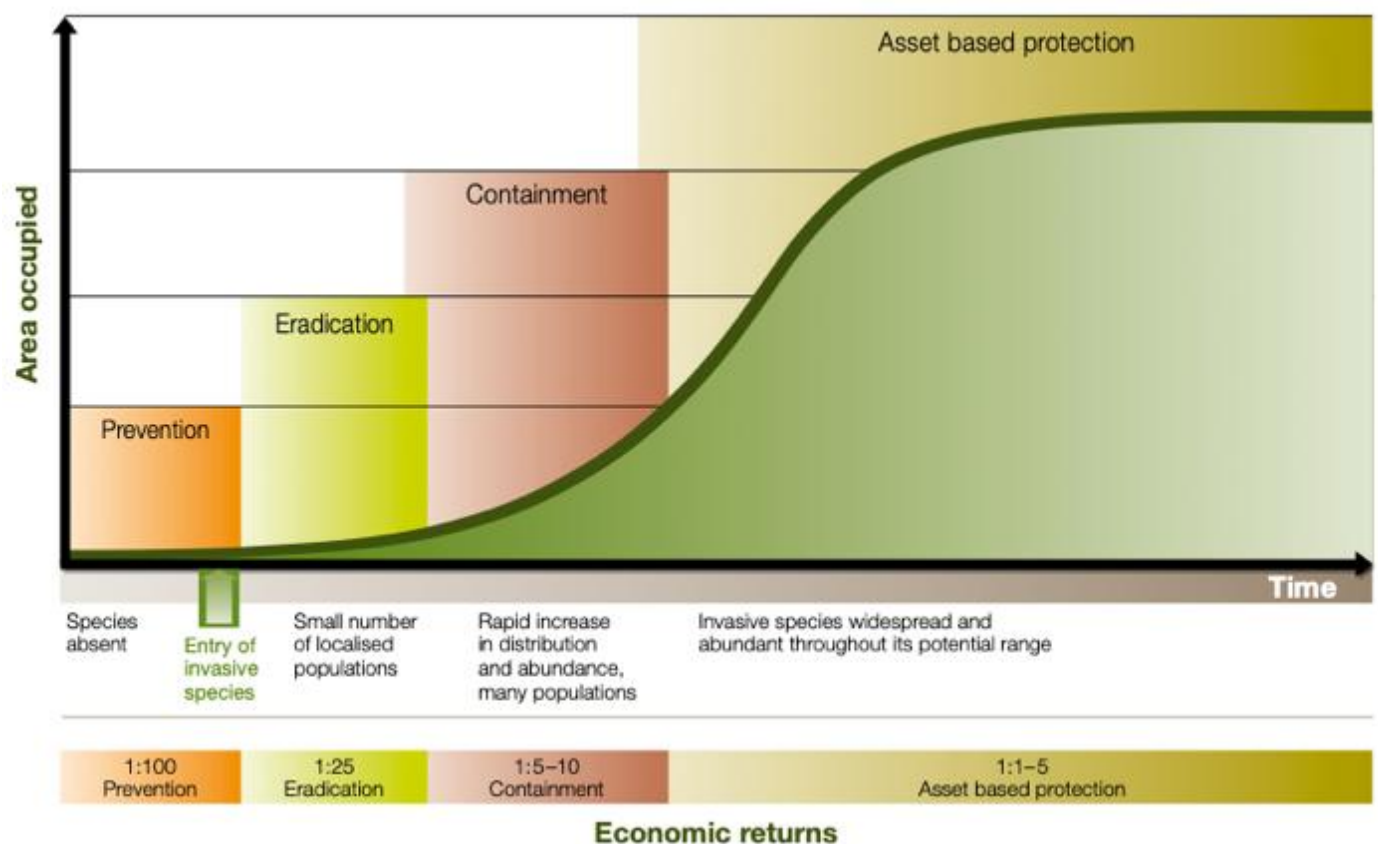


Figure 2. Invasion curve (DPI 2010)

Using this approach, higher priority is directed to prevention of any new pest species, then new and emerging species and small infestations before moving onto more established and widespread species.

Once a pest becomes so widespread that their containment is no longer possible, the management approach focuses on protecting strategically identified assets. Assets may have an environmental, economic and /or social value to the region. The biosecurity approach can be applied at local to regional scales.

Transparent Strategic Approach: Transparent, scientific, evidence based decision-making tools for setting priorities must be employed to ensure the most efficient use of resources. Management actions will be directed by adequate levels of information to make informed decisions. When necessary, additional data collection may be required. In this case a prioritisation matrix was developed to prioritise management precincts using desktop analysis and field work data (Appendix 3).

Cross Tenure Landscape Approach: The ability to foster effective partnerships and implement projects across all land tenures results in efficient use of resources, successful outcomes, and increases success. Barwon Coast aims to integrate works with adjacent land managers such as City of Greater Geelong, Parks Victoria and the Department of Energy, Environment and Climate Action (DEECA) where possible.

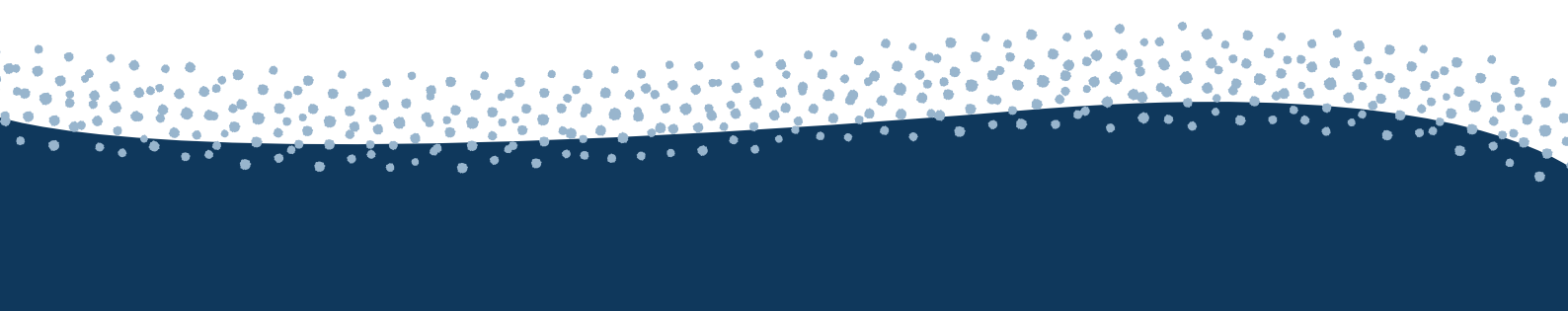
Integrated Land Management: Integrated pest plant and animal management actions into other broader management activities where possible such as fuel load management, recreation, amenity and capital works.

Address Cause: Effective solutions must address the cause of pest invasion, not just the symptoms. This may require developing an understanding of local pest pathways and dispersal mechanisms. In the case of many Barwon Coast weed infestations this may mean implementing community awareness programs to prevent garden escapees entering Barwon Coast managed land.

Ongoing Commitment: Pest plant and animal control programs are generally only effective if sustained resources are available over a prolonged period. When investing in programs and control activities it is essential to ensure as best possible that ongoing resources will be available for follow up work.

Community Engagement: Active involvement by the community is one of the greatest resources available in managing ecological issues across landscapes. Barwon Coast will build on existing working relationships with community environmental volunteer groups active within the Barwon Coast managed land. Weed control and biodiversity enhancement programs and should increase community awareness and capacity of community groups where possible.

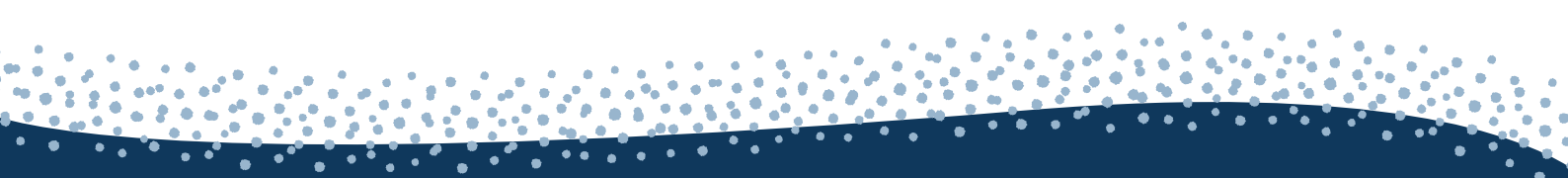
Monitoring and Review: An outcomes-based approach to monitoring, evaluation and reporting should be adopted. Monitoring and review are to be undertaken periodically and assessed against pre-determined measurable objectives.



2.3 WADAWURRUNG TRADITIONAL OWNERS ABORIGINAL CORPORATION AND CONNECTION TO COUNTRY

For over a decade, Barwon Coast have walked alongside Wadawurrung Traditional Owners in shared objectives to care for Country. Barwon Coast is committed to working in partnership with the Wadawurrung Traditional Owners towards a shared goal of improving the health of our coastal environment and meet with Wadawurrung representatives on a monthly basis. The Wadawurrung natural resource management team, Gobata Dja, currently works on country with the Barwon Coast Natural Resource Team three days per month supporting their role as Traditional Custodians of Coastal Country.

Paleert Tjaara Dja – Let's make Country good together 2020-2030 Wadawurrung Country Plan (Wadawurrung Traditional Owners Aboriginal Corporation 2020), is the Wadawurrung Country Plan developed by the Wadawurrung Traditional Owners Aboriginal Corporation. This plan identifies inappropriate access, weeds and rabbits as a threat to Sea Country, Coastal Country, rivers, estuaries and wetlands, and a risk to bush tucker, medicines and other resources. By preventing inappropriate access, implementing significant weed and pest animal control along the coast and protecting ecological values, this Strategy supports the Wadawurrung values and strengthens the conservation objectives from the Wadawurrung Country Plan.



3 METHODOLOGY

3.1 LITERATURE REVIEW

The following documents and databases were reviewed as part of the investigation:

- **Nature Kit** for pre-1750 (pre - European settlement) and 2005 (extant) native vegetation modelling and significant flora and fauna species previously recorded within the study area (DEECA 2025a).
- **Victorian Biodiversity Atlas** for flora and fauna species previously recorded within the study area (DEECA 2025b).
- **Protected Matters Search Tool** for nationally significant ecological values that are predicted to occur within the study area (DCCEEW 2025).
- **iNaturalist** for flora and fauna species previously recorded within the study area (iNaturalist 2026).

Relevant literature, such as Bioregional Ecological Vegetation Class (EVC) Benchmarks (DEECA 2025c) and national/state/local policies and legislation were also reviewed as part of the investigation. The following were also reviewed:

- *Barwon Coast Coastal and Marine Management Plan* (Barwon Coast 2021);
- *Barwon Coast Vegetation Management Plan* (Mark Trengove Ecological Services 2013); and,
- *Black Rock Foreshore Reserve Vegetation Assessment* (Mark Trengove Ecological Services 2010).

3.2 FIELD ASSESSMENT

Native vegetation and management issues within Barwon Coast managed land were assessed on foot and mapped where suitable during March 2025.

Native Vegetation Assessment

A rapid condition assessment of native vegetation was undertaken within the study area using criteria based on Keighery (1994). This is a six-point scale with vegetation ranked from near pristine to completely degraded (Table 2).

Ecological Vegetation Classes (EVC) for the areas of native vegetation within the study area were also mapped. EVCs are the standard unit developed by DEECA for classifying vegetation types in Victoria. EVCs are described through a combination of floristics, lifeforms and ecological characteristics as per benchmarks provided on the DEECA website (DEECA 2025c).

Each EVC has been assigned a Bioregional Conservation Status (endangered, vulnerable, depleted, least concern or rare) that reflects the current extent and quality when compared to the original (pre-1750) extent and condition modelling.

Table 2. Summary of vegetation condition scale adapted from Keighery (1994).

Condition Scale	Description
Near Pristine (6)	Pristine or nearly so, no obvious signs of disturbance.
Excellent (5)	Vegetation structure intact, disturbance affecting individual species and weeds are isolated infestations, relatively easy to control.
Very Good (4)	Vegetation structure altered, obvious signs of disturbance. Weed cover is up to 25% but capable of being controlled.
Good (3)	Vegetation structure significantly altered, obvious signs of multiple disturbance. Generally greater than 25% weed cover and difficult to control.
Degraded (2)	Basic vegetation structure severely impacted by disturbance. Scope for rehabilitation but not to a state approaching good condition without intensive management. Examples may include greater than 50% weed cover or basic overstorey species remaining with little to no remnant understorey.
Completely Degraded (1)	The structure of the vegetation is no longer intact, and the area is completely or almost completely without native species.

While in the field the potential presence of national and state significant species was also assessed using observed habitat, previous records from NatureKit (DEECA 2025) and previous reports.

Weed Mapping

Weeds are plants that occur beyond their natural range and have the potential to cause significant adverse economic, environmental and social impacts.

For the purposes of this plan, the definition of a weed is taken from the Australia Weeds Strategy 2017-2027 (Invasive Plants and Animals Committee 2016):

A weed is considered as a plant that requires some form of action to reduce its harmful effect on the economy, the environment, human health and/or amenity.

Weed infestations were noted within each management precinct with new and emerging weeds mapped using GIS technology. Waypoints were taken at the centre of infestations with the radius of infestation,

infestation level and life form collected (See Table 3 for data collected for each infestation). Larger infestations were mapped using polygons where appropriate.

Weeds considered to be part of the common ambient weed cover were generally not noted. These are weed species that are common across the landscape and are considered resource intensive to control. Herbaceous weeds considered part of this group include species such as Ribwort *Plantago lanceolata*, Buckshorn Plantain *Plantago coronopus*, Catsear *Hypochoeris radicata*, Red Pimpernel *Anagallis arvensis*, Clovers *Trifolium* spp, and Ox-tongue *Helminthotheca echinoides*. Common introduced grass species were only noted when infestations were way from vegetation edges such as pathways and carparking.

Table 3. Weed mapping data collected.

Field	Field Options	Field Description
Location/GPS point		Waypoint data collected from the GPS
Date		Date of weed mapping
Assessor		Name of person collecting the data
Common Name		Common name of weed
Scientific Name		Scientific name of weed
Extent Radius	<1 metre	The average radius of the infestation in metres. For data points the infestation waypoint is in the centre of the infestation.
	1-5 metres	
	6 – 10 metres	
	11 – 25 metres	
	Polygon	
Infestation cover	<1% Trace	Estimate of the projective foliage cover of the weed infestation. Projective foliage cover is an estimation of the percentage of the ground that would be covered by the shadow of the weed's leaves if the sun was directly overhead.
	1 – 10% Light	
	11 – 50% Medium	
	50% Dense	
Age Class	Seedling	Age class of the weed infestation. A resprout is a plant that has been previously treated that is showing regrowth.
	Juvenile	
	Mature	
	Resprout	

Fauna Camera Monitoring

Deployment of cameras

Otway Ecology placed baited camera traps (CTs) with assistance from Barwon Coast staff at 42 sites within the survey area. Sites were numbered 1 – 42 (from west to east). CTs were deployed for between 15 – 20 days at each site in May 2025. Site location details and survey effort are summarised in Attachment 1. Bait was placed in a bait holder (PVC tube) and pegged into the ground and/or tied to a log/branch. Bait consisted of rolled oats, peanut butter, golden syrup and a drizzle of truffle-infused olive oil. A tissue soaked with truffle infused olive oil was also inserted in the bait holder as an additional scent attractant.

Three types of cameras were used:

- Reconyx HP2W HyperFire 2 Professional White Flash Camera (~1 m focal length), camera numbers r1 – r5. Set to take 5 consecutive pictures (no video)
- Reconyx HP2W HyperFire 2 Professional White Flash Camera, camera numbers r6 – r10. Set to take 5 consecutive pictures (no video)
- Nextech 4K Infrared Trail Camera, camera numbers n1 – n11. Set to take both pictures (3 images) and a 10-second video.

Where possible, the Reconyx white flash cameras were placed in habitats most suitable for small native ground mammals. Before setting the camera, a brief search was undertaken for signs of animal (e.g. bandicoot digs, runways/tracks) to place the camera in the best location. The survey avoided locations near public tracks to avoid camera theft or the public tampering with the cameras. White flash cameras were generally placed furthest away from tracks/viewing points.

Analysis of data

To analyse the large volume of camera trap images (pictures and video) recorded during the survey, both automated open-source software (AddaxAI) and manual review processes were used. This approach was necessary because the dataset contained approximately 177,748 images, making manual analysis impractical for all images.

Addax AI (van Lunteren 2023) is an AI platform that allows you to analyse images on your computer and use machine learning models for automatic detection and identification. It incorporates the open-source MegaDetector model, which identifies animals, people, and vehicles in camera trap images (which also makes it helpful in eliminating blank images). This model is trained on several million images from a variety of ecosystems. MegaDetector only finds animals, it does not identify them to species level. The MegaDetector 5b model was used to filter images to identify animals for later manual review. In addition to

the MegaDetector, the Species Identification model for Tasmania (developer Barry Brook2) was used, considering the partial overlap of species (e.g., Black Rat) within the study area and general classes (e.g., snake or insect). Outputs from the analysis process were reviewed through the verification process, and a CSV file was generated with the results for each camera image (file) recorded at each site. Two reviewers, Craig Grabham and Peter Crowcroft, manually identified images in parallel to running the AddaxAI process.

Given the large number of images recorded, emphasis was placed on the manual review of candidate images containing small mammal and pest animal species to validate the AddaxAI outputs.

All work was completed under the following approvals: Wildlife Small Institutions Animal Ethics Committee (WSIAEC - reference number 10.25) and the Department of Energy, Environment and Climate Change Wildlife Research Authorisation (Permit No.10011443).

3.3 REVIEW OF 2013 MANAGEMENT OBJECTIVES

The *Barwon Coast Vegetation Management Plan* (Mark Trengove Ecological Services 2013) set out priorities for each Management Precinct. These actions have been reviewed using field results and discussions with Barwon Coast's Natural Resource Team to determine if actions have been completed.

One of the following categories of achievement was assigned for each objective:

1. *Objective achieved.*
2. *Objective not achieved.*
3. *Objective changed (In some instances the objective was changed as a different approach was used)*

Completion of objectives was then analysed against field results and discussion with Barwon Coast Staff.

3.4 CONSULTATION PROCESS

The project involved engagement with internal stakeholders and external experts (e.g., local Friends of groups, regional environmental NGOs, academic institutions, DEECA) through workshops, consultations, and feedback sessions to gather diverse perspectives and expertise. Consultation included discussion of field assessments and an explanation of the proposed management area prioritisation system, how it relates to the stakeholder works and discussion of potential objectives for relevant management areas. This included representatives from:

- Department of Energy, Environment and Climate Action (DEECA)
- Wadawurrung Traditional Owners Aboriginal Corporation
- Great Ocean Road Coast and Parks Authority (GORCAPA)
- City of Greater Geelong

- Parks Victoria
- Corangamite Catchment Management Authority (CCMA)
- Friends of the Hooded Plover
- Ocean Grove Coastcare
- Friends of the Bluff and
- Breamlea Coastcare.

3.5 THREAT RISK MATRIX ASSESSMENT

A qualitative threat assessment was undertaken to develop a qualitative analysis that provides a general indication of the level of threat(s) to Barwon Coast Managed ecological values is potentially subject to, based on the likelihood and consequence of the threat if it were to occur. This will then assist with setting objectives to protect ecological values.

The methodology is based on the principles and procedures of the *Australian/New Zealand Standard for Risk Management ISO 31000:2009* (Standards Australia 2009; AZ/NZS 4360:1999) and *HB 203: 2000 Environmental Risk Management – Principles and Process* (Standards Australia 2009).

This approach looks at each threat through the lens of its likelihood to affect the ecological value and possible consequence. The likelihood score is described as below:

1. Almost Certain: The outcome is expected to occur.
2. Likely: The outcome will occur in most circumstances
3. Possible: The outcome may occur; some evidence to support it will happen.
4. Unlikely: The outcome will only occur in a few circumstances; uncommon but known to occur elsewhere.
5. Rare: The outcome is not expected to occur; no record of occurring but not impossible; may occur in exceptional circumstance.

The consequence criteria is described below:

1. Insignificant: Minimal impact on the ecological value.
2. Minor: Minor impact on values and impacts likely to be short term only.
3. Moderate: Moderate impact to values with impacts likely to lead to moderate and/or short term effects.
4. Major: Significant impact to values with recovery likely to measure in years or decades.
5. Critical: Complete disturbance to ecological values with a possibility that values cannot be restored.

Combining these two values results in a threat matrix as below in Table 3.5.

Table 3.5: Threat matrix

Likelihood	Consequence				
	1. Insignificant	2. Minor	3. Moderate	4. Major	5. Critical
1. Almost Certain	Low	Medium	High	Severe	Severe
2. Likely	Low	Medium	Medium	High	Severe
3. Possible	Low	Low	Medium	High	Severe
4. Unlikely	Low	Low	Low	Medium	High
5. Rare	Low	Low	Low	Medium	High

The outcome of the threat matrix is used to prioritise actions to mitigate higher threats.

3.6 MANAGEMENT PRECINCT PRIORITISATION

To effectively allocate resources and protect highest value environmental assets, management precincts were ranked by priority using a methodology based on the Nillumbik Shire Council *Environmental Works. Bushland & Wetland Reserves Prioritisation & Planning Guidelines* (Nillumbik Shire Council 2013). Prioritising management precincts ensures strategic management focuses first in areas that have the greatest biodiversity and community values and the best long-term chance of retaining high biodiversity values.

Management precincts were ranked by using a prioritisation matrix (Table 4), allocating scores based on ecological values, vegetation quality and level of community input.

Table 4 Barwon Coast Prioritisation Matrix Data

Criteria	Data Source	Categories	Scores
Vegetation Values	Vegetation Condition Score	Pristine	24
		Excellent	20
		Very Good	16
		Good	12
		Modified/Revegetation	8
		Degraded	4
	EVC Bioregional Conservation Significance*	Endangered	5
		Rare	4

		Vulnerable	3
		Depleted	2
		Least Concern	1
Significant Species/Communities**	NatureKit (DEECA 2025)	RAMSAR or EPBC Act 1999 listed communities	30
		EPBC Act 1999 listed Flora	4
		EPBC Act 1999 listed Fauna	4
		FFG Act 1988 listed Flora	2
		V FFG Act 1988 listed Fauna	2
Community Involvement	To be collated from community groups and local community input	Active community or community group within reserve	10
		No active community or community group within reserve or adjacent to site	0

Notes:

*Note that for EVC scores, scores are cumulative for each EVC present within the management precinct.

**Note that for EPBC 1999 and FFG Act 1988 listed flora scores are cumulative for each species either recorded or with potential habitat.

Each zone is ranked against other zones based on score and allocated one of three levels of priority: High, Medium, and Low. If resources are reduced or not all objectives are able to be met, then resource allocation within management precincts will be determined using the priority system. See Appendix 4 for expected levels of service for each priority rating.

3.7 OBJECTIVE SETTING

Objective setting for overall objectives and precinct objectives has used the S.M.A.R.T. objective setting approach where possible. This stands for:

- S. Specific: Clearly defined so that all people involved in the project have the same understanding of what the terms of the objective mean.
- M. Measurable: Definable in relation to some standard scale (numbers, percentage, fractions or all/nothing states).

- A. Achievable: Practical and appropriate within the context of the project scope and considering the available resources.
- R. Relevant: The objective is to be relevant to the aims of the strategy.
- T. Time limited: Achievable within a specific period

When setting objectives for each management precinct, care was taken when selecting the language of each objective. Objectives need to be clear on what is intended to be achieved and where. Some example wordings and why they were used are listed below. It should be noted that setting objectives for every single weed noted in a management precinct was not considered appropriate and only key weed species have set objectives. It is assumed that while control works are being carried out for key species, all weed species will be controlled appropriately.

Effectively eradicate all mature plants: This wording is generally used for woody weeds. Many woody weeds have persistent seed banks and to use terms such as total eradication or elimination are not suitable as these seedlings are likely to continue to appear many years after all mature plants have been removed. If the objective of removal of mature plants is continuously achieved, the seed bank will gradually be diminished. A species is considered effectively eradicated from a Management precinct when there is less than 100 square metres of mature plants present within the zone.

Control Annually: Control is not always successful for some species. Weeds such as Sea Spurge and Bridal Creeper may require several treatments to achieve varied success. For many herbaceous and grassy weeds, the objectives are related to controlling plants. Control means the target infestations are treated using approved control methods each year, trialling different methods to see which is most effective.

Contain: Some infestations require more resources than are likely to be available or may be difficult to treat. For these large infestations, containment lines have been drawn around core infestations or current infestation levels. Infestations outside this containment area are to be controlled and the core infestation reduced over time as resources allow.

Reduce or effectively eradicate: Where appropriate, an objective related to the reduction of the cover or number of infestations for a target weed. Generally, if the cover of a species is reduced to less than 100 square metres per precinct then it is considered effectively eradicated.

Plant taxonomy follows the Victorian Biodiversity Atlas. See Appendix 1 for a list of common and scientific names of weeds noted within this plan.

Note that annual works plans will be developed to ensure precinct objectives are met.

3.8 LIMITATIONS

Field surveys provide an indication of what is present at the time of survey (i.e., a 'snapshot') and as such may not include species that may be dormant or absent due to seasonal or climatic conditions. The field work was undertaken during early autumn after a prolonged dry summer. As such, some native or introduced species may be dormant or not displaying adequate diagnostic characteristics at the time of

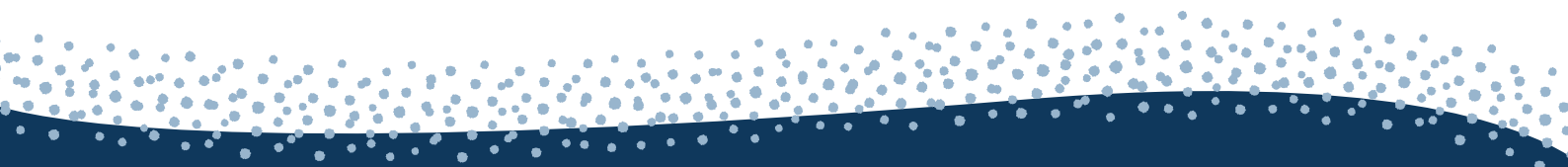


survey. Additional weed species and infestations may be recorded within the study area during assessments undertaken at alternative times of the year or during a prolonged time in the field.

In some instances, access was difficult due to steep terrain or dense vegetation. These areas were traversed or observed from a distance as best as possible. GPS tracking and aerial photography was used to ensure that sites were covered as systematically as possible.

The survey effort and review of existing relevant information is considered sufficient to provide biodiversity recommendations within the Barwon Coast managed land.

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4 REVIEW OF BARWON COAST VEGETATION MANAGEMENT PLAN 2013 PLAN

The *Barwon Coast Vegetation Management Plan* (Mark Trengove Ecological Services 2013) set objectives for management precincts across the study area which ended at the west end of 13th beach at that time. The success of these objectives has been assessed using results seen in the field and discussion with Barwon Coast's Natural Reserves staff.

Overall, the majority of objectives have been met particularly those related to weed control with a significant decrease in weed cover across the study area. See below for a discussion on previous objectives and Table 5 for more details.

Pest Animals: Control of pest animals has been consistent over time targeting foxes, rabbits, cats and rats.

Fox Control: Barwon Coast has implemented 10 years continuous baiting in remote areas, reducing the program during summer due to influx of visitors. Control has changed from Sodium fluoroacetate (1080) to Para-amino propiophenone (PAPP), as an antidote can be applied if recognised early. An inspection of the coastal reserve is undertaken annually to monitor previously controlled fox dens, map new locations and complete follow up fumigation using carbon monoxide treatments.

A professional shooter has been engaged with six to eight site visits per annum prior to the Hooded Plover breeding season (September to April) to reduce fox predation on this significant species.

Rabbit Control: An inspection of the coastal reserves is undertaken annually to monitor previously controlled warrens, map new locations and implement follow up fumigation Phos toxin (Aluminium phosphide) as required. An annual baiting program using Pindone (Pindone sodium) is also completed.

Cat Control: Cats are trapped when observed within reserve and returned to owners or disposed of humanly.

Rat Control: An annual rat control baiting program using Ratshot Blue (Difenacoum) is applied in areas of rat infestation, notably 13th Beach.

Assessment and monitoring: Monitoring of quadrats set up as part of the *Barwon Coast Vegetation Management Plan* (Mark Trengove Ecological Services 2013) have continued to be monitored every five years. Further, additional monitoring using belt transects has been set up in four locations across the study area with a focus on monitoring for vegetation composition changes associated with climate change.

Education and protection: Community education is carried out on an ongoing basis. Volunteer and school groups are supported through various community activities including weeding, planting, litter clean ups and educational tours. Education and capacity building is promoted through social media and the Barwon Coast website.

Inappropriate access appears to be adequately controlled across the study area with fencing maintained and appropriate signage alerting visitors to ecological values and why they should be protected. Brushing was also noted in some locations to prevent access and sand erosion. Overall evidence of inappropriate access was considered low with minimal evidence of party sites and camps.

Hooded Plover: Management of Hooded Plovers has been undertaken annually during breeding and fledging times by erecting signage and partnering with Ocean Grove Coastcare, Birdlife Australia, Barwon Water, City of Greater Geelong, Friends of the Hooded Plover Breamlea, Friends of the Hooded Plover Bellarine and Friends of Buckley Park. Fledgling rates vary seasonally with number of fledged individuals being between one and three per year.

Weed Control: Nearly all weed related objective are considered achieved particularly with woody weed cover significantly decreased across all precincts.

Austal Lotus: In the first three years of the previous management plan, small plantings were conducted on 13th Beach West and the Ocean Grove East Dune with a 25% success rate, the management action ceased due to availability of plant stock and limited survivorship.

Moonah Woodland: Evidence of revegetation of Moonah shrubs has been completed in appropriate locations across the management area.

Revegetation: Effective revegetation using locally indigenous species has been completed at decommissioned camp sites at Bukareeyoo, Estuary and the Barwon Bluff.

Table 5. List of *Barwon Coast Vegetation Management Plan* objectives and how well they have been achieved.

Issue	Values/Issues	10 Year Goal	Objective Achieved?	Comments
All Sites				
Pest animals	Rabbits, foxes	Works dependent upon introduction of appropriate pesticide for fox. Monitor for rabbits.	Achieved	Rabbit and fox control has been carried out across the study area when appropriate. Annually.
Assessment and monitoring	Quadrats	Implement photo points and monitoring.	Achieved	Quadrat monitoring has been implemented every five years, and belt transects also included.

Issue	Values/Issues	10 Year Goal	Objective Achieved?	Comments
Education and Protection	Community education	Ongoing component required for casual education opportunities.	Achieved	Community education is ongoing.
	Inappropriate Access	Brush matting of intrusion damage as observed.	Achieved	Brush matting has been implemented as required to prevent inappropriate access and stabilise dune areas.
		Signage and fencing of intrusion damage as observed.	Achieved	Signage and fencing have been implemented as required to prevent inappropriate access.
Fauna	Hooded Plovers	Protect hooded plover to assist fledging of chicks.	Achieved	Hooded plover nesting sites have been protected and Barwon Coast have provided support to community volunteer groups protecting this species.
Ocean Grove Dunes				
Priority and Serious Pest Plants	Milkwort, Wattles, Bridal Creeper	Reduce to <5% cover	Achieved	These species generally provide less than 1% cover.
New and emerging	Perennial Veldt-grass	Eliminate	Not achieved	This species is still present in small amounts, generally in shaded sandy depressions.
Persistence activities	Flax-leaf Broom	Reduce cover to 5%	Achieved	This species was not noted within this precinct.
Rehabilitation/revegetation	Austral Lotus	Increase through revegetation to achieve additional 50 plants per year for 5 years and monitor.	Objective changed	After limited success over the first three years this program ceased.

Issue	Values/Issues	10 Year Goal	Objective Achieved?	Comments
	Moonah Woodland	Rehabilitate existing Moonah and revegetate to create new moonah.	Achieved	Revegetation of Moonah shrubs has occurred on the edge of this management area.
Urban				
No direct objectives				
Bukareeyoo				
Priority Pest Plants	Milkwort, Dolichos	Reduce to <5% cover	Achieved	These species generally provide less than 1% cover.
New and emerging	Purple Groundsel	Eliminate	Achieved	These species generally provide less than 1% cover.
Persistence activities	Tree Aeonium, Climbing Groundsel	Reduce cover to <5%	Achieved	These species were not noted within this precinct.
Rehabilitation/revegetation	Revegetation	Revegetation of former camping areas.	Achieved	Revegetation of former camping areas has been completed using local indigenous species.
Estuary				
Priority Pest Plants	Milkwort, Bridal Creeper, Italian Buckthorn	Reduce cover to <5%	Achieved	These species generally provide less than 1% cover.
New and emerging	Rambling Dock, Spreading Pellitory	Eliminate	Achieved	These species were not noted within this precinct.
Persistence activities	Ivy, Freesia, Agapanthus, Gazania	Reduce cover to <5%	Achieved	These species were not noted within this precinct.
Rehabilitation/revegetation	Revegetation	Revegetation of former camping areas	Achieved	Revegetation of former camping areas has been completed using

Issue	Values/Issues	10 Year Goal	Objective Achieved?	Comments
				locally indigenous species.
Barwon Bluff				
Priority Pest Plants	Wattles, Italian Buckthorn, Bridal Creeper	Reduce cover to <5%	Achieved	These species generally provide less than 1% cover.
New and emerging	African Thistle	Reduce cover to <5%	Achieved	This species generally provides less than 1% cover.
Persistence activities	Black Flag, Buffalo Grass	Reduce cover to <5%	Achieved	These species generally provide less than 1% cover.
Rehabilitation/revegetation	Revegetation	Revegetation of former camping areas	Achieved	Revegetation of former camping areas has been completed using local indigenous species.
Fauna	Fauna	Undertake fauna monitoring	Achieved	Fauna monitoring across Barwon Heads, Ocean Grove and Breamlea foreshore reserves using 100m grid squares. This program has stopped in recent years due to lower priority and available staff.
13th Beach				
Priority Pest Plants	Sea Wheat Grass, Sea Spurge, Acacia sp., Milkwort, Bridal Creeper	Reduce cover to <5%	Achieved	This species generally provides less than 1% cover.
	Marram Grass	Reduce cover to <5%	Achieved	This species is dominant in some areas but generally providing less than 5% cover.

Issue	Values/Issues	10 Year Goal	Objective Achieved?	Comments
New and emerging	Sea Lavender, African Thistle, Fleabane, Pampas Grass	Reduce cover to <5%	Achieved	These species generally provide less than 1% cover.
Rehabilitation/revegetation	Austral Lotus	Increase through revegetation to achieve additional 50 plants per year for 5 years and monitor.	Objective changed	After limited success over the first three years this program ceased.

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5 BARWON COAST BIODIVERSITY VALUES

The study area covers two bioregions, dominated by the Otway Plain Bioregion with an area of approximately 900 metres wide between 13th Beach and Bancoora Beach in the Victorian Volcanic Plain Bioregion.

5.1 RAMSAR SITE

Ramsar sites are wetlands that are recognised as having international importance under the '*Ramsar Convention on Wetlands*'. The Barwon River estuary is considered part of the **Port Phillip Bay (Western Shoreline) and Bellarine Peninsula** RAMSAR site.

5.2 NATIONAL PARKS AND WILDLIFE CONSERVATION ACT 1975

The *Barwon Bluff Marine Sanctuary* is present at the Barwon Bluff covering 17 hectares including sandstone and basalt intertidal reefs and offshore areas. The Sanctuary supports diverse range of intertidal and marine flora and fauna with offshore kelp forests.

5.3 EPBC ACT 1999 LISTED NATIONALLY SIGNIFICANT VEGETATION COMMUNITIES

Vegetation within the study area is considered to meet the condition thresholds for two nationally significant ecological communities:

- *Natural Temperate Grassland of the Victorian Volcanic Plain (critically endangered)*
- *Subtropical and Temperate Coastal Saltmarsh (vulnerable)*

Natural Temperate Grassland of the Victorian Volcanic Plain: A patch of vegetation mapped as Coastal Tussock Grassland within precinct 7.2 Black Rock Grassland meets the condition thresholds for *Natural Temperate Grassland of the Victorian Volcanic Plain* (SEWPAC 2011) as it is:

- Within the Victorian Volcanic Plain;
- Dominated by native grassland vegetation (Coast Tussock-Grass providing approximately 60% vegetative cover);
- Is larger than 0.05 hectares (Patch is approximately 1.57 hectares).

Subtropical and Temperate Coastal Saltmarsh: Coastal Saltmarsh vegetation mapped within precinct 6.1 Breamlea Spit West is considered to be part of the *Subtropical and Temperate Coastal Saltmarsh* community as it meets the following key diagnostic characteristics:

- Occurs south of 23° 37' S latitude - from the central Mackay coast on the east coast of Australia, southerly around to Shark Bay on the west coast of Australia (26° latitude), and including the Tasmanian coast and islands within the above range

- Occurs on the coastal margin, along estuaries and coastal embayments and on low wave energy coasts
- Occurs on places with at least some tidal connection, including rarely-inundated supratidal areas, intermittently opened or closed lagoons, and groundwater tidal influences, but not areas receiving only aerosol spray
- Occurs on sandy or muddy substrate and may include coastal clay pans (and the like);
- Consists of dense to patchy areas of characteristic coastal saltmarsh plant species (i.e. salt-tolerant herbs, succulent shrubs or grasses, that may also include bare sediment as part of the mosaic); and,
- Proportional cover by tree canopy such as mangroves, Melaleucas or Casuarinas is not greater than 50%, nor is proportional ground cover by seagrass greater than 50%.

5.4 EPBC ACT 1999 LISTED NATIONALLY SIGNIFICANT SPECIES

The study area does not support known habitat for any nationally significant flora species listed under the *EPBC Act 1999*.

The study area supports significant habitat for one fauna species of national significance, the Hooded Plover, listed under the *EPBC Act 1999*. Additional nationally significant bird species are likely to use the adjacent Thompsons Creek estuary and Lake Connemara.

Hooded Plover: Sandy beaches across the majority of the study area support habitat for the nationally significant Hooded Plover which is listed as vulnerable on the EPBC Act 1999.

Key threats for this species include:

- Beach use by people, dogs, horses and vehicles. All of these pose a major threat during the breeding season with eggs being crushed, adults disturbed on nests and predation/mortal injury of flightless chicks.
- Urban development and infrastructure along the coast changing the size and structure of beaches that the Eastern Hooded Plover uses.
- Foxes, cats and domestic dogs preying on adults, nests and chicks.
- Habitat loss from weeds such as Sea Spurge, Marram Grass, Sea Wheatgrass and Beach Daisy.
- Climate change causing extreme storm events, including storms and storm surges that flood nests; and sea level rise causing a loss of habitat on narrow beaches (DCCEEW 2025b).

5.5 FFG ACT 1988 LISTED STATE SIGNIFICANT COMMUNITIES

Vegetation within the study area is considered to meet the requirements of two *FFG Act 1988* listed communities:

- *Coastal Moonah Woodland*
- *Western (Basalt) Plains Grasslands Community*

Coastal Moonah Woodland: The study area supports patches of vegetation considered to be part of the *Coastal Moonah Woodland* FFG listed community. This includes vegetation generally mapped as Coastal Headland Scrub at precinct 4.3 Bluff Headland and as areas of Coastal Alkaline Scrub dominated by Moonah across the study area.

Note that there is no formal definition with condition thresholds provided for the *Flora and Fauna Guarantee Act 1988* listed *Coastal Moonah Woodland* within the Otway Plain Bioregion. The *Coastal Moonah Woodland Action Statement* (DSE 2003) identifies this issue and the first management action listed in the statement is to:

Refine the description of Coastal Moonah Woodland and determine its relationship to similar communities, in particular Moonah dominated coastal communities occurring on soils other than calcareous sands.

The *Field guide to Coastal Moonah Woodland in Victoria* (DSE 2010) states that:

The vegetation structure and species composition of Coastal Moonah Woodland vary in relation to the landscape position (e.g., dune crest or swale), exposure to coastal influences, and disturbance history. Although the name of the community suggests that Moonah is the dominant canopy component of the community this is misleading as Coast Wirilda, Coast Tea-tree and Coast Beard-heath can also be dominant or co-dominant. The community name suggests that structurally it is woodland, however, the community generally forms a low open-forest and it also may be considered an open or closed shrubland, woodland, open woodland and open-forest depending on its location in the landscape and exposure to coastal influences.

Moxham *et al.* (2009) provide a description and key for *Coastal Moonah Woodland* in the Gippsland Plain bioregion however they state that the key is not definitive for *Coastal Moonah Woodland* in other bioregions (e.g., Otway Plain). Further the key provided defines vegetation occurring on coastal headland systems as Coastal Headland Scrub (EVC 161) and not *Coastal Moonah Woodland*. Both DSE (2010) and Moxham *et al.* (2009) identify *Coastal Moonah Woodland* occurring predominantly in Coastal Alkaline Scrub

(EVC 858) vegetation. Note that these definitions do not consider Moonah dominated Coastal Headland Scrub (EVC 161) vegetation such as noted within the study area,

For the purposes of this assessment, *Coastal Moonah Woodland* is defined as:

Vegetation where Moonah Melaleuca lanceolata is the dominant or co-dominant overstorey species.

One intended management action that Barwon Coast is responsible for from the *Coastal Moonah Woodland Action Statement No. 141* (DSE 2003) is to *Develop and implement management prescriptions, based on research findings and/or adaptive management, to protect, enhance and restore remnants of Coastal Moonah Woodland.*

If native vegetation is removed for track work or to access areas then Moonah shrubs are to be prioritised for retention over other native shrub species.

Western (Basalt) Plains Grasslands Community: Vegetation meeting the condition thresholds for the *Natural Temperate Grassland of the Victorian Volcanic Plain* in precinct 7.2 *Black Rock Grassland* are considered to also meet the thresholds for the *Western (Basalt) Plains Grasslands Community*.

5.6 FFG ACT 1988 LISTED STATE SIGNIFICANT SPECIES

The study area supports known habitat for seven flora species listed under the FFG Act 1988. These are detailed below. Note that Austral Lotus, *Lotus australis* was identified as a state significant species in the *Barwon Coast Vegetation Management Plan* (Mark Trengove Ecological Services 2013) as it was previously listed as poorly known on the Victorian Rare and Threatened Lists but is not included on the current *FFG Act 1988 Threatened List* (DEECA 2025d).

Coast Bitterbush *Adriana quadripartita* listed as *endangered*. Coast Bitter Bush was noted as isolated plants across the study area in small numbers. This species has been used in revegetation programs to increase its range.

Coast Fescue *Poa billardierei* listed as *endangered*. Coast Fescue is known from several small populations and has been planted in some new locations. Weed control works have been targeted to protect and enhance this species in some known locations.

Coast Twin-leaf *Roepera billardierei* listed as *endangered*. Coast Twin-leaf distribution is naturally limited within the study area but has been used in revegetation projects to increase its distribution.

Coast Wirilda *Acacia uncifolia* listed as *endangered*. Coast Wirilda distribution appears to be naturally limited within the study area with some natural regeneration noted. Natural regeneration and its including in revegetation areas is increasing the range of this species.

Dune Poa *Poa poiformis* var. *ramifer* listed as *endangered*. This species may be a variation of Coast Tussock-grass and may be least partly ecotypic - occurring when plants are partly buried by mobile sand or when plants are growing in shade (VicFlora 2025). This species is known from several populations and appears to be sustaining itself.

Marsh Saltbush *Atriplex paludosa* subsp. *paludosa* listed as *endangered*. Marsh Saltbush appears to be naturally limited to saltmarsh conditions within the study area.

Grey Mangrove *Avicennia marina* subsp. *australasica* listed as *endangered*. Grey Mangrove is naturally limited to Mangrove Shrubland within the Barwon river estuary.

5.7 ECOLOGICAL VEGETATION CLASSES

Eleven Ecological Vegetation Classes (EVC) were mapped across the study area as below. See the precinct management maps for distribution of EVCs across the study area.

- Coastal Saltmarsh (EVC 9, Bioregional Conservation Significance of *endangered*).
- Coastal Dune Scrub (EVC 160, Bioregional Conservation Significance of *depleted* (Gippsland Plain)).
- Coastal Headland Scrub (EVC 161, Bioregional Conservation Significance of *vulnerable*).
- Coastal Tussock Grassland (EVC 163, Bioregional Conservation Significance of *vulnerable*).
- Berm Grassy Shrubland (EVC 311, Bioregional Conservation Significance of *endangered*).
- Tall Marsh (EVC 821, No Bioregional Conservation Significance).
- Coastal Alkaline Scrub (EVC 858, Bioregional Conservation Significance of *endangered*).
- Coastal Dune Grassland (EVC 879, Bioregional Conservation Significance of *depleted* (Gippsland Plain)).
- Plains Brackish Sedge Wetland (EVC 891, Bioregional Conservation Significance of *vulnerable*).
- Estuarine Flats Grassland (EVC 914, Bioregional Conservation Significance of *endangered* (Victorian Volcanic Plain)).
- Coastal Tussock Saltmarsh (EVC A112, taken from *Benchmarks for Wetland Ecological Vegetation Classes in Victoria* (DELWP 2022)).
- Mangrove Shrubland (EVC 40, Bioregional Conservation Significance of *vulnerable*).

See the following pages for a description of the above vegetation types within the study area.

Coastal Saltmarsh (EVC 9)

Coastal Saltmarsh typically occurs on and immediately above marine and estuarine tidal flats and contains distinct floristic communities as bands or zones in the same location, depending on the positioning of the various floristic communities in relation to the saline environment. Consists of a range of life forms including succulent herbs, low succulent shrubs, rushes and sedges. (DEECA 2025c).

Within the study area this vegetation type was noted in the far west on the Thompson Creek and is dominated by Beaded Glasswort *Sarcocornia quinqueflora* with Austral Seablite *Suaeda australis*, Shrubby Glasswort *Sclerostegia arbuscula*, Sea Rush *Juncus kraussii* ssp. *australiensis*, Southern Sea-heath *Frankenia pauciflora* var. *gunnii*, Australian Salt-grass *Distichlis distichophylla*, Trailing Hemichroa *Hemichroa pentandra* and Rounded Noon-flower *Disphyma crassifolium* (Plate 1). Introduced species cover was negligible. Note that this vegetation type is considered to meet the diagnostic characteristics for the EPBC Act 1999 listed Subtropical and Temperate Coastal Saltmarsh community.

Plate 1. Coastal Saltmarsh within the study area



Coastal Dune Scrub (EVC 160)

Coastal Dune Scrub is described as a *closed scrub to five metres tall with occasional emergents occurring on secondary dunes along ocean and bay beaches and lake shores. Occupies siliceous and calcareous sands that are subject to high levels of salt spray and continuous disturbance from onshore winds* (DEECA 2025c)

Coastal Dune Scrub dominates the study area and is generally dominated by Coast Tea-tree *Gaudium laevigatum*, with Thyme Rice-flower *Pimelea serpyllifolia*, Coast Wattle *Acacia longifolia* subsp. *sophorae*, Seaberry Saltbush *Rhagodia candolleana* ssp. *candolleana*, Coast Pomaderris *Pomaderris paniculosa* ssp. *paralia*, Coast Beard-heath *Leucopogon parviflorus*, Coast Daisy-bush *Olearia axillaris* and Boobialla *Myoporum insulare* (Plate 2). Native understorey species include Coast Tussock-grass *Poa poiformis*, Karkalla *Carpobrotus rossii*, Supple Spear-grass *Austrostipa mollis*, Bower Spinach *Tetragonia implexicoma*, Coast Flax-lily *Dianella brevicaulis*, Coast Bone Fruit *Threlkeldia diffusa*, Knobby Club rush *Ficinia nodosa*, Coast Swainson-pea *Swainsona lessertiifolia*, Kidney Weed *Dichondra repens*, Hounds Tongue *Cynoglossum australe*, Coast Sword-sedge *Lepidosperma gladiatum* and White Correa *Correa alba*.

Typical weeds within this vegetation type includes Myrtle-leaf Milk-wort *Polygala myrtifolia*, Italian Buckthorn *Rhamnus alaternus*, Dolichos pea *Dipogon lignosus*, Bridal Creeper *Asparagus asparagoides*, Sallow Wattle *Acacia longifolia* subsp. *longifolia* and Panic Veldt Grass *Ehrharta erecta*.



Plate 2. Coastal Dune Scrub within the study area

Coastal Headland Scrub (EVC 161)

Coastal Headland Scrub is described as a *scrub or low shrubland to two metres tall on steep, rocky coastal headlands often associated with cliffs exposed to the stresses of extreme salt-laden winds and salt spray from the south west. Occurs on shallow sands along rocky sections of the coast* (DEECA 2025c).

Coastal Headland Scrub was noted at the Barwon Bluff and some small areas along the eastern section of 13th Beach and is dominated by Moonah *Melaleuca lanceolata* with Thyme Rice-flower, Sea Box *Alyxia buxifolia*, Coast Tea-tree, White Correa, Boobialla and Coast Daisy-bush (Plate 3). Native understorey species include Coastal Tussock-grass, Common Eutaxia *Eutaxia microphylla*, Coast Spear Grass *Austrostipa stipoides*, Karkalla, Coast Sword-sedge, Bidgee Widgee *Acaena novae-zelandiae* and Knobby Club Rush.

Introduced species within this vegetation type include Myrtle-leaf Milkwort, Mirror Bush *Coprosma repens*, Bridal Creeper, Red-eyed Wattle *Acacia cyclops* and Italian Buckthorn.

Note that this vegetation on the Barwon Bluff is considered part of the *Coastal Moonah Woodland FFG Act 1988* listed community.



Plate 3. Coastal Headland Scrub within the study area

Coastal Tussock Grassland (EVC 163)

Coastal Tussock Grassland is described as a *tussock grassland that may contain emergent shrubs. Occurs on exposed coastal cliffs and bluffs. Soils are saline and the strong salt-laden winds preclude tree growth* (DEECA 2025c).

Coastal Tussock Grassland was noted as some small areas in the east of the study area and larger areas in the west. These grassland areas are generally dominated by Coastal Tussock-grass with scattered Bidgee Widgee, Seaberry Saltbush, Bower Spinach, Australian Salt-grass, Rounded Noon-flower, Knobby Club rush, Milky Beauty-heads *Calocephalus lacteus*, Creeping Brookweed *Samolus repens* and Wallaby Grass *Rytidosperma* spp (Plate 4).

Introduced species include Cocksfoot *Dactylis glomerata*, Ribwort *Plantago lanceolata*, Ox-tongue *Helminthotheca echioides* and Buckshorn Plantain *Plantago coronopus*.



Plate 4. Coastal Tussock Grassland within the Black Rock Grassland precinct. Note that this vegetation is considered to meet the condition thresholds of the EPBC Act 1999 listed community. Natural Temperate Grassland of the Victorian Volcanic Plain.

Berm Grassy Shrubland (EVC 311)

Berm Grassy Shrubland is typically a *low shrubland to 1.5 metres tall occurring in sheltered coastal areas where sand deposits have formed as a result of low energy wave action. Contains a number of halophytic species over a ground layer of grasses and herbs* (DEECA 2025c).

Berm Grassy Shrubland was noted at the far west of the study area at the entrance to Thompsons Creek. Within the study area this vegetation is quite sparse with native species including Coastal Saltbush *Atriplex cinerea*, Seaberry Saltbush, Beaded Glasswort and Austral Seablite *Suaeda australis* (Plate 5).

The introduced grass Sea Wheat-grass *Thinopyrum junceiforme* is present within this vegetation.



Plate 5. Berm Grassy Shrubland within the study area

Tall Marsh (EVC 821)

Tall Marsh typically occurs on Quaternary sedimentary geology of mainly estuarine sands, soils are peaty, silty clays, and average annual rainfall is approximately 600 millimetres. Requires shallow water (to one metre deep) and low current-scour, and can only tolerate very low levels of salinity. Closed to open grassland/sedgeland to three metres tall, dominated by Common Reed and Cumbungi. Small aquatic and semiaquatic species occur amongst the reeds, however they are generally not visible during inundation (DEECA 2025c).

Tall Marsh was noted in the north of the precinct 6.2 Bancoora Dune and is dominated by a dense cover of Common Reed *Phragmites australis* and Narrow-leaf Cumbungi *Typha domingensis* (Plate 6).



Plate 6. Tall Marsh within the study area

Coastal Dune Grassland (EVC 879)

Coastal Dune Grassland consists of grasses and halophytes (succulents) that colonise the foredunes of ocean beaches. Soils are siliceous sands that have a very low humus content (DEECA 2025c).

Coastal Dune Grassland was noted within on the foredunes of Bukareeyoo, 13th Beach and Breamlea beaches. Within the study area this vegetation type is quite sparse, dominated by Hairy Spinifex *Spinifex sericeus* with scattered Dune Thistle *Actites megalocarpa*, Sea Parsley *Apium prostratum*, Cushion Bush *Calocephalus brownii*, Knobby Club rush and Karkalla (Plate 7).

Introduced cover generally includes Sea Wheat Grass, Marram Grass and Sea Rocket *Cakile maritima* at varying levels of cover.



Plate 7. Coastal Dune Grassland within the study area

Coastal Alkaline Scrub (EVC 858)

Coastal Alkaline Scrub is described as a *near-coastal, deep calcareous (alkaline) and largely stable sand dunes and swales commonly dominated by Moonah *Melaleuca lanceolata* ssp. *lanceolata**. It occurs at low elevations of 20 to 60 metres above sea level, average annual rainfall is approximately 55 to 950 millimetres, and it occurs on a variety of geologies and soil types. Low woodland or tall shrubland to eight metres tall, typically with a medium shrub layer, small shrub layer and sedges, grasses and herbs in the ground layer (DEECA 2025c).

Coastal Alkaline Scrub was noted behind the Barwon Bluff. This vegetation type was dominated variously by Moonah, Coast Tea-tree, Boobialla *Myoporum insulare*, Coastal Beard Heath and Coast Daisy Bush (Plate 7). The understorey supports various native species including Old Mans Beard *Clematis microphylla*, Seaberry Saltbush, Sea Box, Coast Sword Sedge, Spiny-headed Mat-rush *Lomandra longifolia*, Coast Flax-lily, Coast Spear-grass *Austrostipa flavescens*, Kidney Weed, Coast Bonefruit and Common Raspwort *Gonocarpus tetragynus*.

Introduced species includes Bridal Creeper, Myrtle-leaf Milkwort, Italian Buckthorn, Boxthorn *Lycium ferocissimum* and Panic Veldt-grass.



Plate 7. Coastal Alkaline Scrub within the study area

Plains Brackish Sedge Wetland (EVC 891)

Plains Brackish Sedge Wetland is described as a *treeless EVC dominated by sedges and herbs that are generally indicative of saline conditions. True halophytic species such as samphires, if present, only occur with very low cover. Occurs in estuaries and along poorly defined drainage lines or associated with shorelines of brackish lakes* (DEECA 2025c).

Within the study area this vegetation type is dominated by Chaffy Saw-sedge *Gahnia filum* with scattered Coast Tussock-grass, Bidgee Widgee, Bower Spinach and Seaberry Saltbush (Plate 8).

Introduced cover is low and includes Ox-tongue and Toowoomba Canary-grass *Phalaris aquatica*.



Plate 8. Plains Brackish Sedge Wetland within the study area

Estuarine Flats Grassland (EVC 914)

Estuarine Flats Grassland is described as a *closed to open grassland to 1.5 m tall with occasional shrubs occurring on estuarine flats often associated with current or old beach berms or sand sheets that are occasionally inundated by high tides. Occupies areas on marginally higher ground inland from Coastal Saltmarsh* (DEECA 2025c).

Estuarine Flats Grassland was noted in the west of the study area and is dominated variously by Knobby Club-sedge and Sea Rush in association with Coast Tussock-grass, Australian Salt-grass, Australian Hound's-tongue *Cynoglossum australe*, Slender Speedwell *Veronica gracilis*, Bidgee Widgee, Old Mans Beard and Salt Pratia *Lobelia irrigua* (Plate 9).

Introduced species cover is generally negligible.



Plate 9. Estuarine Flats Grassland within the study area

Coastal Tussock Saltmarsh (EVC A112)

Coastal Tussock Saltmarsh is described as an *upper coastal saltmarsh zone dominated by robust tussocks. Scattered distribution along the Victorian Coast* (DELWP 2022).

Within the study area this vegetation type was noted in the far west on Thompson Creek and is dominated by Prickly Spear-grass with scattered Australian Salt-grass, Beaded Glasswort, Austral Seablite, Creeping Brookweed *Samolus repens*, Swampweed *Selliera radicans*, Chaffy Saw-sedge, Australian Salt-grass, Trailing Hemichroa *Hemichroa pentandra* and Variable Groundsel *Senecio pinnatifolius* (Plate 10).

Introduced species cover is negligible.



Plate 10. Coastal Tussock Saltmarsh within the study area

5.8 FAUNA CAMERA MONITORING

A total of 177,748 images were recorded from the 42 survey sites across 756 survey days. Approximately 38% of the images were manually validated, excluding sites 5 and 36 where fewer than 5% of the images were reviewed. Camera trap site 5 appeared to continuously record images without any apparent triggers during session 1 and although the firmware was reset the camera (r8) continued to take large number of blank images without animals during the second session (n = 49,564 session 1 and 32,989 session 2), accounting for approximately 46% of images recorded from all sites combined.

Twenty (20) species were identified (Table 6), of which 13 were native and seven (7) were introduced. The majority of images reviewed (60% +) contained one or more Black Rat (*Rattus rattus*) or possibly the introduced (non-native) Brown Rat (*Rattus norvegicus*). No small native ground mammals (e.g. native rodents, Antechinus or Dunnart) were recorded.

Table 6. Fauna species identified from the camera trap survey

Common name	Scientific name	Session 1 – number of sites recorded	Session 2 – number of sites recorded	Total number of sites recorded
Black Rat	<i>Rattus rattus</i> +	21	21	42
Black Wallaby	<i>Wallabia bicolor</i>	9	6	15
Black-shouldered Kite	<i>Elanus axillaris</i>	1	0	1
Brushtail Possum	<i>Trichosurus vulpecula</i>	1	1	2
Common Blackbird	<i>Turdus merula</i> +	4	14	18
Common Ringtail Possum	<i>Pseudocheirus peregrinus</i>	1	2	3
Fox	<i>Vulpes vulpes</i> +	4	9	13
Grey Fantail	<i>Rhipidura albiscapa</i>	2	0	2
Grey Shrike-thrush	<i>Colluricincla harmonica</i>	3	2	5
House Mouse	<i>Mus musculus</i> +	18	10	28
Lowland Copperhead	<i>Austrelaps superbus</i>	1	0	1
Rabbit	<i>Oryctolagus cuniculus</i> +	0	1	1
Short-beaked Echidna	<i>Tachyglossus aculeatus</i>	2	2	4
Superb Fairywren	<i>Malurus cyaneus</i>	12	4	16
Thornbill	<i>Acanthiza species</i>	0	1	1
White-browed Scrubwren	<i>Sericornis frontalis</i>	14	18	32
Singing Honeyeater	<i>Lichenostomus virescens</i>	0	1	1
Spotted Turtle Dove	<i>Spilopelia chinensis</i> +	1	3	4
Magpie	<i>Gymnorhina tibicen</i>	0	0	0

Common name	Scientific name	Session 1 – number of sites recorded	Session 2 – number of sites recorded	Total number of sites recorded
Eastern Yellow Robin	<i>Eopsaltria australis</i>	2	0	2
Small unknown mammal / small rodent (most likely M. musculus or juvenile R. rattus)+		10	15	25

Table notes: = + introduced species.

5.9 PREVIOUSLY RECORDED FLORA AND FAUNA SPECIES

Victorian Biodiversity Atlas Data was searched to collect all previous flora and fauna records within the study area (Appendix 2). This comprised a total of 276 species including 107 flora species (57 native and 50 introduced) and 167 fauna species (156 native and 11 introduced).

iNaturalist data was searched to collect all previous flora and fauna records within the study area. This comprised a total of 561 species including 150 plants, two amphibians, six spiders, 117 birds, 76 insects, 12 mammals, nine reptiles and 265 marine animals.

5.10 COMMUNITY ENVIRONMENTAL VOLUNTEER GROUPS

Four community environmental groups operate within the Barwon Coast Managed area including:

- Ocean Grove Coastcare
- Friends of the Bluff
- Breamlea Coastcare.
- Friends of Hooded Plover

Barwon Coast supports community participation in citizen science, planning and on-ground activities as a way of increasing community awareness and stewardship of the area. Barwon Coast recognises and values the work, knowledge and experience of all community participants. Environmental volunteer groups within the management area will be supported and capacity enhanced where possible.

6 THREATS

There are numerous threats to ecological values within the study area. These are detailed below and then listed in a threat matrix listing threats against values listed in Section 5 to determine the risk of each threat with regards to the value.

This most severe threats are pest animals with regard to Hooded Plover and fauna and also pest plants with regard to native vegetation.

Pest Plants: Pest plants are a key threat to ecological values within the Barwon Coast Committee management area and are a central component of the Natural Resource Team regular on ground works. Pest plants can outcompete native plants and disrupt ecological processes displacing native fauna species. Control of weed species is vital to protect ecological values.

Dense Shrub Competition: Coast Tea-tree is the dominant species across the majority of the Coastal Dune Scrub and Coastal Alkaline Scrub and in some instances is forming a dense cover, outcompeting other species and reducing species diversity.

Typically, a succession from species rich open dune scrub to species poor closed shrubland is related to the frequency of fire events within scrub communities. Within the study area the vision is to maintain and enhance ecosystem health. Within these communities this equates to preserving species diversity. It is reasonable to assume that the scrub vegetation is the climax vegetation and that the change to large shrubby vegetation is a response to inappropriate fire regimes (i.e., infrequent fire). Comparison of recent and historical aerial photos show how native shrub cover has increased significantly over time (See Plate 11 and 12 below).



Plate 12. Aerial photography from 1951 on left and 2025 on right showing an increase in native shrub cover in coastal dune systems.

Barwon Coast is undertaking management to maintain a more diverse, open Coastal Dune Scrub and Coastal Alkaline Scrub communities in two locations by allowing natural regeneration through either

periodic burning or manual removal of indigenous shrub species that may be becoming dominant, particularly Coast Tea-tree. These works have been approved by DEECA under the Conservation Works Exemption listed in 52.17-7 of the City of Greater Geelong planning scheme to allow native vegetation removal that provides an overall improvement for biodiversity to proceed without a planning permit when written agreement is provided by the Secretary to DEECA.

If these works are deemed a success and the program is proposed to be expanded, any future removal of native vegetation will require an exemption from *Clause 52.17 Native Vegetation* under the City of Greater Geelong Planning scheme Conservation work exemption.

Climate Change: The *Barwon Coast Coastal and Marine Management Plan* (Barwon Coast 2021) identifies *Climate Change Preparedness* as a guiding principle:

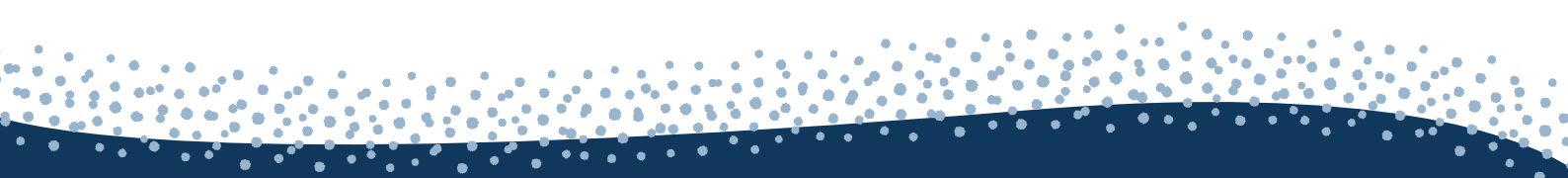
Barwon Coast proactively identifies and prepares adaptation plans in response to climate change and its potential impacts including inundation, erosion, heat, fire, rain and storms.

Evidence suggests that climate change will cause more extreme weather events with greater stresses on native species and ecosystems. These changes and follow-on effects may lead to negative impacts to native biodiversity. Biodiversity related climate change issues include:

- *Extreme Weather Events: May stress or destroy native vegetation communities opening new opportunities for weed species to invade. Storm surges, increased bushfire events and sea level rise are examples of potential events in Barwon Coast managed areas.*
- *Species Distribution Shifts: Changes in rainfall and temperature may impact on native species habitat range and allow some weed species to expand their range into new areas.*
- *Increased CO₂: Increased CO₂ may provide some introduced species to outcompete native species.*
- *Increased sea levels and storm surges: Climate change impacts may require retreat from the coast in some locations and loss of native vegetation. There may be opportunities for coastal vegetation to move further inland with this process.*

The *Bancoora Adaptation Plan: Technical Reporting* (Alluvium 2025) identifies permanent inundation as a result of climate change may cause moderate impacts to some dune eco-systems and breeding sites for threatened birds as well as moderate erosion impacts.

Increases in resources for natural resource management are likely to be required as climate change impacts become more apparent.



Dune Stabilisation: Sea Wheat Grass *Thinopyrum junceum* and Marram Grass *Ammophila arenaria* are introduced grasses that invade coastal foredune systems. Marram Grass was planted from as early as the 1880s in Victoria as a means of stabilising sand dunes. These introduced grasses trap and stabilise sand, altering the shape of sand dunes by creating steep drop-offs in the dune system when high tides and large swell events increase wave energy up the beach as well as dominating some areas, excluding native species.

These steep drop-offs can also have a significant impact on local Hooded Plover populations, reducing the areas in which they are able to nest and blocking their escape from the beach during high tides.

Insufficient resourcing: The Natural Resource Team is currently budgeted for four on ground staff. The team has recently been reduced from six to four staff however works now only focus on conservation activities while previously would also include maintenance and recreation activities. Two staff for three days from the Wadawurrung Gobata Dja Caring For Country Team and two staff from a private contracting firm are engaged monthly to undertake ecological activities.

These staffing level will need to be maintained to continue to effectively manage ecological values within Barwon Coast managed land. A reduction in staffing may reduce the capacity ability to achieve the strategy objectives.

Island Biogeography: The Barwon Coast managed land is geographically isolated with poor faunal habitat linkages to other areas of potential fauna habitat particularly for small mammals. The majority of the managed area abuts introduced pasture and residential areas with Thompsons Creek bordering to the west. Some areas of native vegetation, primarily around Lake Victoria and Breamlea Flora and Fauna Reserve provide some connectivity however these are not linked to larger refuge areas. As no small mammals have been recorded within the study area in recent times management of this fauna type may require reintroduction.

Native vegetation clearing: Clearing of native vegetation is a key threat to remnant native vegetation in Victoria. Any proposed works by Barwon Coast must always avoid and minimise impacts to native vegetation.

Change in hydrological regime of saline systems: Increased freshwater runoff from adjacent developments may be impacting on saline dependent ecological communities. This appears to be occurring to the north of the Bancoora S.L.S.C with an the Breamlea Coastcare group noting an increase of Cumbungi *Typha orientalis* cover and to a lesser extent Common Reed *Phragmites australis* invading previously known saltmarsh communities. A decrease in the salinity level of this site may allow more effective growing conditions for these species allowing them to outcompete other native saltmarsh species, altering the community to a simpler structure.

Rabbits: Rabbits are one of the most widespread and abundant pest animals in Victoria. Impacts to the environment are significant, with rabbit grazing preventing regeneration and displacing native flora and fauna. In Victoria, feral or wild populations of European rabbits are declared as established pest animals under the *Catchment and Land Protection Act 1994 (CALP Act)*. Under the CaLP Act, landowners have a responsibility to take all reasonable steps to prevent the spread of, and as far as possible eradicate, established pest animals from their land. Rabbit populations will be monitored and control implemented where required.

Rats: Introduced Rat populations have been noted within the 13th Beach dune systems. Rat populations will be monitored and control implemented where required.

Foxes: Foxes are opportunistic omnivores that eat a variety of meat, insects and plant materials and can severely impact native fauna populations, particularly the Hooded Plover in this instance. In Victoria, red foxes (*Vulpes vulpes*) are declared as established pest animals under the CaLP Act. Under the CaLP Act, landowners have a responsibility to take all reasonable steps to prevent the spread of, and as far as possible eradicate, established pest animals from their land. Fox populations will be monitored and control implemented where required.

Cats: Predation of native fauna by domestic and feral cats can impact on local fauna populations, particularly the Hooded Plover in this instance. Control of feral cats can be difficult, particularly adjacent to residential areas. Cat traps should be utilised when cats are reported within native vegetation. Community engagement programs communicating the risks to local fauna of uncontrolled domestic cats should also be implemented.

Shifting Baseline Syndrome: A shifting baseline is a type of change to how a system is measured, usually against previous reference points (baselines), which themselves may represent significant changes from an even earlier state of the system that fails to be considered or remembered. This can be problematic in ecological situations where ecosystems that appear diverse and healthy may be degraded from a previous condition.

Lack of visitor knowledge and capacity: The local community and visitors interact with the coastal system regularly and it is important that they have an understanding of the local ecological values and how their actions may adversely affect them. The following five threats are all related to locals and visitors which can be ameliorated through a better education program and understanding of ecological values.

Domestic Dogs: Domestic dogs may cause injury and death to native fauna if allowed to roam freely. For some species, such as the nationally significant Hooded Plover the scent or presence of dogs may disrupt natural fauna activities putting species at risk.



Further dog faeces can increase soil nutrient levels creating conditions more suitable for introduced species. Community engagement to ensure dogs are under effective control at all times and faeces are removed should be encouraged.

Litter: Litter levels were generally noted as low throughout Barwon Coast managed land. Litter impacts the amenity of the area but can also pose a risk to fauna species through ingestion or entrapment. Litter is also a direct risk to marine life if it makes its way to the ocean. Bins are currently supplied in high visitation areas and it is considered important to continue this practice. Fines for littering are enforced under local laws under the management of the City of Greater Geelong.

Illegal rubbish dumping: Illegal dumping poses a direct threat to the surrounding environment and to human health. Illegally dumped materials can be hazardous, for example asbestos and chemicals create a risk of soil and water contamination, fire and toxicity. Dumping of weeds & garden waste can also introduce new garden escapee weeds. While this not an issue for the majority of the Authority's managed land any dumped rubbish should be reported and removed immediately. Signage indicating applicable fines should be installed in locations where rubbish is regularly dumped.

Barwon Coast and the City of Greater Geelong and Victoria Police have also partnered to install CCTV cameras in key locations at Ocean Grove main beach to reduce illegal rubbish dumping and vandalism.

Garden Escapees: Residential areas about Barwon Coast managed land in many areas. Some residential gardens support environmental weeds that are spreading into the coastal reserve. Weed control should look at controlling infestation sources where possible. Community awareness campaigns to reduce environmental weeds in local gardens should be implemented in sensitive areas.

Illegal Camping and Party Sites: Illegal campsites and party sites were noted as only a few isolated incidences and appear to be managed successfully. Camp sites should continue to be removed as soon as possible and people camping in car parks moved on.

Distressed Animals: Barwon Coast as a Crown land manager has a duty of care for distressed injured terrestrial, avian and marine faunal species. Often this will be as first responders to community led information or ground staff observations. Processes may include and not limited to contacting relevant wildlife carers, providing initial assessments and support, or capture, management actions to reduce harm or distress, fencing, signage temporary beach closures.

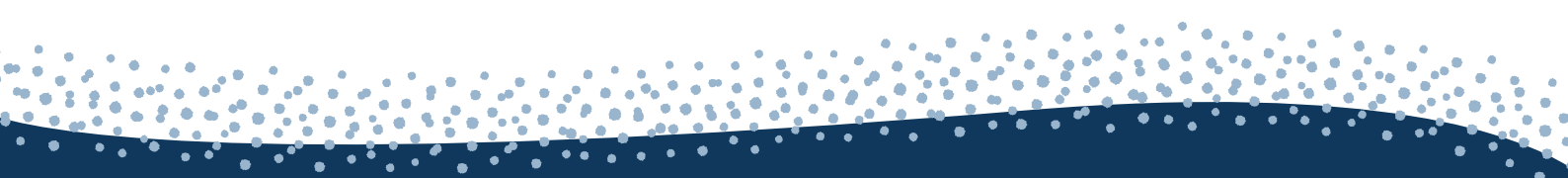


Table 7. Threat matrix for values within the Barwon Coast managed area.

	Value	Pest Plants	Dense shrub competition	Island biogeography	Native vegetation clearing	Change in hydrological regime	Insufficient resources	Climate Change	Dune stabilisation	Rabbits	Rats	Foxes	Cats	Lack of visitor understanding	Domestic dogs	Litter	Illegal rubbish dumping	Garden escapees	Illegal camping and party sites	Shifting baseline
EPBC Act Listed Values	Port Phillip Bay (Western Shoreline) and Bellarine Peninsula RAMSAR site	L: 1 C: 3 L	NA	L: 1 C: 1 L	L: 4 C: 3 L	NA	L: 3 C: 1 L	L: 2 C: 3 M	NA	L: 2 C: 2 L	L: 2 C: 1 L	L: 1 C: 2 M	L: 1 C: 2 M	L: 3 C: 2 L	L: 2 C: 3 M	L: 1 C: 1 L	L: 4 C: 1 L	L: 4 C: 2 L	L: 2 C: 1 L	L: 3 C: 2 L
	Natural Temperate Grassland of the Victorian Volcanic Plain *	L: 1 C: 4 H	L: 4 C: 3 L	L: 2 C: 3 M	L: 4 C: 3 L	NA	L: 3 C: 4 H	L: 2 C: 3 M	NA	L: 2 C: 3 M	L: 2 C: 3 M	L: 1 C: 1 L	L: 1 C: 1 L	L: 3 C: 2 L	L: 3 C: 2 L	L: 1 C: 1 L	L: 3 C: 4 H	L: 3 C: 4 H	L: 4 C: 2 L	L: 3 C: 3 M
	Subtropical and Temperate Coastal Saltmarsh	L: 4 C: 3 L	L: 5 C: 3 L	L: 2 C: 3 M	L: 4 C: 3 L	L: 4 C: 3 L	L: 3 C: 2 L	L: 2 C: 3 M	NA	L: 4 C: 1 L	L: 2 C: 1 L	L: 1 C: 1 L	L: 1 C: 1 L	L: 3 C: 2 L	L: 2 C: 1 L	L: 1 C: 1 L	L: 4 C: 2 L	L: 4 C: 1 L	L: 4 C: 2 L	L: 3 C: 3 M
	Hooded Plover	L: 2 C: 3 M	NA	L: 5 C: 1 L	L: 4 C: 2 L	NA	L: 3 C: 4 H	L: 2 C: 3 M	L: 2 C: 4 H	L: 5 C: 1 L	L: 3 C: 4 H	L: 1 C: 5 S	L: 1 C: 5 S	L: 3 C: 4 H	L: 1 C: 5 S	L: 1 C: 1 L	L: 4 C: 2 L	L: 4 C: 1 L	L: 3 C: 2 L	L: 4 C: 3 L
FFG Act Listed	Coastal Moonah Woodland	L: 2 C: 4 H	L: 3 C: 3 M	L: 3 C: 3 M	L: 3 C: 3 L	NA	L: 3 C: 3 M	L: 2 C: 3 M	NA	L: 3 C: 2 L	L: 3 C: 2 L	L: 1 C: 1 L	L: 1 C: 1 L	L: 3 C: 2 L	L: 2 C: 2 L	L: 1 C: 1 L	L: 3 C: 2 L	L: 3 C: 3 M	L: 3 C: 3 M	L: 3 C: 2 L
	Coast Bitterbush	L: 1 C: 3 H	L: 3 C: 3 M	L: 4 C: 3 L	L: 4 C: 2 L	NA	L: 3 C: 3 M	L: 2 C: 3 M	NA	L: 2 C: 2 M	L: 2 C: 1 L	L: 1 C: 1 L	L: 1 C: 1 L	L: 3 C: 2 L	L: 2 C: 2 L	L: 1 C: 1 L	L: 3 C: 2 L	L: 3 C: 2 L	L: 4 C: 3 L	L: 3 C: 3 M
	Coast Fescue	L: 1 C: 3 H	L: 5 C: 3 L	L: 4 C: 3 L	L: 4 C: 2 L	NA	L: 3 C: 3 M	L: 2 C: 3 M	L: 2 C: 4 H	L: 5 C: 1 L	L: 2 C: 1 L	L: 1 C: 1 L	L: 1 C: 1 L	L: 3 C: 2 L	L: 2 C: 2 L	L: 1 C: 1 L	L: 3 C: 2 L	L: 3 C: 2 L	L: 4 C: 3 L	L: 3 C: 3 M

	Value	Pest Plants	Dense shrub competition	Island biogeography	Native vegetation clearing	Change in hydrological regime	Insufficient resources	Climate Change	Dune stabilisation	Rabbits	Rats	Foxes	Cats	Lack of visitor understanding	Domestic dogs	Litter	Illegal rubbish dumping	Garden escapees	Illegal camping and party sites	Shifting baseline
	Coast Twin-leaf	L:1 C:3 H	L:3 C:3 M	L:4 C:3 L	L:4 C:2 L	NA	L:3 C:3 M	L:2 C:3 M	NA	L:2 C:2 M	L:2 C:1 L	L:1 C:1 L	L:1 C:1 L	L:3 C:2 L	L:2 C:2 L	L:1 C:1 L	L:3 C:2 L	L:3 C:2 L	L:4 C:3 L	L:3 C:3 M
	Coast Wirilda	L:1 C:3 H	L:3 C:3 M	L:4 C:3 L	L:4 C:2 L	NA	L:3 C:3 M	L:2 C:3 M	NA	L:2 C:2 M	L:2 C:1 L	L:1 C:1 L	L:1 C:1 L	L:3 C:2 L	L:2 C:2 L	L:1 C:1 L	L:3 C:2 L	L:3 C:2 L	L:4 C:3 L	L:3 C:3 M
	Dune Poa	L:1 C:3 H	L:5 C:3 L	L:4 C:3 L	L:4 C:2 L	NA	L:3 C:3 M	L:2 C:3 M	L:2 C:4 H	L:5 C:1 L	L:2 C:1 L	L:1 C:1 L	L:1 C:1 L	L:3 C:2 L	L:2 C:2 L	L:1 C:1 L	L:3 C:2 L	L:3 C:2 L	L:4 C:3 L	L:3 C:3 M
	Marsh Saltbush	L:4 C:3 L	L:5 C:3 L	L:4 C:3 L	L:4 C:2 L	NA	L:3 C:1 L	L:2 C:3 M	NA	L:5 C:1 L	L:2 C:1 L	L:1 C:1 L	L:1 C:1 L	L:3 C:2 L	NA	L:1 C:1 L	L:3 C:2 L	L:4 C:2 L	L:4 C:3 L	L:3 C:3 M
	Grey Mangrove	L:5 C:1 L	NA	L:4 C:2 L	L:5 C:1 L	NA	NA	L:2 C:3 M	NA	NA	NA	L:1 C:1 L	L:1 C:1 L	L:3 C:2 L	NA	L:1 C:1 L	NA	NA	NA	L:3 C:3 M
Local values	Saltmarsh Vegetation	L:3 C:3 M	NA	L:4 C:3 L	L:5 C:3 L	L:2 C:3 H	L:3 C:1 L	L:2 C:3 M	NA	L:5 C:1 L	L:2 C:1 L	L:1 C:1 L	L:1 C:1 L	L:3 C:2 L	L:2 C:2 L	L:1 C:1 L	L:3 C:2 L	L:4 C:2 L	L:4 C:3 L	L:3 C:3 M
	Native vegetation	L:1 C:4 S	L:2 C:4 H	L:3 C:2 L	L:2 C:2 L	NA	L:3 C:4 H	L:2 C:3 M	L:2 C:4 H	L:2 C:3 M	L:2 C:1 L	L:1 C:1 L	L:1 C:1 L	L:3 C:2 L	L:2 C:3 M	L:1 C:1 L	L:3 C:3 M	L:2 C:3 M	L:3 C:3 M	L:3 C:3 M
	Fauna	L:1 C:3 H	L:2 C:3 M	L:2 C:4 H	L:3 C:2 L	NA	L:3 C:3 M	L:2 C:3 M	L:4 C:3 L	L:2 C:2 M	L:2 C:3 M	L:1 C:5 S	L:1 C:5 S	L:3 C:2 L	L:2 C:4 High	L:1 C:1 L	L:3 C:2 L	L:2 C:2 L	L:3 C:2 L	L:3 C:3 M
	Community Environmental Groups	NA	NA	NA	NA	NA	L:3 C:3 M	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Barwon Bluff Marine Sanctuary	L:5 C:3 L	NA	NA	NA	NA	L:3 C:1 L	L:2 C:3 M	NA	NA	NA	NA	NA	L:3 C:2 L	NA	NA	NA	NA	NA	L:3 C:3 M



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Notes: L – Likelihood, (5 – Rare, 4 – Unlikely, 3 – Possible, 2 – Likely, 1 – Almost Certain), C – Consequence (1, Insignificant, 2 – Minor, 3 – Moderate, 4 – Major, 5 – Critical), NA – Not applicable, Risk level: L – Low, M – Medium, H – High, S – Severe, * – And Western (Basalt) Plains Grasslands Community (FFG Act)

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7 OVERALL MANAGEMENT OBJECTIVES

While the majority of ecological issues are dealt with in each of the precinct objectives there are some management area wide threats that should be specifically addressed. These are discussed below and summarised in Table 5.

Pest Plants: Pest plant objectives are generally detailed at a precinct level and can be found in Section 8.

Dense Shrub Competition: Preventing loss of biodiversity through dense shrub encroachment should be undertaken strategically to determine best methods of control and ability to ensure adequate follow up is available.

Ecological thinning of Coast Tea-tree at two sites at the Barwon Bluff has been approved by DEECA and has been implemented covering approximately 0.45 hectares using mechanical methods. This project is considered a trial under the approved permit and has a two year assessment period. At this time the project appears to be having some success with recruitment of ground cover species.

If the project is determined to be a success additional sites covering a minimum of an additional two hectares will be implemented over the next ten years using either fire or mechanical methods. These sites would be focused around the Barwon Bluff.

The use of fire to manage dense native shrubs at additional sites will be investigated with the Wadawurrung Gobata Dja Caring For Country Team.

Dune Stabilisation: Dune stabilisation through growth of the introduced Sea Wheat Grass and Marram Grass is noted as a significant threat.

With current resources, Sea Wheat Grass and Marram Grass cannot be controlled across the entire management area. Sea Wheat Grass and Marram grass will continue to be controlled at Bukareeyoo to protect the Coast Fescue population and Blue Rocks Dune.

Change in hydrological regime of saline systems: The Barwon Coast Natural Resource Team will assist the Breamlea Coastcare Group with control of this species and collaborate with Parks Victoria to ensure a cross tenure approach is employed as detailed in the precinct plan for Bancoora Dune.

Rabbits and Hares: During February and March annually all mapped warrens will be checked to see if active. Fumigation will be applied at active warrens. A Pindone Rabbit program will be implemented where active rabbit populations are noted, particularly around the Barwon Heads Caravan Park and at the rear of Blue Rocks. Hares and rabbits will also be shot by fox shooters opportunistically. Barwon Coast will continue to work in partnership with Barwon Water and Parks Victoria.



Foxes: All mapped Fox dens will be checked February and March annually during rabbit warren check and fumigated where considered active. Fox dens will also be fumigated during the year if located. A fox shooting program is undertaken annually prior to the Hooded Plover breeding time at each of the known breeding locations (9 locations between Breamlea to and Ocean Grove). PAPP (para-aminopropiophenone) baits are set all year across Barwon Coast Managed areas with weekly bait checks. This program is not run around populous areas between December and March during peak visitation times.

Cats: Cat traps will be utilised when cats are reported within native vegetation.

Shifting Baseline Syndrome: Vegetation monitoring will follow the *Barwon Coast Vegetation Monitoring Manual* (Beacon Ecological 2026) to ensure that changes in vegetation composition is monitored over time.

A fauna survey 'bioblitz' will be run every two years using community input and the iNaturalist recording app. Barwon Coast will facilitate this program with a focus on fauna including invertebrate fauna to collect baseline data and note any trends.

Domestic Dogs: To ensure dog control is adequately implemented and clearly Barwon Coast will continue to liaise with the City of Greater Geelong to implement beach dog regulations to benefit ecological values, particularly the Hooded Plover.

Dog litter bags will be maintained at selected bin sites to prevent nutrient loads affecting native vegetation.

Litter: Bins are currently supplied in high visitation areas and this practice will be continued. Barwon Coast will also continue to work with the City of Greater Geelong to issue fines where appropriate. Bins will be emptied regularly to prevent overflow.

Illegal rubbish dumping: Any dumped rubbish will be reported and removed immediately. Signage indicating applicable fines should be installed in locations where rubbish is regularly dumped. Barwon Coast will continue to work with the City of Greater Geelong and issue fines where appropriate.

Illegal Camping and Party Sites: Illegal campsites and party sites were noted as only a few isolated incidences and appear to be managed successfully. Camp sites will continue to be removed as soon as possible and people camping in car parks moved on. **Hooded Plover:** Barwon Coast will continue to support the Friends of the Hooded Plover with protective fencing during breeding times and continue with signage. Barwon Coast will continue to liaise with the City of Greater Geelong to implement beach dog regulations to benefit ecological values, particularly the Hooded Plover. Fox, cat and weed control objectives also feed into protecting this species.

Barwon Coast will continue to liaise with other local managers including the City of Greater Geelong, Surf Coast Shire, Great Ocean Road Coast and Parks Authority and Parks Victoria to collectively manage threats for this species. This would include advocacy for a compliance officer focussed on the Hooded Plover.

Community Environmental Volunteer Groups: Community Environmental Volunteer Groups are an essential component of managing the coast as it allows management bodies to leverage community effort and provides an opportunity for the community to be able to participate in on ground environmental restoration works. These groups will be supported with a minimum of one annual contact with each group to discuss proposed works for the following year and conservation staff attendance at working bees if required.

An annual working bee will be facilitated by Barwon Coast within the Thirteenth Beach area to try and foster a community group in this area.

Resources

Table 5. Management Area Wide Objectives

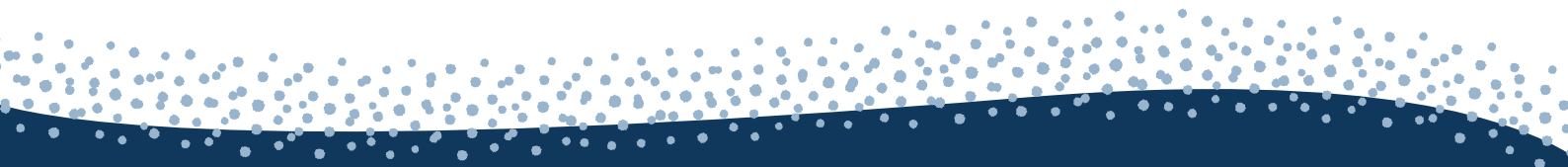
Weed Threat/Management Action	10 Year Objectives
Dense Shrub Competition	Two sites covering approximately 0.45 hectares will continue to be managed with project success determined by mid 2027. additional sites covering a minimum of an additional two hectares will be implemented over the next ten years
Dune Stabilisation	Sea Wheat Grass and Marram grass will continue to be controlled at Bukareeyoo to protect the Coast Fescue population and Blue Rocks Dune. These species at this site will remain less than 5% cover.
Change in hydrological regime of saline systems	The Barwon Coast Natural Resource Team will assist the Breamlea Coastcare Group with control of this species and collaborate with Parks Victoria to ensure a cross tenure approach is employed.
Rabbits and hares	Current annual rabbit control program of warren fumigation, Pindone program and opportunistic shooting will continue.
Foxes	Current ongoing fox control using PAPP, den fumigation and shooting will continue with a focus to protect the Hooded Plover.

Domestic and Feral cats	Cat traps will be utilised when cats are reported within managed areas.
Shifting Baseline Syndrome	Vegetation monitoring will follow the <i>Barwon Coast Vegetation Monitoring Manual</i> (Beacon Ecological 2026) to ensure that changes in vegetation composition is monitored over time. Barwon Coast will facilitate a community science 'bioblitz' every two years with a focus on fauna including invertebrate fauna.
Domestic Dogs	Continued community engagement program to ensure dogs are under effective control and dog faeces collection bags are regularly available. Liaise with the City of Greater Geelong local laws to enforce dog faeces littering and dogs off lead.
Litter	Continue the provision of bins at high visitation sites. Implement community engagement program relating to the risks of litter to the environment and fauna. Continue to work with the City of Greater Geelong and issue fines where appropriate.
Illegal rubbish dumping	Any dumped rubbish will be reported and removed immediately. Signage indicating applicable fines should be installed in locations where rubbish is regularly dumped. Continue to work with the City of Greater Geelong and issue fines where appropriate.
Illegal Camping and Party Sites	Remove campsites when located in native vegetation and move on illegal campers in carparks.
Hooded Plover	Barwon Coast will continue to support the Friends of the Hooded Plover with physical protection during breeding times and recommending updated dog regulations to the City of Greater Geelong to benefit Hooded Plover. Barwon Coast will continue to liaise with other local managers including the City of Greater Geelong, Surf Coast Shire, Great Ocean Road Coast and Parks Authority and Parks Victoria to collectively manage threats for this species. Fox, cat and weed control objectives also feed into protecting this species.
Community Environmental Volunteer Groups	Environmental volunteer groups within the management area will be supported and capacity enhanced with a minimum of one contact to plan the following year and assistance including

attendance at working bees as required.

An annual working bee will be facilitated by Barwon Coast within the Thirteenth Beach area to try and foster a community group in this area.

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8 PRECINCT MANAGEMENT OBJECTIVES

PRECINCT 1: OCEAN GROVE DUNES PRECINCT (COLLENDINA)



Figure 1.1. Ocean Grove Dunes Precinct Ecological values and notable weeds map

Precinct Biodiversity Management Aim: Manage native vegetation as Coastal Dune Scrub with minimal inappropriate access from adjacent residential areas.

The Ocean Grove Dunes Precinct (Collendina) is located in the far east of Barwon Coast managed land adjoining the Buckley Park Foreshore managed by the City of Greater Geelong and is dominated by Coastal Dune Scrub. Walking tracks are present behind houses in the west of this precinct with several beach access points. Some inappropriate access is likely given the proximity to residential areas. The Ocean Grove Coastcare group operates in this area. This beach zone provides for walking with dogs off-leash all year, with dogs required to be under effective control at all times.



Key weed species include Myrtle-leaf Milkwort, Dolichos Pea and Italian Buckthorn for which control was visible and the majority of infestations were noted as recruiting or juvenile plants. Bridal Creeper is also considered a key weed in this management precinct.

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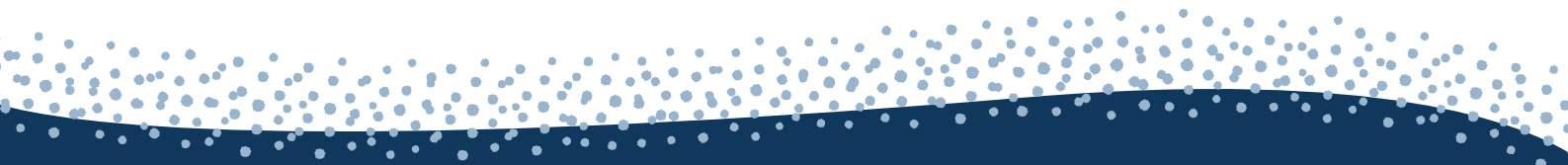


Table 1. Ocean Grove Dunes Precinct Values and Objectives

Priority	Medium
EVCs Present	Coastal Dune Scrub (EVC 160 <i>depleted</i>)
Environmental Activity	Ocean Grove Coastcare
Vegetation Quality	Generally Excellent. Large areas of relatively intact native vegetation, amongst minor woody and non-woody weed infestations.
Significant Ecological Values	Hooded Plover (<i>EPBC Act 1999, FFG Act 1988 vulnerable</i>) Coastal Moonah Woodland (<i>FFG Act 1988</i>) Wirilda <i>Acacia uncifolia</i> (<i>FFG Act 1988 endangered</i>) Coast Bitter-bush <i>Adriana quadripartita</i> (<i>FFG Act 1988 endangered</i>)
Weed Threat/Management Action	10 Year Objectives
Revegetate Moonah Woodland	Monitor and maintain existing revegetation areas
WOODY WEEDS	
Myrtle-leaf Milkwort – Signs of control with majority of mature plants removed. Scattered across site.	Effectively eradicate (remove all mature plants)
Italian Buckthorn – Isolated juveniles	
Sallow Wattle – Isolated juveniles	
NON-WOODY WEEDS	
Bridal Creeper – Scattered across site on rear dunes	Control annually
Sea Spurge, Purple Groundsel (Very low cover noted)	
Dolichos Pea – Scattered across site in rear dunes	
Sea Rocket – Sporadic along foredune	
GRASSY WEEDS	
Panic Veldt Grass – Some infestations in depressions	Contain to current levels
Sea Wheat Grass – Consistent cover along primary foredune	
Marram Grass – Sporadic along foredune	

PRECINCT 2: OCEAN GROVE MAIN BEACH

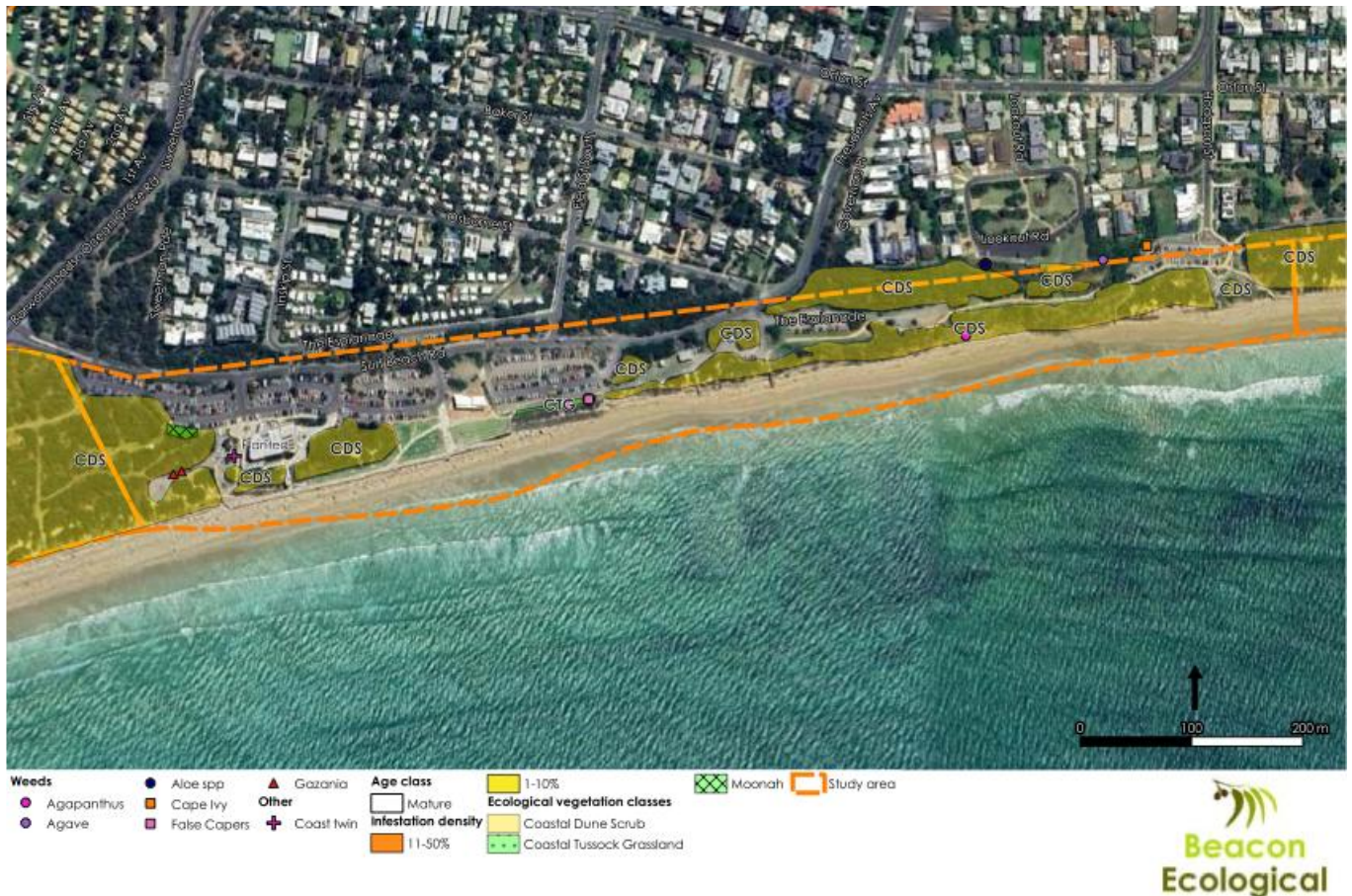


Figure 2. Ocean Grove Main Beach Ecological values and notable weeds map

Precinct Biodiversity Management Aim: Manage native vegetation as Coastal Dune Scrub with minimal inappropriate access from adjacent recreation areas.

Ocean Grove Main Beach precinct is a well-developed activity node supporting a mix of lower quality ecological values and recreation areas. This precinct receives very high visitation with walking tracks, car parking, the Dunes Cafe and the Ocean Grove S.L.S.C breaking up areas of native vegetation. Revegetation using locally indigenous species is present amongst car parking areas. Native vegetation is of mixed condition with some weedy areas. Large Monterey Cypress and Norfolk Pine trees are also present. The Ocean Grove Coastcare group operates in this area.

Table 2. Ocean Grove Main Beach Values and Objectives

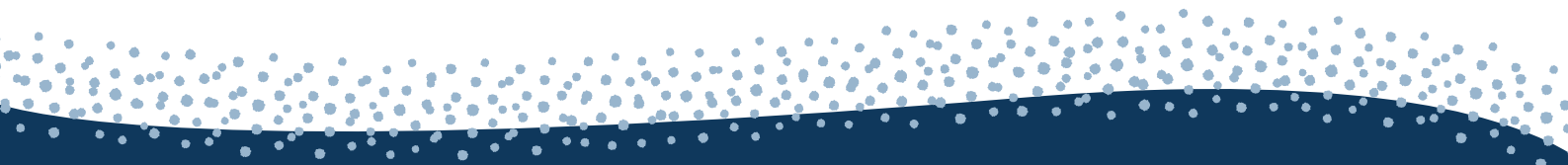
Priority	Low		
EVCs Present	Coastal Dune Scrub (EVC 160 <i>depleted</i>) Coastal Tussock Grassland (EVC 163 <i>vulnerable</i>)		
Environmental Activity	Community	Group	Ocean Grove Coastcare
Vegetation Quality	Good. Vegetation quality is partially modified with patches of native vegetation amongst recreational area. Some significant weed infestations are present. Revegetation using indigenous species is present adjacent to carparking areas. Some remnant <i>Correa Correa sp.</i> are present on the Ocean Grove Bluff.		
Significant Ecological Values	Coastal Moonah Woodland (<i>FFG Act 1988</i>) planted around year 2000. Coast Twin Leaf (<i>FFG Act 1988 endangered</i>) Likely planted		
Weed Threat/Management Action		10 Year Objectives	
WOODY WEEDS			
Myrtle-leaf Milkwort – Signs of control with majority of mature plants removed. Scattered across site.		Effectively eradicate (remove all mature plants)	
Italian Buckthorn – Isolated juveniles			
Sallow Wattle – Isolated juveniles			
Norfolk Pine, Monterey Cypress – Mature trees adjacent to car parking areas		Remove as trees decline and replace with locally indigenous species	
NON-WOODY WEEDS			
Bridal Creeper – Scattered across site on rear dunes		Control annually	
Sea Spurge, Purple Groundsel (Very low cover noted)			
Dolichos Pea – Scattered across site in rear dunes			
Sea Rocket – Sporadic along foredune			
GRASSY WEEDS			
Buffalo Grass – Some isolated infestations		Control annually	



Sea Wheat Grass – Consistent cover
along primary foredune

Marram Grass – Low cover within this
precinct

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PRECINCT 3 BUKAREEYOO (PREVIOUSLY KNOWN AS OCEAN GROVE SPIT)



Figure 3. Ocean Grove Spit Ecological values and notable weeds map

Precinct Biodiversity Management Aim: Manage native vegetation as a mix of Coastal Dune Scrub, Coastal Alkaline Scrub and Coastal Dune Grassland with minimal inappropriate access from adjacent recreation areas. Coastal Dune Grassland in south of area to be exclude Marram and Sea What Grass.

Bukareeyoo (previously known as Ocean Grove Spit). The precinct is bound by the Barwon River to the west and receives high visitation with the northern area used over summer and Easter periods as a campground. Several parking and beach access areas are present across the zone.

This precinct supports a variety of vegetation types with Coastal Dune Scrub on the foredunes and Coastal Alkaline Scrub within the camping area. FFG Act 1988 listed species Coast Twin-leaf and Wirilda were also noted, the majority likely planted. The FFG Act 1988 Coastal Moonah Woodland was also noted as remnant and revegetation areas.

Table 3. Bukareeyoo Values and Objectives

Priority	High		
EVCs Present	Coastal Dune Scrub (EVC 160 <i>depleted</i>) Coastal Dune Grassland (EVC 163 <i>vulnerable</i>) Coastal Alkaline Scrub (EVC 858 <i>endangered</i>)		
Environmental Activity	Community	Group	Ocean Grove Coastcare
Vegetation Quality	Good. Vegetation quality is a mix of Excellent areas and areas with a modified understorey at times dominated by introduced grasses.		
Significant Ecological Values	Hooded Plover (<i>EPBC Act 1999, FFG Act 1988 vulnerable</i>) Coastal Moonah Woodland (<i>FFG Act 1988</i>) Coast Twin Leaf (<i>FFG Act 1988 endangered</i>) Coast Bitter Bush (<i>FFG Act 1988 endangered</i>) Coast Fescue (<i>FFG Act 1988 endangered</i>)		
Weed Threat/Management Action		10 Year Objectives	
WOODY WEEDS			
Myrtle-leaf Milkwort – Signs of control with majority of mature plants removed. Scattered across site.		Effectively eradicate (remove all mature plants)	
Italian Buckthorn – Isolated juveniles			
Sallow Wattle – Isolated juveniles			
NON-WOODY WEEDS			
Bridal Creeper – Scattered across site on rear dunes		Control annually	
Sea Spurge, Purple Groundsel (Very low cover noted)			
Dolichos Pea – Scattered across site in rear dunes			
Sea Rocket – Sporadic along foredune			
False Capers – Some patches of heavy infestation		Contain to current infestations	
GRASSY WEEDS			
Couch, Panic Veldt Grass, Rats Tail Grass, Cocksfoot – Some infestation areas		Contain to current infestations	

Sea Wheat Grass – Consistent cover along primary foredune.	Control annually
Marram Grass – Isolated infestations	

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3.1 RIVERVIEW FAMILY CARAVAN PARK



Figure 3.2. Riverview Family Caravan Park values and notable weeds map

Precinct Biodiversity Management Aim: Manage precinct for tourism values while protecting remaining remnant native vegetation.

The Riverview Caravan Park is dominated by planted non-indigenous species trees and shrubs over lawn areas used for camping. Some mature Moonah affinities to Coastal Alkaline Scrub are present in the north of the park. Woody weed cover is generally absent from the park.

Table 3.1 Riverview Family Caravan Park Values and Objectives

Priority	Low		
EVCs Present	Coastal Alkaline Scrub (EVC 858 <i>endangered</i>)		
Environmental Activity	Community	Group	No



Vegetation Quality	Degraded. Native vegetation is restricted to some mature Moonah in the north of the site.
Significant Ecological Values	Coastal Moonah Woodland (<i>FFG Act 1988</i>)
Weed Threat/Management Action	10 Year Objectives
WOODY WEEDS	
Various	Monitor for woody weed incursions, particularly on the southwestern boundary where it intersects with native vegetation.

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PRECINCT 4: BARWON BLUFF TO BARWON HEADS

4.1 BARWON RIVER ESTUARY

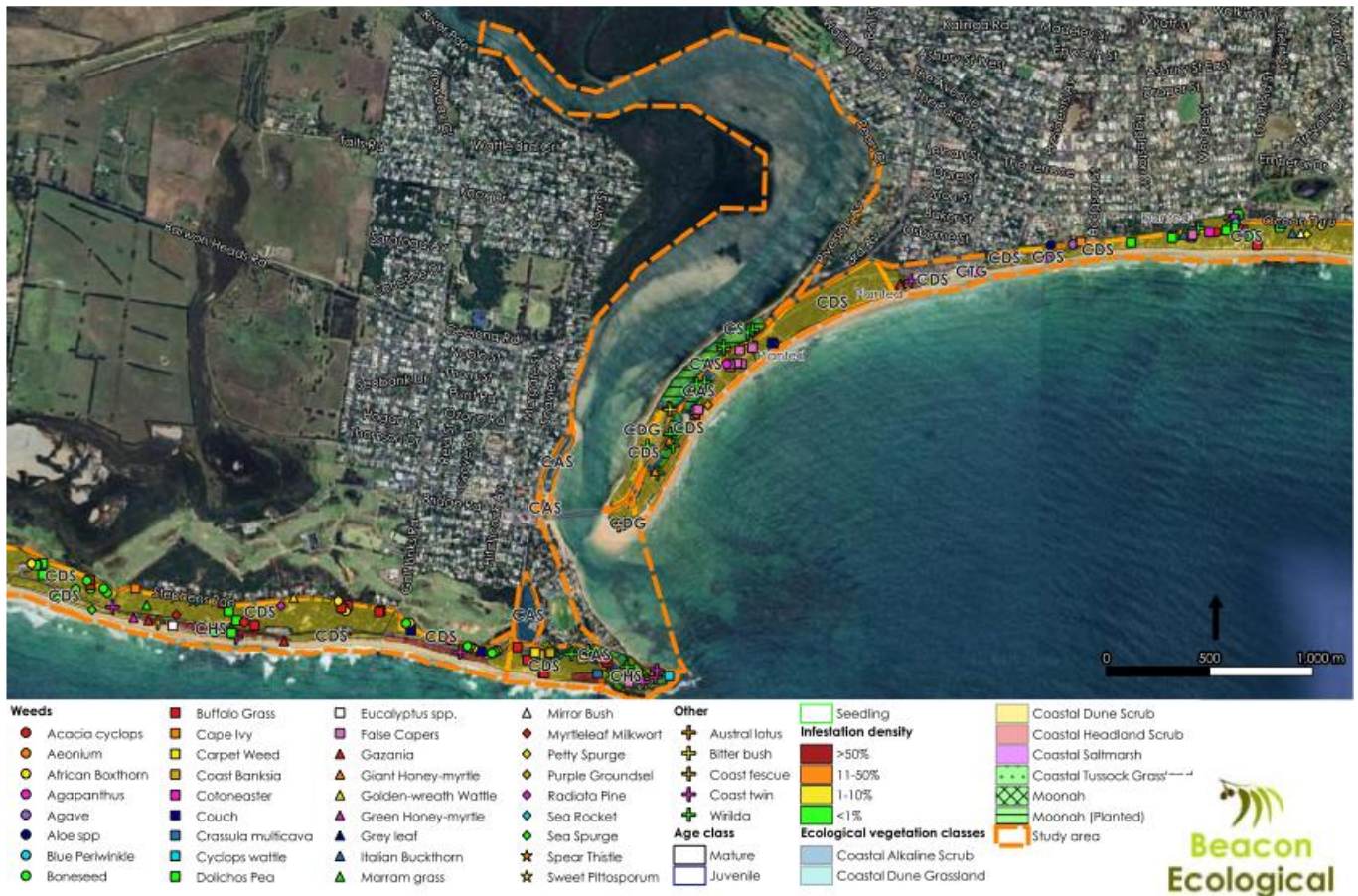


Figure 4. Barwon River Estuary Ecological values and notable weeds map

Precinct Biodiversity Management Aim: Manage precinct for high ecological values and balance recreational use through the boat ramp and boat access.

The estuary has a distinctive landscape with high ecological and habitat values and is connected to the Lake Connewarre State Game Reserve (a Ramsar wetland of international importance) and Barwon Bluff Marine Sanctuary. The site provides as river access for boating and general recreation and receives high visitation in summer months.

The estuary supports several vegetation types including Mangrove Shrubland, a semi-aquatic and aquatic system with Coastal Saltmarsh and Coastal Alkaline Scrub along the Barwon River Banks. Coastal Dune Grassland is present on the end of the sand spit supporting the *FFG Act 1988* listed species Coast Fescue.



Frank Ellis Reserve is on the west bank of the Barwon River with a playground area and amenities.

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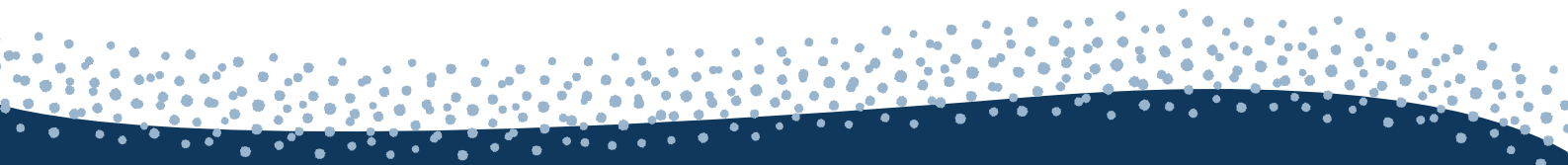


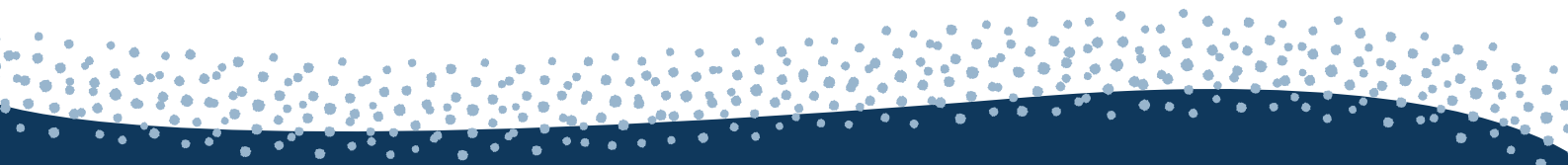
Table 4. Barwon River Estuary Values and Objectives

Priority			High
EVCs Present			Coastal Saltmarsh (EVC 9, <i>endangered</i>) Coastal Alkaline Scrub (EVC 858, <i>endangered</i>) Coastal Dune Grassland (EVC 163 <i>vulnerable</i>) Mangrove Shrubland (EVC 40, <i>vulnerable</i>)
Environmental Activity	Community	Group	No
Vegetation Quality			Generally Excellent. Large areas of relatively intact native vegetation with low weed cover.
Significant Ecological Values			Part of RAMSAR Site Port Philip Bay (Western Shoreline) and Bellarine Peninsula Subtropical and Temperate Coastal Saltmarsh (EPBC Act 199) Coastal Moonah Woodland (FFG Act 1988) Marsh Saltbush (FFG Act 1988 <i>endangered</i>) Wirilda (FFG Act 1988 <i>endangered</i>) Planted Coast Bitter Bush (FFG Act 1988 <i>endangered</i>) Coast Fescue (FFG Act 1988 <i>endangered</i>) Grey Mangrove <i>Avicennia marina</i> subsp. <i>australasica</i> (FFG Act 1988 <i>endangered</i>)
Weed Threat/Management Action			10 Year Objectives
WOODY WEEDS			
Myrtle-leaf Milkwort – Juveniles present across site (west bank)			Effectively eradicate (remove all mature plants)
Italian Buckthorn – Isolated juveniles			
African Boxthorn – Isolated individuals			
Tuart – Mature amenity trees around Frank Ellis Reserve playground			Remove as trees decline and replace with locally indigenous species
NON-WOODY WEEDS			
Bridal Creeper – Isolated infestations			Control annually
False Capers – Isolated infestations			
GRASSY WEEDS			
Panic Veldt Grass – Some infestation areas			Control annually



Sea Wheat Grass – Consistent cover along river	
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4.2 THE BARWON BLUFF (BLUFF WOODLAND)

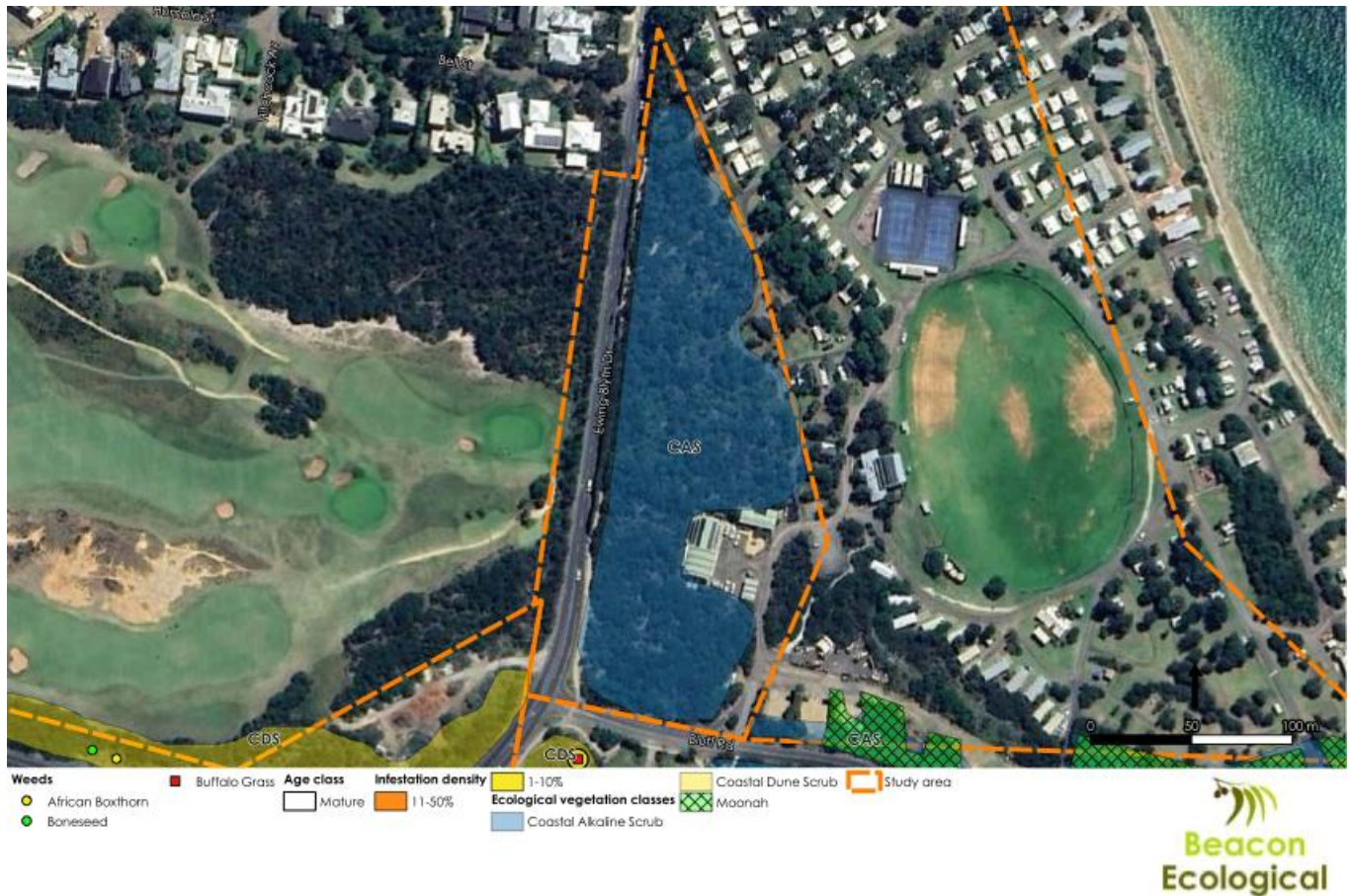


Figure 4.2. Bluff Woodland values and notable weeds map

Precinct Biodiversity Management Aim: Manage precinct for ecological values with some areas of dense scrub managed as more open vegetation type.

Bluff Woodland precinct is bound by the Barwon Heads Caravan Park and contains Barwon Coast's depot and is managed as an offset site. This area of vegetation does not have any walking paths and is generally not accessed by the public. The precinct also supports small populations of Sun Orchids *Thelymitra* spp.

Table 4.2 Bluff Woodland Values and Objectives

Priority	Low
EVCs Present	Coastal Alkaline Scrub (EVC 858 <i>endangered</i>)
Environmental Activity	No
Vegetation Quality	Very Good. Vegetation generally intact however supports high infestation levels of Bridal Creeper with scattered woody weeds
Significant Ecological Values	Coastal Moonah Woodland (<i>FFG Act 1988</i>)
Weed Threat/Management Action	10 Year Objectives
WOODY WEEDS	
Myrtle-leaf Milkwort – Isolated juveniles	Effectively eradicate (remove all mature plants)
Italian Buckthorn – Isolated juveniles	
Sallow Wattle – Isolated juveniles	
NON-WOODY WEEDS	
Black Flag – Isolated infestations	Effectively eradicate (less than 100 square metres)
Bridal Creeper – High cover across site	Control annually

4.3 THE BARWON BLUFF (BLUFF DUNE)



Figure 4.3. Bluff Dune values and notable weeds map

Precinct Biodiversity Management Aim: Manage native vegetation as a mix of Coastal Dune Scrub, Coastal Alkaline Scrub and Coastal Headland Scrub with minimal inappropriate access.

Bluff Dunes support relatively intact native vegetation with generally low weed cover. The site supports a popular walking track and carparking to access the Barwon Bluff beach. Areas dominated by Moonah are likely to have been planted as well as Coast Wirilda. Weed cover is generally low with evidence of ongoing woody weed works.

Table A4.3 Bluff Dune Values and Objectives

Priority	High
EVCs Present	Coastal Dune Scrub (EVC 160 <i>depleted</i>) Coastal Headland Scrub (EVC 161 <i>vulnerable</i>) Coastal Alkaline Scrub (EVC 858 <i>endangered</i>)
Environmental Activity	Friends of the Bluff
Vegetation Quality	Excellent. Vegetation quality is generally excellent with isolated Bridal Creeper. Evidence of Myrtle-leaf Milkwort removal was apparent.
Significant Ecological Values	Hooded Plover (<i>EPBC Act 1999, FFG Act 1988 vulnerable</i>) Coastal Moonah Woodland (<i>FFG Act 1988</i>) Wirilda (<i>FFG Act 1988 Endangered</i>) Coast Fescue (<i>FFG Act 1988 endangered</i>)
Weed Threat/Management Action	10 Year Objectives
WOODY WEEDS	
Myrtle-leaf Milkwort – Signs of control within site	Effectively eradicate (remove all mature plants)
Mirror Bush – Small infestation in east of site	
Coast Banksia – Small infestation of mature plants	
NON-WOODY WEEDS	
Bridal Creeper – Scattered across site on rear dunes	Control annually
Carpet Weed – Single infestation in dunes	Effectively eradicate (<100 square metres)
Fairy Crassula – Single infestation noted	
GRASSY WEEDS	
Buffalo Grass – Infestation in foredune	Effectively eradicate (<100 square metres)
Marram Grass – Isolated infestation in Coastal Dune Scrub	



4.4 THE BARWON BLUFF (BLUFF HEADLAND)

Figure 4.4. Bluff Headland values and notable weeds map

Precinct Biodiversity Management Aim: Manage native vegetation as Coastal Headland Scrub with areas of more open vegetation supporting a diverse native understorey.

The Barwon Bluff Headland supports an impressive limestone bluff with basalt boulders at the western base part of the Barwon Bluff Marine Sanctuary. Native vegetation comprises relatively intact Coastal Headland Scrub shifting to Coastal Alkaline Scrub moving north. The precinct is also dominated by the FFG Act listed *Coastal Moonah Woodland* community. The site receives high visitation on its walking tracks and rockpool areas at the Barwon Bluffs base. The Friends of the Bluff community volunteer group has been very active in this precinct, and the excellent condition of ecological values can be partially attributed to the work of this group. The group is less active with on ground works now but still providing educational and advocacy resources.

Table 4.4 Bluff Headland Values and Objectives

Priority	High
EVCs Present	Coastal Alkaline Scrub (EVC 858 <i>endangered</i>) Coastal Headland Scrub (EVC 161 <i>vulnerable</i>)
Environmental Community Group Activity	Friends of the Bluff
Vegetation Quality	Excellent. Diverse vegetation supporting generally low cover of weed species
Significant Ecological Values	Barwon Bluff Marine Sanctuary Coastal Moonah Woodland (<i>FFG Act 1988</i>) Wirilda (<i>FFG Act 1988 endangered</i>) Coast Twin Leaf (<i>FFG Act 1988 endangered</i>)
Weed Threat/Management Action	10 Year Objectives
Revegetate Moonah Woodland	Monitor and maintain existing revegetation areas
WOODY WEEDS	
Myrtle-leaf Milkwort – Isolated juveniles present across site	Effectively eradicate (remove all mature plants)
Italian Buckthorn – Isolated juveniles.	
Cyclops Wattle – Isolated individuals.	
Mirror Bush – Isolated juveniles mostly in inaccessible locations on cliffs	Effectively eradicate (remove all mature plants) plants that are safely accessible
NON-WOODY WEEDS	
Bridal Creeper – Scattered across site	Control annually
False Capers – Noted small infestation near path	Effectively eradicate (less than 100 square metres)
Black Flag – Isolated infestations	
GRASSY WEEDS	
Buffalo Grass – Two small infestations in west of site	Effectively eradicate (less than 100 square metres)

4.5 BARWON HEADS CARAVAN PARK



Figure 4.5. Barwon Heads Caravan Park values and notable weeds map

Precinct Biodiversity Management Aim: Manage precinct for tourism values while protecting remaining remnant native vegetation.

The Barwon Heads Caravan Park is bordered by the Barwon Bluff Headland to the south and Bluff Woodland to the west with the Barwon River to the east. The park is dominated by mostly planted non-indigenous species trees and shrubs over lawn areas used for camping. Some mature Moonah and areas of native vegetation with affinities to Coastal Alkaline Scrub, some of which may have been planted are present. Woody weed cover is generally absent from the park. Some small areas of Bridal Creeper were noted.

Table 4.5 Barwon Heads Caravan Park Values and Objectives

Priority	Low		
EVCs Present	Coastal Alkaline Scrub (EVC 858 <i>endangered</i>)		
Environmental Activity	Community	Group	No
Vegetation Quality	Modified. Some mature Moonah are present scattered across the site. Some areas of native shrubs are present which may have been planted. Some remnant native vegetation is present in the south.		
Significant Ecological Values	Coastal Moonah Woodland (<i>FFG Act 1988</i>)		
Weed Threat/Management Action	10 Year Objectives		
WOODY WEEDS			
Various	Monitor for woody weed incursions, particularly on the southern boundary		
NON-WOODY WEEDS			
Bridal Creeper – Scattered across site	Control annually		

PRECINCT 5:

5.1 THIRTEENTH BEACH (EAST DUNE)

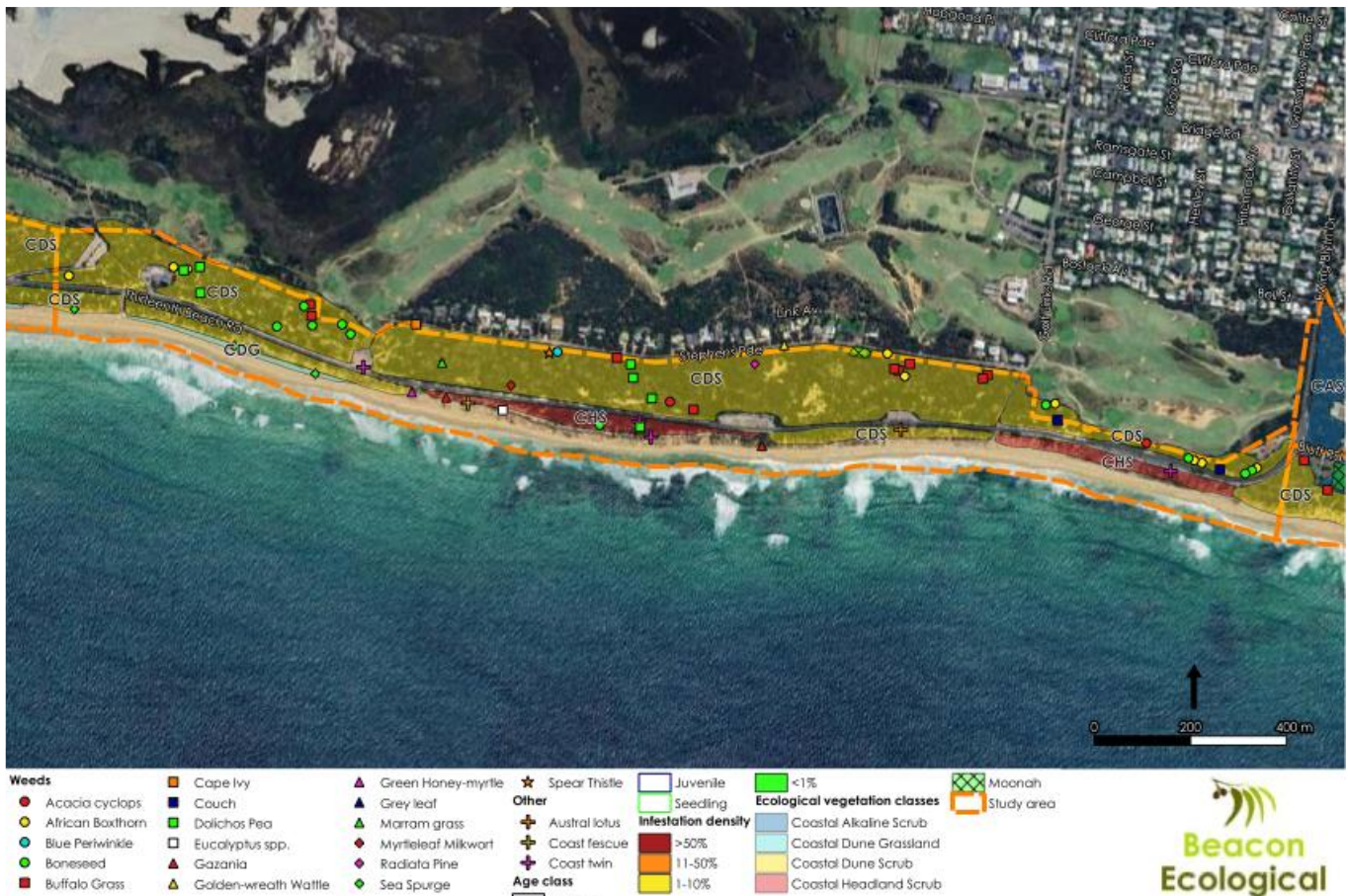


Figure 5.1. Thirteenth Beach East Dune values and notable weeds map

Precinct Biodiversity Management Aim: Manage native vegetation as a mix of Coastal Dune Scrub and Coastal Headland Scrub with minimal inappropriate access.

Thirteenth Beach East Dune is dominated by Coastal Dune Scrub with some small areas of Coastal Headland Scrub where limestone cliffs are present and Coastal Dune Grassland in the west on the foredune. Thirteenth Beach Road runs through the precinct with a storage depot in the east and several beach carparks. The 13th Beach S.L.S.C. is present in the west of the precinct. Stephens Parade abuts the precinct in the centre with the Barwon Heads Golf Club abutting the remainder of the site. Native vegetation is generally in excellent condition with a variety of scattered weeds across the site. Some dense patches of Couch are also present. Oceanside vegetation is very narrow at times as access can be difficult due to the high road traffic on 13th Beach Road. Murtnagurt Swamp, part of the RAMSAR site *Port Phillip Bay (Western Shoreline)* and *Bellarine Peninsula* abuts the precinct in the northwest

Table 5.1 13th Beach East Dune Values and Objectives

Priority	Medium	
EVCs Present	Coastal Dune Scrub (EVC 160 <i>depleted</i>) Coastal Headland Scrub (EVC 161 <i>vulnerable</i>) Coastal Dune Grassland (EVC 163 <i>vulnerable</i>)	
Environmental Activity	Community	Group
Vegetation Quality	No	
Significant Ecological Values	Hooded Plover (<i>EPBC Act 1999, FFG Act 1988 vulnerable</i>) Coast Twin Leaf (<i>FFG Act 1988 endangered</i>) Coast Fescue (<i>FFG Act 1988 endangered</i>)	
Weed Threat/Management Action	10 Year Objectives	
WOODY WEEDS		
Myrtle-leaf Milkwort – Isolated juveniles	Effectively eradicate (remove all mature plants)	
Italian Buckthorn – Isolated juveniles		
Boneseed – Isolated individuals		
Boxthorn – Isolated individuals		
Acacia Cyclops –Isolated individuals		
Mirror Bush – isolated individuals		
NON-WOODY WEEDS		
Bridal Creeper – Scattered across site on rear dunes	Control annually	
Sea Spurge, Purple Groundsel (very low cover noted)		
Sea Rocket – Sporadic along foredune		
Dolichos Pea – Scattered across site in rear dunes		
False Capers – Some patches of heavy infestation	Effectively eradicate (less than 100 square metres)	
Gazania – Small infestation at bottom of Beacon steps		
Blue Periwinkle – Small infestation on Stephens Parade		
GRASSY WEEDS		
Couch, Panic Veldt Grass, Buffalo Grass – Some infestation areas	Contain	

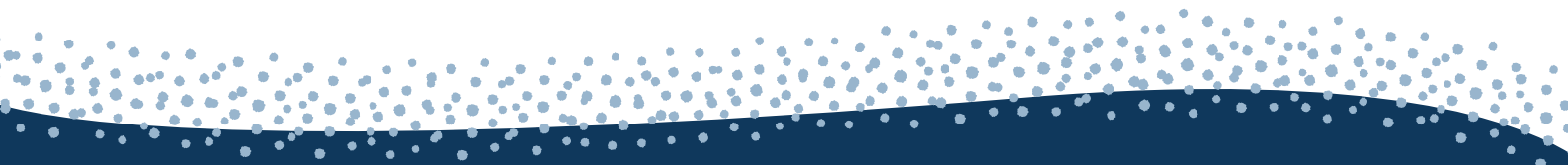


Sea Wheat Grass – Consistent cover
along primary foredune

Marram Grass – Isolated infestations

Effectively eradicate north of 13th Beach Road (less than 100
square metres)

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5.2: THIRTEENTH BEACH (CENTRAL DUNE)



Figure 5.2. Thirteenth Beach Central Dune values and notable weeds map

Precinct Biodiversity Management Aim: Manage native vegetation as a mix of Coastal Dune Scrub and Coastal Dune Grassland with minimal inappropriate access.

Thirteenth Beach Central Dune is dominated by Coastal Dune Scrub with some Coastal Dune Grassland on foredunes. An overflow carpark for the 13th Beach S.L.S.C clubrooms and no beach access is available within the precinct. Weed cover is generally low with some large areas of the precinct supporting negligible weed cover. This precinct also support a variety of orchids in the rear of the dune system including Maroonhood and Greenhood *Pterostylis* spp., Spider Orchids *Caladenia* spp. and Hemet Orchids *Corybas* spp.

Table 5.2 Thirteenth Beach Central Dune Values and Objectives

Priority	Medium
EVCs Present	Coastal Dune Scrub (EVC 160 <i>depleted</i>) Coastal Dune Grassland (EVC 879 <i>depleted</i>)
Environmental Activity	Community Group No
Vegetation Quality	Excellent. Vegetation quality supports areas that have very little weed cover with some areas of minor infestation.
Significant Ecological Values	Hooded Plover (EPBC, FFG <i>vulnerable</i>)
Weed Threat/Management Action	10 Year Objectives
ORCHIDS	
Maroonhood and Greenhood Pterostylis spp., Spider Orchids Caladenia spp. and Hemet Orchids Corybas spp. present in rear dune	Monitor orchid populations and undertake targeted weeding if required
WOODY WEEDS	
Myrtle-leaf Milkwort – Isolated juveniles	Effectively eradicate (remove all mature plants)
Tuart – Small infestation in west	
Italian Buckthorn – Single infestation in centre	
NON-WOODY WEEDS	
Bridal Creeper – Scattered across site on rear dunes	Control annually
Sea Spurge, Purple Groundsel (Very low cover noted)	
Sea Rocket – Sporadic along foredune	
GRASSY WEEDS	
Buffalo Grass – Small infestations in west	Effectively eradicate (less than 100 square metres)
Sea Wheat Grass – Consistent cover along primary foredune	Contain
Marram Grass – Isolated infestations	
NEW AND EMERGING	
Boxthorn – Isolated individuals	Effectively eradicate (remove all mature plants)

Boneseed – Isolated individuals	
Mirror Bush – isolated individuals on foredune	
Aloe – Small Infestation	Effectively eradicate (less than 100 square metres)

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5.3: THIRTEENTH BEACH (WEST DUNE)

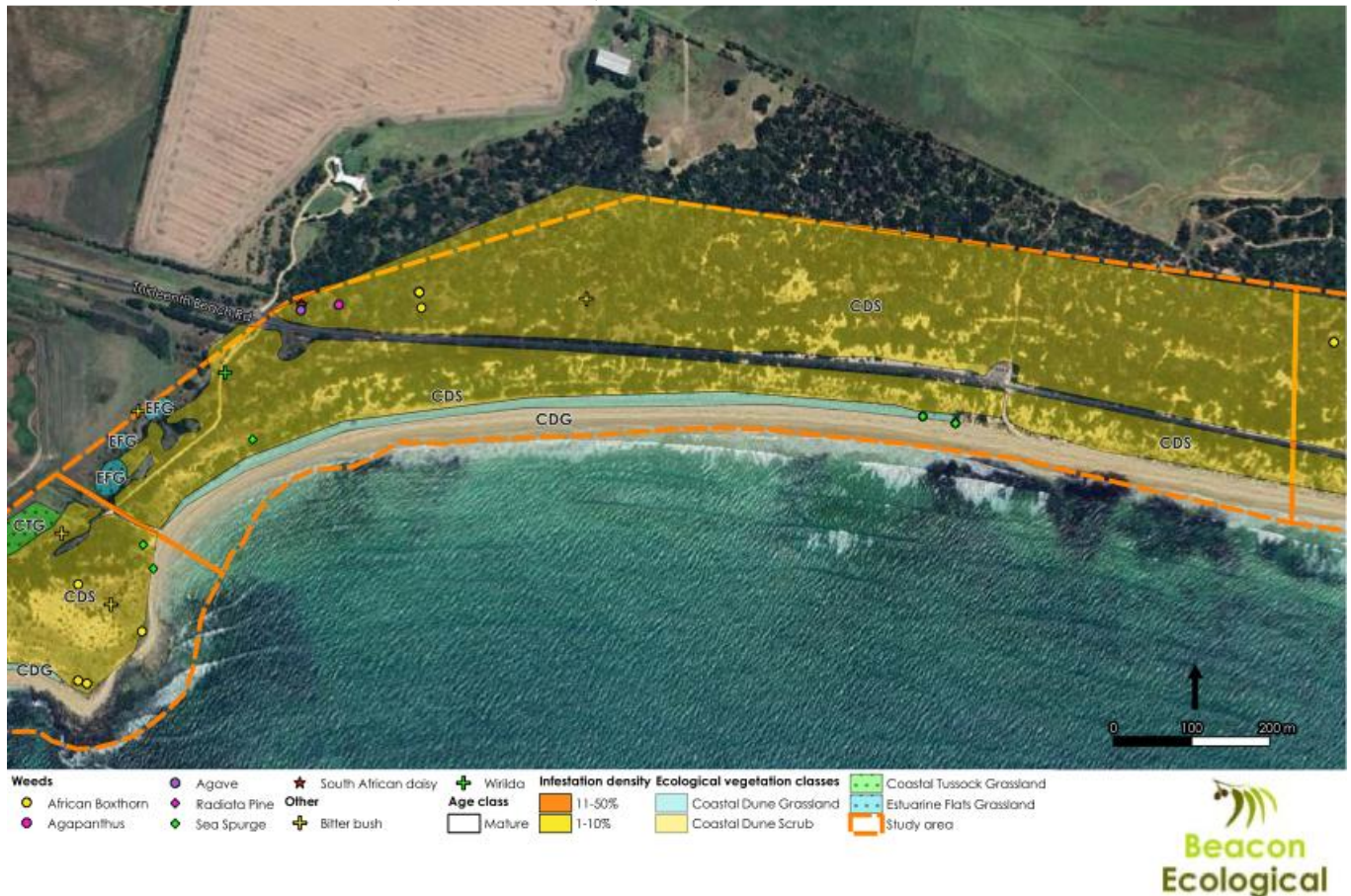


Figure 6.3. Thirteenth Beach West Dune values and notable weeds map

Precinct Biodiversity Management Aim: Manage native vegetation as a mix of Coastal Dune Scrub and Coastal Dune Grassland on the foreshore with minimal inappropriate access.

Thirteenth Beach West Dune is dominated by Coastal Dune Scrub with a large strip of Coastal Tussock Grassland in the west. Some small areas of Estuarine Flats Grassland were noted in the rear of the site in the west. This precinct has a carpark at each end, and the beach is used for horse riding. Large areas of generally non-locally indigenous planted trees and shrubs is present in the centre of the precinct, implemented in the 1970s by the Country Roads board to prevent erosion. These plantings include Tuart, Giant Honey-myrtle, Moonah, Yellow Gum, and Bacchus Marsh Varnish Wattle.

Table 5.3 13th Beach West Dune Values and Objectives

Priority	Medium		
EVCs Present	Coastal Dune Scrub (EVC 160 <i>depleted</i>) Coastal Dune Grassland (EVC 879 <i>depleted</i>) Estuarine Flats Grassland (EVC 914 <i>endangered</i>)		
Environmental Activity	Community	Group	No
Vegetation Quality	Very Good. Vegetation quality is a mix of Excellent areas and areas with a modified understorey at times dominated by introduced grasses.		
Significant Ecological Values	Hooded Plover (<i>EPBC Act 1999, FFG Act 1988 vulnerable</i>) Wirilda (<i>FFG Act 1988 endangered</i>) Coast Bitter Bush (<i>FFG Act 19888 endangered</i>)		
Weed Threat/Management Action		10 Year Objectives	
WOODY WEEDS			
Myrtle-leaf Milkwort – Isolated juveniles		Effectively eradicate (remove all mature plants)	
Mix of planted woody weeds moderate infestations		Contain	
NON-WOODY WEEDS			
Bridal Creeper – Scattered across site on rear dunes		Control Annually	
Sea Spurge, Purple Groundsel (Very low cover noted)			
Sea Rocket – Sporadic along foredune			
GRASSY WEEDS			
Panic Veldt Grass– Some infestation areas		Contain	
Sea Wheat Grass – Sporadic cover along primary foredune			
Marram Grass – Isolated infestations			
NEW AND EMERGING			
Agapanthus – Small infestation		Effectively eradicate (less than 100 square metres)	
South African Daisy – Small infestation			
Agave – Small Infestation			

PRECINCT 6: BLACK ROCK

6.1 BLACK ROCK DUNE

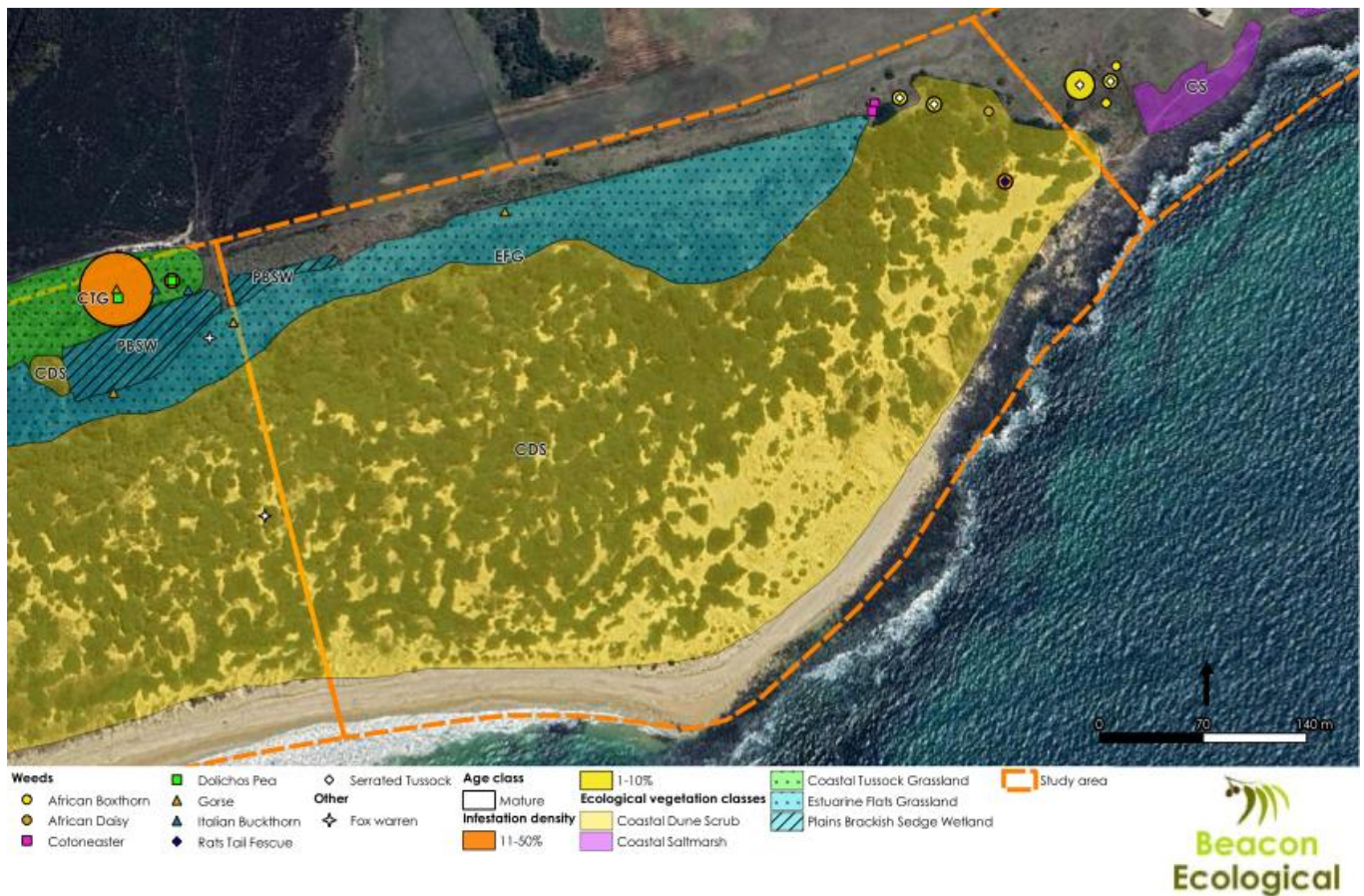


Figure 6.1. Black Rock Dune values and notable weeds map

Precinct Biodiversity Management Aim: Manage native vegetation as a mix of Coastal Dune Scrub with Estuarine Flats Grassland and Plains Brackish Sedge Wetland in the rear with minimal inappropriate access.

The Black Rock Dune Precinct is dominated by Coastal Dune Scrub on tall dunes with Estuarine Flats Grassland dominating the rear dune with a small amount of Plains Brackish Sedge Wetland. Areas dominated by introduced grasses on raised basalt rock piles are present beyond these. The site receives low visitation and has no close beach access.

Table 6.1 Black Rock Dune Values and Objectives

Priority	Medium
EVCs Present	Coastal Dune Scrub (EVC 160 <i>depleted</i>) Estuarine Flats Grassland (EVC 914 <i>endangered</i>) Plains Brackish Sedge Wetland (EVC 891 <i>vulnerable</i>)
Environmental Activity	No
Vegetation Quality	Excellent. Vegetation quality supports areas that have very little weed cover with large areas of negligible weed cover and some areas of minor infestation.
Significant Ecological Values	Hooded Plover (<i>EPBC Act 1999, FFG Act 1988 vulnerable</i>)
Weed Threat/Management Action	10 Year Objectives
GRASSY WEEDS	
Sea Wheat Grass – Consistent cover along primary foredune	Contain
Marram Grass – Isolated infestations	
NEW AND EMERGING	
Serrated Tussock – Two small infestations in east	Effectively eradicate (less than 100 square metres)
African Daisy – Single infestation in east	
Cotoneaster – Small Infestation in east	
Gorse – Single infestation in north	

6.2 BLACK ROCK GRASSLAND

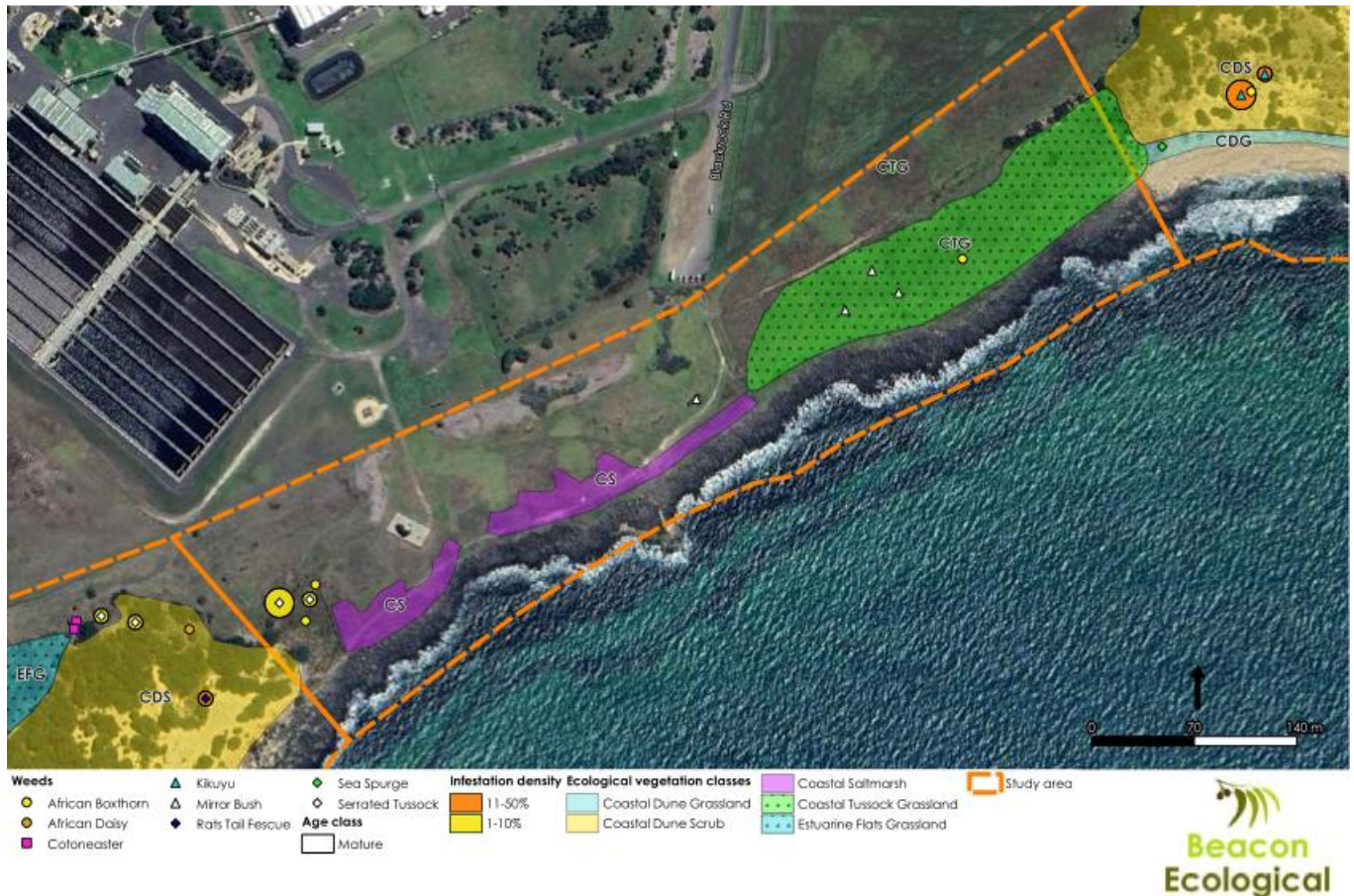


Figure 6.2. Black Rock Grassland values and notable weeds map

Precinct Biodiversity Management Aim: Manage native vegetation as a mix of Coastal Tussock Grassland and Coastal Saltmarsh with minimal inappropriate access.

The Black Rock Grassland precinct is dominated by large areas of introduced grasses and planted vegetation with Coastal Tussock Grassland vegetation in the east meeting the condition thresholds for the nationally significant *Natural Temperate Grassland of the Victorian Volcanic Plan* which is listed as *critically endangered* on the EPBC Act 1999. Some areas of Coastal Saltmarsh are present in the east. This precinct is within the Victorian Volcanic Plain with a rocky basalt coast.

Table 6.2 Black Rock Grassland Values and Objectives

Priority	High
EVCs Present	Coastal Tussock Grassland (EVC 163 <i>endangered</i>) Coastal Saltmarsh (EVC 9 <i>vulnerable</i>)
Environmental Activity	No
Vegetation Quality	Very Good. Vegetation quality is a mix of Excellent areas and areas dominated by introduced grasses.
Significant Ecological Values	<i>Natural Temperate Grassland of the Victorian Volcanic Plan (EPBC Act 1999 critically endangered)</i>
Weed Threat/Management Action	10 Year Objectives
WOODY WEEDS	
Boxthorn – Isolated individuals	Effectively eradicate (remove all mature plants)
Mirror Bush -Isolated individuals	
GRASSY WEEDS	
Kikuyu and Cocksfoot– Some infestation areas within Coastal Tussock Grassland	Effectively eradicate (less than 100 square metres) within areas of Coastal Tussock Grassland
Serrated Tussock – Small infestation in west	Effectively eradicate (less than 100 square metres)

6.3: BLUE ROCKS DUNE

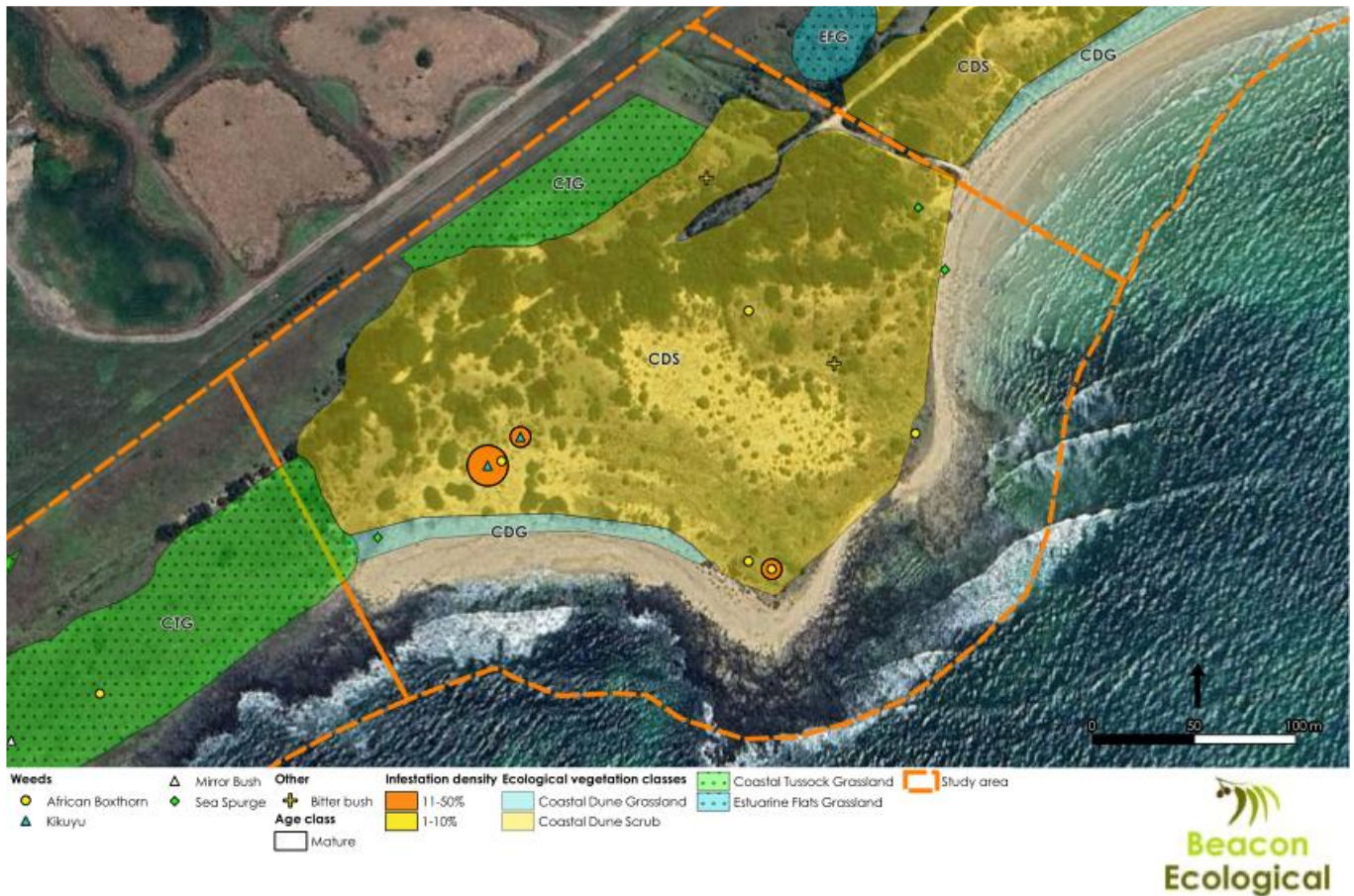


Figure 6.3. Blue Rocks Dune values and notable weeds map.

Precinct Biodiversity Management Aim: Manage native vegetation as a mix of open Coastal Dune Scrub, Coastal Dune Gasland and Coastal Tussock Grassland in the rear of the site with minimal inappropriate access.

The Blue Rocks Dune precinct is dominated by Coastal Dune Scrub with Coastal Dune Grassland in the west and Coastal Tussock Grassland in the north dominated by Australian Salt Grass. The sandy beach changes to basalt rocks in the centre. Access to this beach is limited and appears to receive low visitation. Vegetation is of mixed quality with large areas of excellent Coastal Dune Scrub with some areas dominated by Marram Grass and partially modified Coastal Tussock Grassland.

Table 6.3 Blue Rocks Dune Values and Objectives

Priority	Low		
EVCs Present	Coastal Dune Scrub (EVC 160 <i>depleted</i>) Coastal Dune Grassland (EVC 879 <i>depleted</i>) Coastal Tussock Grassland (EVC 163 <i>vulnerable</i>)		
Environmental Activity	Community	Group	No
Vegetation Quality	Good. Vegetation quality is a mix of Excellent areas and areas with dominated by Marram Grass.		
Significant Ecological Values	Hooded Plover (<i>EPBC Act 1999, FFG Act 1988 vulnerable</i>) Coast Bitter Bush (<i>FFG Act 19888 endangered</i>)		
Weed Threat/Management Action		10 Year Objectives	
WOODY WEEDS			
Boxthorn – Isolated individuals		Effectively eradicate (remove all mature plants)	
NON-WOODY WEEDS			
Sea Spurge, Purple Groundsel (Very low cover noted)		Control annually	
GRASSY WEEDS			
Kikuyu – Some infestation areas		Contain	
Marram Grass – Large infestations		Reduce cover	

PRECINCT 7: BREAMLEA

7.1 BANCOORA DUNE

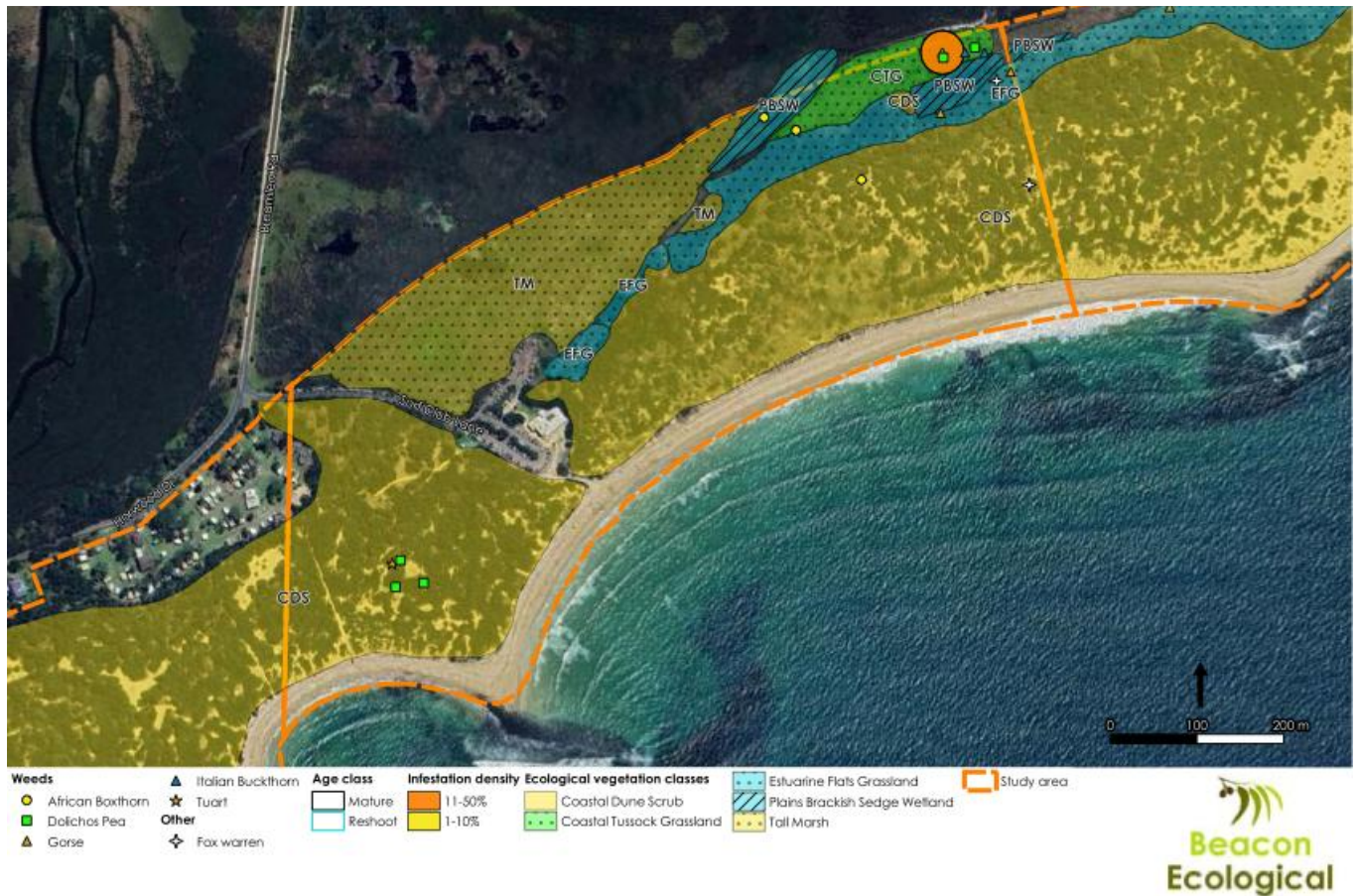


Figure 7.1. Bancoora Dune values and notable weeds map

Precinct Biodiversity Management Aim: Manage native vegetation as a mix of open Coastal Dune Scrub with various saline vegetation types in the rear of dunes with minimal inappropriate access. Monitor for signs of invasion by more freshwater species including Cumbungi and Common Reed.

Bancoora Dune precinct is dominated by Coastal Dune Scrub on tall dunes with a variety of wetland communities to the north of the dune system, contiguous with the Breamlea Flora and Fauna Reserve. The Bancoora S.L.S.C. is present in the west of the study area with access from Surf Club Lane. Evidence of a likely decrease in salinity has been noted to the north of the Bancoora S.L.S.C. with an increase in cover of Cumbungi and Common Reed which should be controlled.

Table 7.1 Bancoora Dune Values and Objectives

Priority			High
EVCs Present			Coastal Dune Scrub (EVC 160 <i>depleted</i>) Tall Marsh (EVC 821) Estuarine Flats Grassland (EVC 914 <i>endangered</i>) Plains Brackish Sedge Wetland (EVC 891 <i>vulnerable</i>) Coastal Tussock Grassland (EVC 163 <i>endangered</i>)
Environmental Activity	Community	Group	Breamlea Coastcare
Vegetation Quality			Generally Excellent. Large areas of relatively intact native vegetation with negligible weed cover, amongst minor woody and non-woody weed infestations. A large, dense Marram Grass Infestation is present in the west of the dune system.
Significant Ecological Values			Hooded Plover (<i>EPBC Act 1999, FFG Act 1988 vulnerable</i>)
Weed Threat/Management Action			10 Year Objectives
WOODY WEEDS			
African Boxthorn – Some infestations in north. Previously controlled.			Effectively eradicate (remove all mature plants)
NON-WOODY WEEDS			
Dolichos Pea – scattered west of Surf Club Lane			Control annually
Bridal Creeper – Scattered west of Surf Club Lane			
Spear Thistle – Sporadic in north			
Cumbungi and Common Reed			Work with Parks Victoria and Breamlea Coastcare to reduce cover by 50%
GRASSY WEEDS			
Panic Veldt Grass – Small infestations west of Surf Club Lane			Contain to current levels
Sea Wheat Grass – Consistent cover along primary foredune			
Marram Grass – Large, dense infestation in west of site. Sporadic along foredune.			

7.2 BREAMLEA CARAVAN PARK



Figure 7.2. Breamlea Caravan Park values and notable weeds map

Precinct Biodiversity Management Aim: Manage precinct for tourism values while protecting remaining remnant native vegetation.

The Breamlea Caravan Park is dominated by planted non-indigenous species trees and shrubs over lawn areas used for camping. Some small areas of native vegetation with affinities to Coastal Dune Scrub are present on the park edges. Woody weed cover is generally absent from the park.

Table 7.2 Breamlea Caravan Park Values and Objectives

Priority	Low		
EVCs Present	Coastal Dune Scrub (EVC 160 <i>depleted</i>)		
Environmental Activity	Community	Group	No
Vegetation Quality	Degraded. Native vegetation is restricted to some small areas on the park edge.		



Significant Ecological Values	Nil.
Weed Threat/Management Action	10 Year Objectives
WOODY WEEDS	
Various	Monitor for woody weed incursions

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7.3 BREAMLEA SPIT EAST

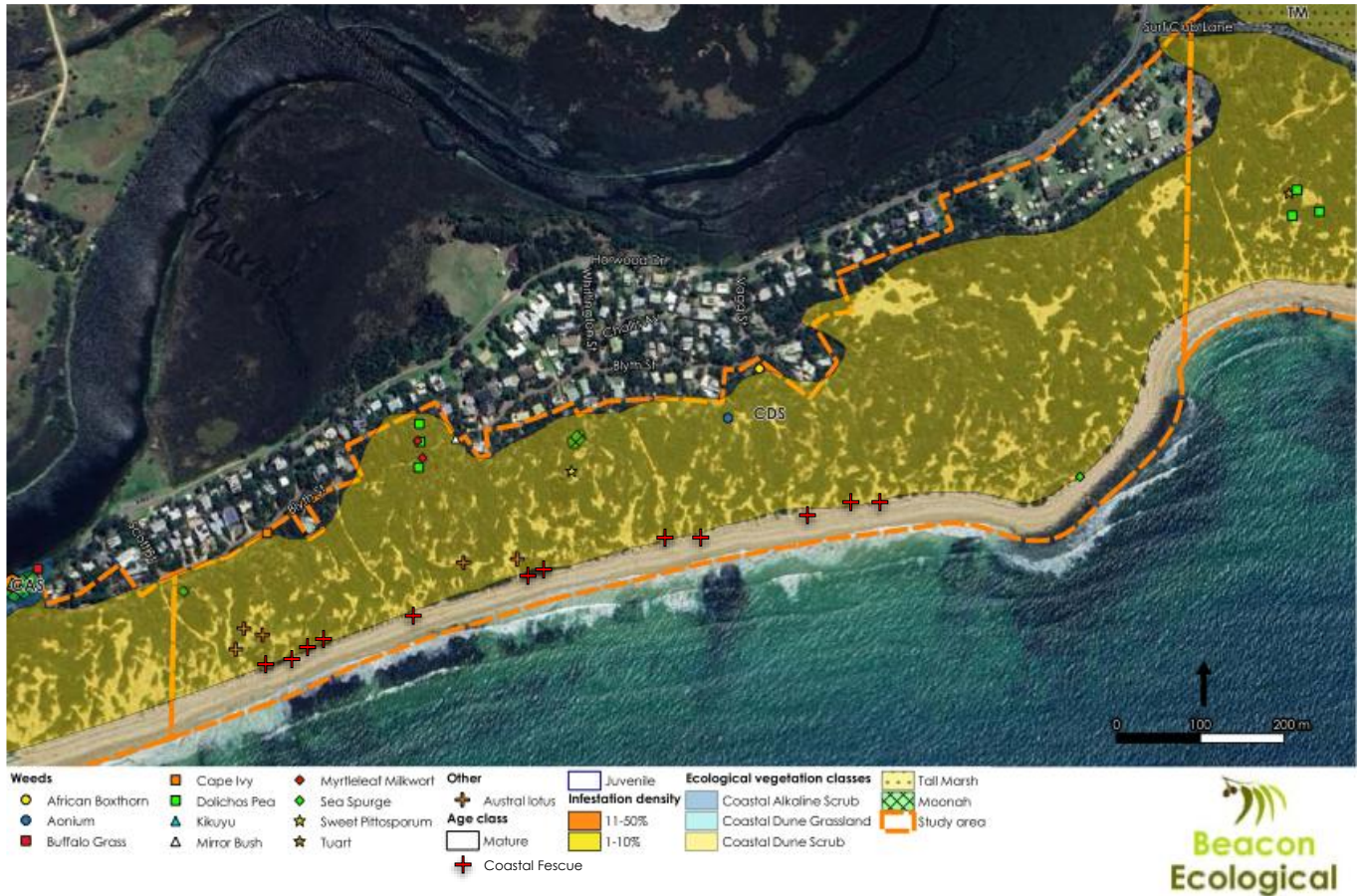


Figure 7.3. Breamlea Split East values and notable weeds map.

Precinct Biodiversity Management Aim: Manage native vegetation as a mix of open Coastal Dune Scrub site with minimal inappropriate access.

The Breamlea Spit is dominated by Coastal Dune Scrub on tall dunes with the Breamlea township immediately to the north with the Breamlea Caravan Park to the northeast. Some dwellings about the coastal reserve with several beach access points.

Table 7.3 Breamlea Spit East Values and Objectives

Priority	Medium
EVCs Present	Coastal Dune Scrub (EVC 160 <i>depleted</i>)
Environmental Community Group Activity	Breamlea Coastcare
Vegetation Quality	Generally Excellent. Large areas of relatively intact native vegetation with low weed cover.
Significant Ecological Values	Coastal Moonah Woodland (<i>FFG Act 1988</i>) Hooded Plover (<i>EPBC Act 1999, FFG Act 1988 vulnerable</i>) Coast Fescue (<i>FFG Act 1988 endangered</i>) Dune Poa (<i>FFG Act 1988 endangered</i>)
Weed Threat/Management Action	10 Year Objectives
WOODY WEEDS	
Myrtle-leaf Milkwort – Scattered across site	Effectively eradicate (remove all mature plants)
NON-WOODY WEEDS	
Bridal Creeper – Scattered across site on rear dunes	Control annually
Sea Spurge, Purple Groundsel (Very low cover noted)	
Dolichos Pea – Scattered across site	
GRASSY WEEDS	
Buffalo Grass, Panic Veldt-grass – Some isolated infestations	Control annually
Sea Wheat Grass – Consistent cover along foredune	
Marram Grass – Scattered along foredune and some small infestations within dune system	
NEW AND EMERGING	
African Boxthorn – Single infestation in centre	Effectively eradicate (less than 100 square metres)
Cape Ivy – Single infestation in west	
Sweet Pittosporum – Single infestation in centre	
Aonium – Single infestation in centre	

7.4 BREAMLEA SPIT WEST

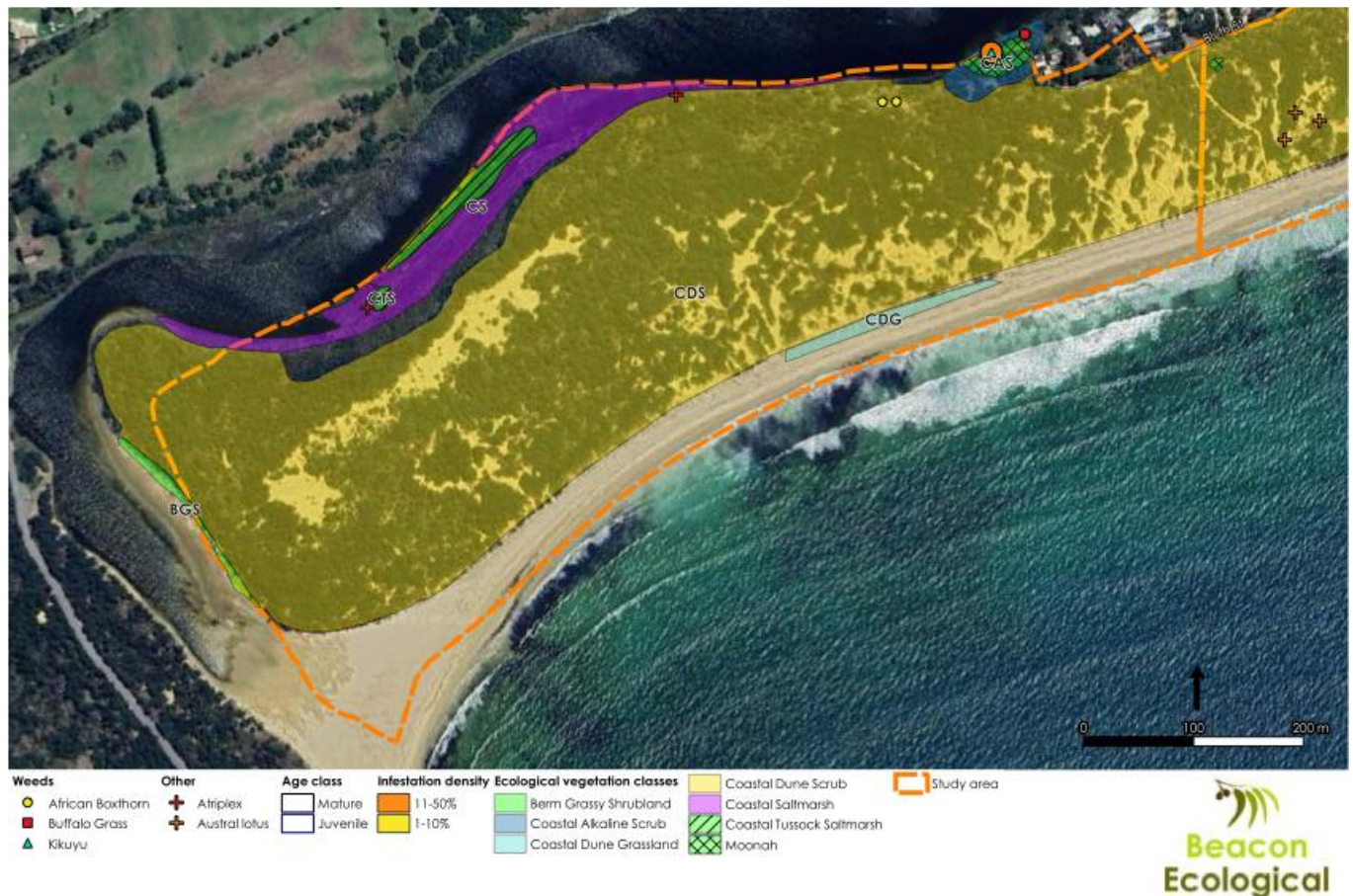


Figure 7.4 Breamlea Spit West values and notable weeds map

Precinct Biodiversity Management Aim: Manage native vegetation as a mix of open Coastal Dune Scrub, Berm Grassy Shrubland and saline dominated communities in the rear of the dunes with minimal inappropriate access.

Breamlea Spit West is dominated by Coastal Dune Scrub with a small area of Coastal Saltmarsh on the Thompsons Creek Estuary considered to meet the condition thresholds for the *EPBC Act 1999* listed *Subtropical and Temperate Coastal Saltmarsh* community. A small area of Coastal Alkaline Scrub in the northeast which is also part of the *Coastal Moonah Woodland FFG Act 1988* listed community. A small area of Coastal Tussock Saltmarsh is also present in the north, Coastal Dune Grassland along the fore dune in the centre and Berm Grassy Shrubland in the west. The *FFG Act 1988* listed Marsh Saltbush was noted within Coastal Saltmarsh and numerous national and state significant bird species are likely to utilise habitat within the adjacent Thompson Creek estuary. This precinct is located at the west end of



the Breamlea township has a walking track along the Thompson Creek but appears to receive low amounts of visitation.

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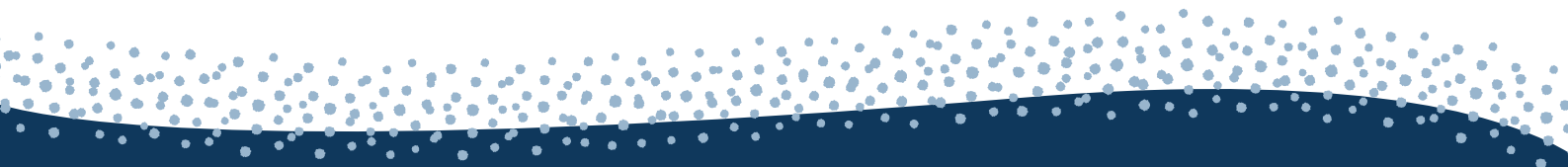


Table 7.4 Breamlea Spit West Values and Objectives

Priority	High
EVCs Present	Coastal Dune Scrub (EVC 160 <i>depleted</i>) Coastal Saltmarsh (EVC 9, <i>endangered</i>). Berm Grassy Shrubland (EVC 311, <i>endangered</i>). Coastal Alkaline Scrub (EVC 858, <i>endangered</i>). Coastal Dune Grassland (EVC 879, <i>depleted</i>). Coastal Tussock Saltmarsh (EVC A112)
Environmental Community Group Activity	Breamlea Coastcare
Vegetation Quality	Generally Excellent. Large areas of relatively intact native vegetation with low weed cover.
Significant Ecological Values	<i>Subtropical and Temperate Coastal Saltmarsh (EPBC Act 1999)</i> <i>Hooded Plover (EPBC Act 1999, FFG Act 1988 vulnerable)</i> <i>Coastal Moonah Woodland (FFG Act 1988)</i> <i>Marsh Saltbush (FFG Act 1988 endangered)</i>
Weed Threat/Management Action	10 Year Objectives
WOODY WEEDS	
Myrtle-leaf Milkwort – Scattered across site	Effectively eradicate (remove all mature plants)
Italian Buckthorn – Scattered in west of site	
NON-WOODY WEEDS	
Bridal Creeper – Isolated infestations	Control annually
Dolichos Pea – Scattered across site	
GRASSY WEEDS	
Panic Veldt-grass, Buffalo Grass, Kikuyu – Some isolated infestations	Control annually
Sea Wheat Grass – Consistent cover along foredune	
Marram Grass – Scattered along foredune and some small infestations within dune system	
NEW AND EMERGING	
African Boxthorn - Single infestation in north.	Effectively eradicate (less than 100 square metres)

9 MONITORING

Monitoring is vital to ensure that strategy objectives are being met and on ground outcomes are being achieved.

An assessment of overall and precinct objectives should be undertaken annually to ensure that objectives are being met. Monitoring of how well objectives are being met can be a subjective assessment by the Natural Reserves team.

Ecological monitoring is also an important component of understanding effectiveness of weed control methods and observing changes in species composition over time. See below for vegetation monitoring that is currently being implemented by the Barwon Coast Natural Resource Team and fauna camera monitoring that should be continued.

9.1 VEGETATION MONITORING

Barwon Coast's Natural Reserves team has been using two vegetation monitoring tools to monitor vegetation changes over time, quadrat surveys and belt transects. See below for a description of each method. Monitoring using these methods should continue and be used to detect changes in vegetation composition and cover of introduced plant species.

Quadrats

The *Barwon Coast Vegetation Management Plan* (Mark Trengove Ecological Services 2013) set up 100 square metre quadrats across the study area which used the Vegetation Quality Assessment method (DSE 2004). Species data was also collected within each quadrat with all vascular plant species assigned a cover value according to the following modified Braun-Blanquet scale:

- + - cover value < 1 %, few individuals
- 1 - cover value 1-5%, any number of individuals
- 2 - cover value 5-20%, any number of individuals
- 3 - cover value 20-50%, any number of individuals
- 4 - cover value 50-75%, any number of individuals
- 5 - cover value 75-100%, any number of individuals

The following data was also collected:

- Cover value(%) of organic litter
- Cover value(%) of bare earth

- Cover value (%) of non-vascular flora (lichens, mosses etc.)
- Vegetation description - a description of the vegetation type
- Vegetation condition - observations of the condition of the vegetation
- Quadrat site Description - Location, aspect, slope and any relevant information

Quadrat locations are marked on site with a permanent metal star picket placed at the southeast corner (unless otherwise indicated) and are located utilising GPS technology. Quadrat sites locations were selected to reflect 'typical' vegetation quality and site conditions or to record sites with particular values.

This monitoring system has continued to be used by Barwon Coast Natural Reserves staff and should continue to be used as a monitoring tool.

Belt Transects

Belt transects have been set up in four sites across the study area and comprise 20 metre by 20 metre quadrats aligned in a north to south aspect covering the entire width of the management area. These belt transects use the same data collection methodology as the quadrats above but can also be used to monitor for species changes as a result of climate change as they are set up moving away from the coast and will be able to monitor potential impacts of sea level rise such as vegetation retreat. Four belt transects have been set up at the following management precincts:

- Ocean Grove East Dune
- Bluff Headland
- Bancoora Dune
- Breamlea Spit West

9.2 FAUNA MONITORING

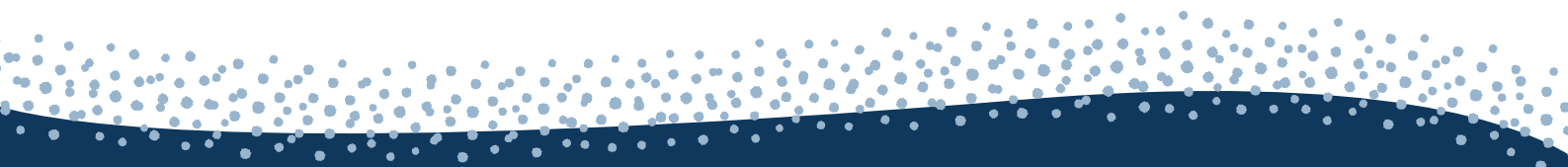
The fauna camera monitoring undertaken in this project should be repeated every 3 years to monitor native fauna levels and pest animal levels. The current data can be used as baseline data to identify any trends in native fauna populations and efficacy of pest animal control. Camera monitoring will also monitor for incursions of new pest animals such as cats.

9.3 MONITORING TIMEFRAMES

Monitoring of objectives should occur annually using a subjective method of going through each objective and assigning a rating as per Table 8.3 below. See Appendix 5 for an objective checklist. At the end of the strategy the objectives should be audited by a third party.

Table 8.3 Monitoring timeframes

Monitoring Type	Timing	Method
Objective monitoring	Annual	Natural Reserves staff go through overall objectives and precinct objectives to rate objectives as: • Objective completed, • Objective on track to be completed, • Objective unlikely to be completed, • Objective changed.
Vegetation Monitoring	Every 5 Years	Natural Reserves staff undertake quadrat and belt transect monitoring and analyse results.
Fauna Monitoring	Every 3 Years	Engage consultant zoologist to undertake systematic camera monitoring across Barwon Coast Management area.





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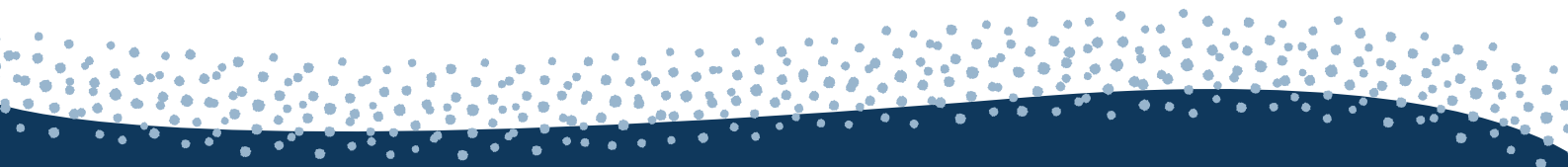


APPENDICES



Beacon Ecological

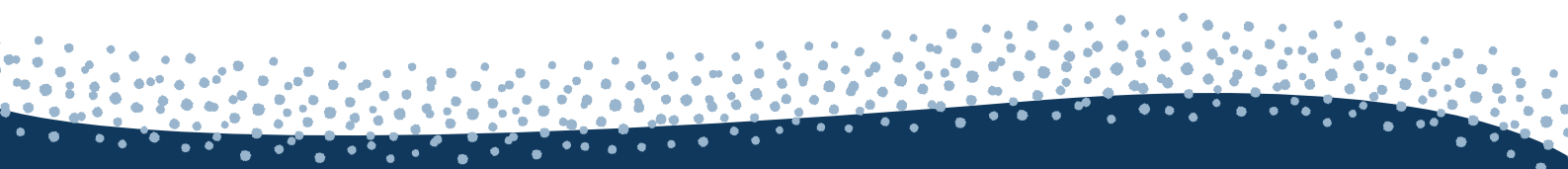
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APPENDIX 1. COMMON AND SCIENTIFIC NAMES OF NOTED WEED SPECIES WITHIN THE STUDY AREA

Common Name	Scientific Name
African Boneseed	<i>Chrysanthemoides monilifera</i> subsp. <i>monilifera</i>
African Boxthorn	<i>Lycium ferocissimum</i>
African Daisy	<i>Osteospermum</i> spp.
Agapanthus	<i>Agapanthus praecox</i>
Agave	<i>Agave americana</i>
Aloe spp.	<i>Aloe</i> spp.
Angled Onion	<i>Allium triquetrum</i>
Aonium	<i>Aonium</i> sp.
Asparagus Fern	<i>Asparagus scandens</i>
Blackberry	<i>Rubus fruticosus</i> spp. agg.
Black Flag	<i>Ferraria crispa</i>
Blue Periwinkle	<i>Vinca major</i>
Bluebell Creeper	<i>Billardiera heterophylla</i>
Bridal Creeper	<i>Asparagus asparagoides</i>
Buffalo Grass	<i>Stenotaphrum secundatum</i>
Cape Ivy	<i>Delairea odorata</i>
Carpet Weed	<i>Galenia pubescens</i>
Coast Banksia	<i>Banksia integrifolia</i>
Cocksfoot	<i>Dactylis glomerata</i>
Cotoneaster	<i>Cotoneaster</i> spp.
Couch	<i>Cynodon dactylon</i>
Cyclops Wattle	<i>Acacia cyclops</i>
Dolichos Pea	<i>Dipogon lignosus</i>
English Ivy	<i>Hedera helix</i>
Eucalyptus spp.	<i>Eucalyptus</i> spp.
Fairy Crassula	<i>Crassula multicava</i>
Flax-leaf Broom	<i>Genista linifolia</i>
Gazania	<i>Gazania linearis</i>
Gorse	<i>Ulex europaeus</i>
Italian Buckthorn	<i>Rhamnus alaternus</i>
Kikuyu	<i>Cenchrus clandestinum</i>
Marram Grass	<i>Ammophila arenaria</i>
Mirror Bush	<i>Coprosma repens</i>
Monterey Cypress	<i>Cupressus macrocarpa</i>

Common Name	Scientific Name
Montpellier Broom	<i>Genista monspessulana</i>
Myrtle-leaf Milkwort	<i>Polygala myrtifolia</i>
Norfolk Pine	<i>Araucaria heterophylla</i>
Panic Veldt-grass	<i>Ehrharta erecta</i>
Paspalum	<i>Paspalum dilatatum</i>
Purple Groundsel	<i>Senecio elegans</i>
Rats Tail Fescue	<i>Sporobolus africanus</i>
Sallow Wattle	<i>Acacia longifolia subsp. sophorae</i>
Serrated Tussock	<i>Nassella trichotoma</i>
Sea Rocket	<i>Cakile maritima</i>
Sea Spurge	<i>Euphorbia paralias</i>
Sea Wheat Grass	<i>Thinopyrum junceiforme</i>
Serrated Tussock	<i>Nassella trichotoma</i>
South African Daisy	<i>Osteospermum fruticosum</i>
Spear Thistle	<i>Cirsium vulgare</i>
Sweet Pittosporum	<i>Pittosporum undulatum</i>
Tuart	<i>Eucalyptus gomphocephala</i>
Toowoomba Canary Grass	<i>Phalaris aquatica</i>



APPENDIX 2. FLORA AND FAUNA SPECIES PREVIOUSLY RECORDED WITHIN THE STUDY AREA.

Appendix 2.1 Flora and Fauna recorded from the Victorian Biodiversity Atlas (DEECA 2025)

LISTING:

EPBC Act:

X Extinct
CR Critically Endangered
EN Endangered
VU Vulnerable

FFG Act:

x Extinct
en Endangered
vu Vulnerable
r Rare
k Poorly Known

Other: * Introduced, # native but may be outside natural distribution

Scientific Name	Common Name	Rating	# of records	Last Record
FLORA				
<i>Acacia longifolia</i> subsp. <i>sophorae</i>	Coast Wattle	#	6	27/9/2020
<i>Acacia pycnantha</i>	Golden Wattle		1	14/2/2020
<i>Acacia uncifolia</i>	Coast Wirilda	en	1	14/2/2020
<i>Acaena novae-zelandiae</i>	Bidgee-widgee		1	12/1/2007
<i>Acaena</i> spp.	Sheep's Burr		1	12/1/2007
<i>Actites megalocarpus</i>	Dune Thistle		2	2/5/2017
<i>Adriana quadripartita</i>	Coast Bitter-bush	en	1	30/6/2009
<i>Aizoon pubescens</i>	Galenia	*	2	14/2/2020
<i>Allocasuarina verticillata</i>	Drooping Sheoak		2	14/2/2020
<i>Alyxia buxifolia</i>	Sea Box		1	14/2/2020
<i>Apium prostratum</i> subsp. <i>prostratum</i>	Sea Celery		1	25/4/2020
<i>Apium prostratum</i> subsp. <i>prostratum</i> var. <i>filiforme</i>	Sea Celery		1	18/3/2007
<i>Asparagus asparagoides</i>	Bridal Creeper	*	3	14/2/2020
<i>Atriplex cinerea</i>	Coast Saltbush		3	14/2/2020
<i>Austrostipa</i> spp.	Spear Grass		1	14/2/2020
<i>Austrostipa stipoides</i>	Prickly Spear-grass		1	2/5/2017
<i>Banksia integrifolia</i> subsp. <i>integrifolia</i>	Coast Banksia		2	14/2/2020
<i>Brassica</i> spp.	Turnip	*	1	14/2/2020
<i>Bromus catharticus</i>	Prairie Grass	*	1	2/5/2017
<i>Bromus diandrus</i>	Great Brome	*	2	14/2/2020

Scientific Name	Common Name	Rating	# of records	Last Record
<i>Bromus hordeaceus</i>	Soft Brome	*	1	14/2/2020
<i>Cakile maritima</i> subsp. <i>maritima</i>	Sea Rocket	*	1	18/3/2007
<i>Calamagrostis arenaria</i>	Marram Grass	*	2	2/5/2017
<i>Carpobrotus aequilaterus</i>	Angled Pigface	*	1	12/1/2007
<i>Carpobrotus rossii</i>	Karkalla		3	14/2/2020
<i>Cenchrus clandestinus</i>	Kikuyu	*	1	14/2/2020
<i>Chenopodium album</i>	Fat Hen	*	1	17/2/2010
<i>Clematis microphylla</i> s.l.	Small-leaved Clematis		4	14/2/2020
<i>Coprosma repens</i>	Mirror Bush	*	2	2/5/2017
<i>Correa alba</i>	White Correa		3	26/9/2020
<i>Cortaderia selloana</i> subsp. <i>selloana</i>	Pampas Grass	*	1	14/2/2020
<i>Cynodon dactylon</i>	Couch	#	3	14/2/2020
<i>Cynodon dactylon</i> var. <i>dactylon</i>	Couch	*	1	18/3/2007
<i>Dactylis glomerata</i>	Cocksfoot	*	2	15/7/2008
<i>Daucus glochidiatus</i>	Australian Carrot		1	30/6/2009
<i>Dianella brevicaulis</i>	Small-flower Flax-lily		2	14/2/2020
<i>Dipogon lignosus</i>	Common Dipogon	*	1	18/3/2007
<i>Ehrharta longiflora</i>	Annual Veldt-grass	*	1	14/2/2020
<i>Emex australis</i>	Spiny Emex	*	1	17/2/2010
<i>Erigeron bonariensis</i>	Flaxleaf Fleabane	*	1	15/7/2008
<i>Erigeron primulifolius</i>	Rough Fleabane	*	2	21/12/2011
<i>Eucalyptus gomphocephala</i>	Tuart	*	1	14/2/2020
<i>Euphorbia terracina</i>	Terracina Spurge	*	1	2/5/2017
<i>Ficinia nodosa</i>	Knobby Club-sedge		3	14/2/2020
<i>Freesia</i> spp.	Freesia	*	1	14/2/2020
<i>Gahnia filum</i>	Chaffy Saw-sedge		1	15/7/2008
<i>Gaudium laevigatum</i>	Coast Tea-tree	#	8	14/2/2020
<i>Gazania linearis</i>	Gazania	*	1	18/3/2007
<i>Gladiolus</i> spp.	Gladiolus	*	1	15/7/2008
<i>Haloragis heterophylla</i>	Varied Raspwort		2	30/6/2009
<i>Helminthotheca echioides</i>	Ox-tongue	*	1	15/7/2008
<i>Hornungia procumbens</i>	Oval Purse	*	1	1/10/2009
<i>Juncus kraussii</i> subsp. <i>australiensis</i>	Sea Rush		1	15/7/2008
<i>Kennedia prostrata</i>	Running Postman		2	30/6/2009

Scientific Name	Common Name	Rating	# of records	Last Record
<i>Lachnagrostis billardierei</i> subsp. <i>billardierei</i>	Coast Blown-grass		1	18/3/2007
<i>Lachnagrostis filiformis</i> s.s.	Common Blown-grass		1	19/2/2009
<i>Lagurus ovatus</i>	Hare's-tail Grass	*	3	14/2/2020
<i>Leontodon rhagadioloides</i> (type form)	Hedypnois	*	1	23/10/2009
<i>Leontodon saxatilis</i> subsp. <i>saxatilis</i>	Hairy Hawkbit	*	1	18/3/2007
<i>Lepidosperma gladiatum</i>	Coast Sword-sedge		3	14/2/2020
<i>Leptospermum</i> spp.	Tea Tree		1	12/1/2007
<i>Leucophyta brownii</i>	Cushion Bush		1	18/3/2007
<i>Leucopogon parviflorus</i>	Coast Beard-heath		5	14/2/2020
<i>Lycium ferocissimum</i>	African Box-thorn	*	1	14/2/2020
<i>Malva</i> spp.	Mallow		1	15/7/2008
<i>Melaleuca lanceolata</i>	Moonah		2	14/2/2020
<i>Melaleuca nesophila</i>	Showy Honey-myrtle	*	1	18/3/2007
<i>Melilotus indicus</i>	Sweet Melilot	*	2	14/2/2020
<i>Morchella esculenta</i>	Common Morel	en	1	30/9/2009
<i>Myoporum insulare</i>	Common Boobialla	#	6	27/9/2020
<i>Olearia axillaris</i>	Coast Daisy-Bush		3	14/2/2020
<i>Olearia</i> spp.	Daisy Bush		1	12/1/2007
<i>Oxalis pes-caprae</i>	Soursob	*	2	2/5/2017
<i>Pauridia glabella</i> var. <i>glabella</i>	Tiny Star		1	30/6/2009
<i>Phalaris aquatica</i>	Toowoomba Canary-grass	*	1	15/7/2008
<i>Pimelea serpyllifolia</i> subsp. <i>serpyllifolia</i>	Thyme Rice-flower		1	18/3/2007
<i>Plantago coronopus</i>	Buck's-horn Plantain	*	3	14/2/2020
<i>Plantago lanceolata</i>	Ribwort	*	1	18/3/2007
<i>Poa billardierei</i>	Coast Fescue	en	1	30/6/2009
<i>Poa labillardierei</i>	Common Tussock-grass		1	15/7/2008
<i>Poa morrisii</i>	Soft Tussock-grass		1	14/2/2020
<i>Poa poiformis</i>	Coast Tussock-grass		3	14/2/2020
<i>Poa poiformis</i> var. <i>ramifer</i>	Dune Poa	en	1	18/3/2007
<i>Polygala myrtifolia</i>	Myrtle-leaf Milkwort	*	1	14/2/2020
<i>Pomaderris paniculosa</i> subsp. <i>paralia</i>	Coast Pomaderris		2	14/2/2020
<i>Pterostylis nana</i>	Dwarf Greenhood		1	30/7/2020

Scientific Name	Common Name	Rating	# of records	Last Record
<i>Rhagodia candolleana</i> subsp. <i>candolleana</i>	Seaberry Saltbush		4	14/2/2020
<i>Rhagodia</i> spp.	Saltbush		1	12/1/2007
<i>Rhamnus alaternus</i>	Italian Buckthorn	*	1	2/5/2017
<i>Roepera billardierei</i>	Coast Twin-leaf	en	1	18/3/2007
<i>Salvia verbenaca</i> var. <i>verbenaca</i>	Wild Sage	*	1	15/9/2009
<i>Senecio angulatus</i>	Climbing Groundsel	*	1	14/2/2020
<i>Senecio pinnatifolius</i>	Variable Groundsel		1	2/5/2017
<i>Senecio pinnatifolius</i> var. <i>maritimus</i>	Coast Groundsel		1	18/3/2007
<i>Sonchus oleraceus</i>	Common Sow-thistle	*	3	14/2/2020
<i>Spinifex sericeus</i>	Hairy Spinifex		1	18/3/2007
<i>Sporobolus africanus</i>	Rat-tail Grass	*	2	14/2/2020
<i>Stenotaphrum secundatum</i>	Buffalo Grass	*	2	14/2/2020
<i>Swainsona lessertiifolia</i>	Coast Swainson-pea		1	1/1/2009
<i>Tetragonia implexicoma</i>	Bower Spinach		8	26/9/2020
<i>Thinopyrum junceiforme</i>	Sea Wheat-grass	*	4	2/5/2017
<i>Threlkeldia diffusa</i>	Coast Bonefruit		3	14/2/2020
<i>Trifolium</i> spp.	Clover	*	1	2/5/2017
<i>Vicia sativa</i>	Common Vetch	*	1	2/5/2017
<i>Vicia sativa</i> subsp. <i>sativa</i>	Common Vetch	*	1	15/7/2008
<i>Vulpia fasciculata</i>	Dune Fescue	*	1	18/3/2007
<i>Vulpia</i> spp.	Fescue	*	1	14/2/2020
MARINE				
<i>Hyperlophus vittatus</i>	Sandy Sprat		1	5/6/2008
<i>Pristiophorus nudipinnis</i>	Southern Sawshark		1	6/6/2017
<i>Arctophoca forsteri</i>	Long-nosed Fur Seal	vu	3	7/6/2020
<i>Arctocephalus pusillus doriferus</i>	Australian Fur Seal		19	11/3/2020
<i>Eudyptula minor</i>	Little Penguin		15	2/5/2020
<i>Kogia breviceps</i>	Pygmy Sperm Whale		2	8/7/2018
<i>Otariidae</i> spp.	Eared Seals		2	12/10/2013
FAUNA				
<i>Acanthagenys rufogularis</i>	Spiny-cheeked Honeyeater		90	14/3/2021
<i>Acanthiza chrysorrhoa</i>	Yellow-rumped Thornbill		6	11/1/2015
<i>Acanthiza pusilla</i>	Brown Thornbill		43	24/4/2021
<i>Acanthorhynchus tenuirostris</i>	Eastern Spinebill		1	17/5/2015

Scientific Name	Common Name	Rating	# of records	Last Record
<i>Accipiter cirrocephalus</i>	Collared Sparrowhawk		2	26/4/2015
<i>Accipiter spp.</i>	Goshawks and Sparrowhawks		1	17/5/2015
<i>Accipitridae spp.</i>	Hawks and Eagles		1	29/8/2018
<i>Acridotheres tristis</i>	Common Myna	*	28	30/12/2016
<i>Alauda arvensis</i>	Eurasian Skylark	*	83	3/12/2020
<i>Anas castanea</i>	Chestnut Teal		6	8/12/2016
<i>Anas gracilis</i>	Grey Teal		4	10/12/2016
<i>Anas superciliosa</i>	Pacific Black Duck		12	8/12/2016
<i>Anthochaera carunculata</i>	Red Wattlebird		46	14/3/2021
<i>Anthochaera chrysoptera</i>	Little Wattlebird		4	17/5/2015
<i>Anthus australis</i>	Australian Pipit		33	18/5/2019
<i>Aquila audax</i>	Wedge-tailed Eagle		4	6/11/2016
<i>Ardea pacifica</i>	White-necked Heron		2	27/7/2014
<i>Ardenna tenuirostris</i>	Short-tailed Shearwater		18	6/11/2016
<i>Austronomus australis</i>	White-striped Free-tailed Bat		1	4/2/2017
<i>Cacatua galerita</i>	Sulphur-crested Cockatoo		1	7/6/2014
<i>Cacomantis flabelliformis</i>	Fan-tailed Cuckoo		2	4/10/2014
<i>Calamanthus fuliginosus</i>	Striated Fieldwren		51	23/12/2016
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	VU vu	4	12/3/2014
<i>Calidris minuta</i>	Little Stint		9	7/12/2016
<i>Calidris ruficollis</i>	Red-necked Stint		165	3/12/2020
<i>Caligavis chrysops</i>	Yellow-faced Honeyeater		7	18/5/2019
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	EN en	1	31/3/2013
<i>Calyptorhynchus funereus</i>	Yellow-tailed Black-Cockatoo		7	30/12/2016
<i>Carduelis carduelis</i>	European Goldfinch	*	9	1/1/2016
<i>Cereopsis novaehollandiae</i>	Cape Barren Goose		1	26/7/2007
<i>Charadrius bicinctus</i>	Double-banded Plover		41	2/8/2016
<i>Charadrius ruficapillus</i>	Red-capped Plover		125	3/12/2020
<i>Chloris chloris</i>	European Greenfinch	*	1	7/7/2013
<i>Chroicocephalus novaehollandiae</i>	Silver Gull		246	24/4/2021
<i>Chrysococcyx basalis</i>	Horsfield's Bronze-Cuckoo		13	24/10/2015
<i>Chrysococcyx lucidus</i>	Shining Bronze-Cuckoo		1	1/1/2015
<i>Circus approximans</i>	Swamp Harrier		55	14/3/2021

Scientific Name	Common Name	Rating	# of records	Last Record
<i>Circus assimilis</i>	Spotted Harrier		2	13/4/2013
<i>Circus spp.</i>	Harriers		1	2/11/2014
<i>Cisticola exilis</i>	Golden-headed Cisticola		32	16/12/2016
<i>Cladorhynchus leucocephalus</i>	Banded Stilt		2	27/9/2015
<i>Colluricincla harmonica</i>	Grey Shrike-thrush		4	14/3/2021
<i>Columba livia</i>	Domestic Pigeon	*	24	10/12/2016
<i>Corvus mellori</i>	Little Raven		125	14/5/2020
<i>Corvus spp.</i>	Ravens and Crows		4	12/3/2017
<i>Coturnix pectoralis</i>	Stubble Quail		1	5/11/2015
<i>Cracticus torquatus</i>	Grey Butcherbird		6	4/10/2014
<i>Cygnus atratus</i>	Black Swan		10	14/5/2020
<i>Egretta novaehollandiae</i>	White-faced Heron		63	24/4/2021
<i>Elanus axillaris</i>	Black-shouldered Kite		30	16/12/2016
<i>Eolophus roseicapilla</i>	Galah		14	14/5/2020
<i>Epthianura albifrons</i>	White-fronted Chat		92	18/5/2019
<i>Falco berigora</i>	Brown Falcon		17	6/11/2016
<i>Falco cenchroides</i>	Nankeen Kestrel		53	30/12/2016
<i>Falco longipennis</i>	Australian Hobby		5	18/10/2015
<i>Falco peregrinus</i>	Peregrine Falcon		3	23/10/2016
<i>Falco subniger</i>	Black Falcon	cr	3	19/1/2018
<i>Fulica atra</i>	Eurasian Coot		1	16/1/2013
<i>Fulmarus glacialis</i>	Southern Fulmar		1	17/8/2014
<i>Gavicalis virescens</i>	Singing Honeyeater		137	24/4/2021
<i>Grallina cyanoleuca</i>	Magpie-lark		62	15/7/2020
<i>Gymnorhina tibicen</i>	Australian Magpie		140	14/5/2020
<i>Haematopus longirostris</i>	Pied Oystercatcher		1	8/12/2016
<i>Haliastur sphenurus</i>	Whistling Kite		9	7/12/2016
<i>Himantopus leucocephalus</i>	Pied Stilt		2	22/6/2013
<i>Hirundapus caudacutus</i>	White-throated Needletail	VU vu	1	12/2/2017
<i>Hirundo neoxena</i>	Welcome Swallow		83	24/4/2021
<i>Larus dominicanus</i>	Kelp Gull		3	10/12/2016
<i>Malurus cyaneus</i>	Superb Fairy-wren		137	24/4/2021
<i>Manorina melanocephala</i>	Noisy Miner		2	28/9/2020
<i>Melithreptus lunatus</i>	White-naped Honeyeater		1	17/5/2015
<i>Microcarbo melanoleucos</i>	Little Pied Cormorant		29	14/5/2020

Scientific Name	Common Name	Rating	# of records	Last Record
<i>Milvus migrans</i>	Black Kite		1	28/3/2015
<i>Mirafrja javanica</i>	Horsfield's Bushlark		1	31/12/2013
<i>Morus serrator</i>	Australasian Gannet		66	10/12/2016
<i>Neochmia temporalis</i>	Red-browed Finch		2	14/3/2021
<i>Neophema chrysostoma</i>	Blue-winged Parrot	VU vu	2	5/9/2015
<i>Ocyphaps lophotes</i>	Crested Pigeon		20	14/5/2020
<i>Onychoprion anaethetus</i>	Bridled Tern		1	15/2/2014
<i>Pachyptila belcheri</i>	Slender-billed Prion		1	2/5/2013
<i>Pachyptila desolata</i>	Antarctic Prion		1	2/5/2013
<i>Pandion cristatus</i>	Eastern Osprey		2	6/1/2014
<i>Pardalotus punctatus</i>	Spotted Pardalote		3	13/7/2014
<i>Passer domesticus</i>	House Sparrow	*	28	14/3/2021
<i>Passer montanus</i>	Eurasian Tree Sparrow	*	2	16/11/2015
<i>Pelecanus conspicillatus</i>	Australian Pelican		6	15/9/2016
<i>Petrochelidon nigricans</i>	Tree Martin		5	8/12/2016
<i>Petroica phoenicea</i>	Flame Robin		1	24/4/2021
<i>Phalacrocoracidae spp.</i>			1	25/7/2019
<i>Phalacrocorax carbo</i>	Great Cormorant		137	26/10/2019
<i>Phalacrocorax sulcirostris</i>	Little Black Cormorant		10	9/12/2016
<i>Phaps chalcoptera</i>	Common Bronzewing		1	5/10/2016
<i>Phylidonyris novaehollandiae</i>	New Holland Honeyeater		43	14/3/2021
<i>Platycercus elegans</i>	Crimson Rosella		1	14/3/2021
<i>Platycercus eximius</i>	Eastern Rosella		10	15/11/2016
<i>Podargus strigoides</i>	Tawny Frogmouth		2	15/11/2016
<i>Poliocephalus poliocephalus</i>	Hoary-headed Grebe		1	19/1/2007
<i>Porphyrio melanotus</i>	Australasian Swamphen		1	14/3/2021
<i>Psephotus haematonotus</i>	Red-rumped Parrot		1	27/7/2013
<i>Pseudocheirus peregrinus</i>	Eastern Ring-tailed Possum		11	6/8/2019
<i>Ptilotula penicillata</i>	White-plumed Honeyeater		1	27/7/2013
<i>Puffinus gavia</i>	Fluttering Shearwater		5	25/1/2020
<i>Rattus rattus</i>	Black Rat	*	1	7/7/2019
<i>Recurvirostra novaehollandiae</i>	Red-necked Avocet		1	27/9/2015
<i>Rhipidura albiscapa</i>	Grey Fantail		22	14/3/2021
<i>Rhipidura leucophrys</i>	Willie Wagtail		41	18/5/2019
<i>Sericornis frontalis</i>	White-browed Scrubwren		59	24/4/2021

Scientific Name	Common Name	Rating	# of records	Last Record
<i>Spilopelia chinensis</i>	Spotted Dove	*	16	14/3/2021
<i>Stercorarius parasiticus</i>	Arctic Jaeger		1	24/4/2021
<i>Sterna hirundo</i>	Common Tern		1	27/2/2014
<i>Strepera graculina</i>	Pied Currawong		6	8/4/2016
<i>Sturnus vulgaris</i>	Common Starling	*	59	24/4/2021
<i>Synoicus ypsilophorus</i>	Brown Quail		2	16/7/2015
<i>Tachyglossus aculeatus</i>	Short-beaked Echidna		1	1/12/2014
<i>Tadorna tadornoides</i>	Australian Shelduck		6	8/12/2016
<i>Taeniopygia guttata</i>	Zebra Finch		1	8/12/2016
<i>Thalasseus bergii</i>	Crested Tern		102	24/4/2021
<i>Threskiornis molucca</i>	Australian White Ibis		74	14/5/2020
<i>Threskiornis spinicollis</i>	Straw-necked Ibis		54	3/12/2020
<i>Trichoglossus moluccanus</i>	Rainbow Lorikeet		9	14/5/2020
<i>Trichosurus vulpecula</i>	Common Brush-tailed Possum		2	26/4/2018
<i>Turdus merula</i>	Common Blackbird	*	78	24/4/2021
<i>Vanellus miles</i>	Masked Lapwing		106	14/5/2020
<i>Vanellus tricolor</i>	Banded Lapwing		12	17/5/2015
<i>Wallabia bicolor</i>	Black-tailed Wallaby		3	15/7/2024
<i>Zosterops lateralis</i>	Silvereye		64	14/3/2021
<i>Crinia signifera</i>	Common Froglet		1	18/8/2021
<i>Limnodynastes peronii</i>	Striped Marsh Frog		1	18/8/2021
<i>Limnodynastes tasmaniensis</i>	Spotted Marsh Frog (race unknown)		3	18/8/2021
<i>Litoria ewingii</i>	Southern Brown Tree Frog		1	1/9/2019
<i>Ardea alba</i>	Great Egret		5	12/5/2019
<i>Arenaria interpres</i>	Ruddy Turnstone	VU vu	90	16/11/2018
<i>Calidris alba</i>	Sanderling		43	3/12/2020
<i>Calidris canutus</i>	Red Knot	VU vu	7	3/10/2015
<i>Calidris ferruginea</i>	Curlew Sandpiper	CR cr	24	22/11/2017
<i>Chlidonias hybrida</i>	Whiskered Tern		17	19/12/2018
<i>Egretta garzetta</i>	Little Egret	en	1	27/11/2015
<i>Haematopus fuliginosus</i>	Sooty Oystercatcher		33	24/4/2021
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	en	3	1/6/2019
<i>Hydroprogne caspia</i>	Caspian Tern	vu	32	25/7/2019
<i>Larus pacificus</i>	Pacific Gull		254	25/7/2019

Scientific Name	Common Name	Rating	# of records	Last Record
<i>Limosa lapponica</i>	Bar-tailed Godwit	EN en	2	9/11/2016
<i>Macronectes giganteus</i>	Southern Giant-Petrel	EN en	1	18/7/2013
<i>Macronectes halli</i>	Northern Giant-Petrel	VU en	1	1/6/2018
<i>Numenius madagascariensis</i>	Eastern Curlew	CR cr	4	27/11/2015
<i>Pachyptila turtur</i>	Fairy Prion		18	28/2/2019
<i>Pelagodroma marina</i>	White-faced Storm-Petrel	en	1	28/2/2019
<i>Pelecanoides urinatrix</i>	Common Diving-Petrel		1	16/5/2018
<i>Phalacrocorax fuscescens</i>	Black-faced Cormorant		19	13/5/2019
<i>Phalacrocorax varius</i>	Pied Cormorant		36	12/5/2019
<i>Platalea regia</i>	Royal Spoonbill		4	12/5/2019
<i>Pluvialis fulva</i>	Pacific Golden Plover	vu	124	28/9/2018
<i>Pluvialis squatarola</i>	Grey Plover	VU vu	1	9/12/2014
<i>Spatula rhynchotis</i>	Australasian Shoveler	vu	4	15/1/2019
<i>Sternula nereis</i>	Fairy Tern	VU cr	1	6/11/2016
<i>Thalassarche cauta</i>	Shy Albatross	EN en	26	25/7/2019
<i>Thalassarche melanophris</i>	Black-browed Albatross	VU	14	25/7/2019
<i>Thinornis cucullatus</i>	Hooded Plover	VU vu	879	26/3/2025
<i>Tringa nebularia</i>	Common Greenshank	EN en	3	30/1/2018
<i>Xenus cinereus</i>	Terek Sandpiper	VU vu	1	29/10/2014

Appendix 2.2 Flora and Fauna recorded from iNaturalist (iNaturalist 2025)

Scientific Name	Common Name	# of records
FLORA		
<i>Acacia longifolia</i>	Longleaf Wattle	12
<i>Acacia longifolia sophorae</i>	coastal wattle	18
<i>Acacia uncifolia</i>	coast wirilda	4
<i>Acaena echinata</i>	Sheep's Burr	1
<i>Acaena novae-zelandiae</i>	bidgee-widgee	4
<i>Adriana quadripartita</i>	bitter bush	6
<i>Aizoon pubescens</i>	Coastal Galenia	3
<i>Allium triquetrum</i>	Three-cornered garlic	3
<i>Allocasuarina verticillata</i>	Drooping She-oak	5
<i>Aloe maculata</i>	soap aloe	4
<i>Alyxia buxifolia</i>	Sea Box	9

Scientific Name	Common Name	# of records
<i>Amphibolis antarctica</i>	Sea Nymph	26
<i>Anchusa arvensis</i>	small bugloss	1
<i>Apium prostratum</i>	Sea Celery	13
<i>Arctotheca calendula</i>	Capeweed	3
<i>Asparagus asparagoides</i>	Bridal creeper	3
<i>Asphodelus fistulosus</i>	Onion Weed	1
<i>Atriplex cinerea</i>	Grey Saltbush	10
<i>Austrostipa stipoides</i>	coast speargrass	6
<i>Avicennia marina</i>	Grey Mangrove	1
<i>Avicennia marina australasica</i>	Grey Mangrove	2
<i>Banksia integrifolia</i>	Coastal Banksia	2
<i>Banksia marginata</i>	Silver Banksia	1
<i>Brassica oleracea</i>	cabbage, broccoli, and allies	1
<i>Burchardia umbellata</i>	Milkmaids	1
<i>Cakile maritima</i>	European Searocket	13
<i>Caladenia latifolia</i>	Pink Fairies	6
<i>Calamagrostis arenaria</i>	European marram grass	3
<i>Calocephalus lacteus</i>	Milky Beauty-heads	2
<i>Carpobrotus chilensis</i>	Chilean sea fig	1
<i>Carpobrotus rossii</i>	Australian Pig Face	23
<i>Caulerpa brownii</i>	Sea Rimu	16
<i>Caulerpa cactoides</i>	Cactus caulerpa	5
<i>Caulerpa flexilis</i>	Fern caulerpa	1
<i>Caulerpa muelleri</i>	Mueller's fern caulerpa	7
<i>Caulerpa scalpelliformis</i>	Scalpel green seaweed	3
<i>Chaetomorpha coliformis</i>	Mermaid's Necklace	17
<i>Clematis microphylla</i>	Small-leaved Clematis	15
<i>Codium fragile</i>	Dead Man's Fingers	3
<i>Coprosma repens</i>	Mirror bush	6
<i>Corallina officinalis</i>	Common Coralline	5
<i>Correa alba</i>	White Correa	10
<i>Cotoneaster coriaceus</i>	Late cotoneaster	1
<i>Cynodon dactylon</i>	couch	3
<i>Cynoglossum australe</i>	Australian Hound's-tongue	2
<i>Dactylis glomerata</i>	orchard grass	1
<i>Daucus glochidiatus</i>	Australian Carrot	1

Scientific Name	Common Name	# of records
<i>Delairea odorata</i>	Cape-ivy	2
<i>Dianella brevicaulis</i>	Coast Flax-Lily	14
<i>Dianella revoluta</i>	Blueberry Lily	1
<i>Dichelachne crinita</i>	Long Hair Plume Grass	1
<i>Dichondra repens</i>	kidney weed	1
<i>Dipogon lignosus</i>	dolichos pea	23
<i>Disphyma crassifolium</i>	Purple Dewplant	1
<i>Disphyma crassifolium clavellatum</i>	Jellybeans	2
<i>Distichlis distichophylla</i>	Australian Salt-grass	3
<i>Duma florulenta</i>	Tangled Lignum	1
<i>Ehrharta longiflora</i>	longflower veldtgrass	1
<i>Eleocharis acuta</i>	common spike-rush	1
<i>Elymus farctus</i>	Sand Couch-grass	1
<i>Eriochilus cucullatus</i>	Parson's Bands	1
<i>Eschscholzia californica</i>	California poppy	1
<i>Eucalyptus gomphocephala</i>	Tuart	1
<i>Eucalyptus leucoxylon</i>	Yellow gum	2
<i>Euphorbia paralias</i>	Sea Spurge	5
<i>Euphorbia terracina</i>	Geraldton Carnation Weed	11
<i>Ficinia nodosa</i>	Knobby Clubrush	10
<i>Frankenia pauciflora</i>	Sea Heath	7
<i>Freesia leichtlinii</i>	Freesia	1
<i>Fumaria muralis</i>	common ramping-fumitory	1
<i>Gahnia filum</i>	chaffy saw-sedge	2
<i>Gaudium laevigatum</i>	Coast Teatree	43
<i>Gladiolus undulatus</i>	Wild gladiolus	1
<i>Goodenia ovata</i>	hop goodenia	2
<i>Helminthotheca echioides</i>	bristly oxtongue	1
<i>Hemichroa pentandra</i>	Trailing Hemichroa	1
<i>Hibbertia sericea</i>	Silky Guinea-flower	2
<i>Jania verrucosa</i>	Well-forked Coralline	1
<i>Kennedia prostrata</i>	Running Postman	6
<i>Lachenalia bulbifera</i>	Red Viooltjie	1
<i>Lachnagrostis billardierei</i>	Sand Wind Grass	1
<i>Lagurus ovatus</i>	Hare's Tail Grass	13
<i>Lepidosperma gladiatum</i>	Coast Sword-sedge	5

Scientific Name	Common Name	# of records
<i>Leucophyta brownii</i>	Cushion Bush	26
<i>Leucopogon australis</i>	Spike Beard-heath	1
<i>Leucopogon parviflorus</i>	coastal beard-heath	43
<i>Lolium perenne</i>	Perennial Ryegrass	1
<i>Lomandra longifolia</i>	Spiny-headed Mat-rush	2
<i>Lotus australis</i>	austral trefoil	1
<i>Lycium ferocissimum</i>	African boxthorn	1
<i>Malva arborea</i>	Tree Mallow	1
<i>Medicago polymorpha</i>	bur clover	2
<i>Melaleuca lanceolata</i>	Moonah	15
<i>Melaleuca nesophila</i>	Showy Honey-myrtle	1
<i>Melaleuca pallida</i>	Lemon Bottlebrush	1
<i>Melilotus indicus</i>	small melilot	4
<i>Mentha — rotundifolia</i>	Apple Mint	1
<i>Mentha suaveolens</i>	Apple Mint	1
<i>Muehlenbeckia adpressa</i>	Climbing Lignum	1
<i>Myoporum insulare</i>	common boobialla	12
<i>Myosotis discolor</i>	yellow and blue forget-me-not	1
<i>Olea europaea</i>	Olive	1
<i>Olearia axillaris</i>	Coastal Daisy-Bush	41
<i>Olearia lepidophylla</i>	clubmoss daisy-bush	1
<i>Osteospermum moniliferum moniliferum</i>	Boneseed	1
<i>Oxalis pes-caprae</i>	Soursob	7
<i>Ozothamnus turbinatus</i>	Coast Everlasting	7
<i>Persicaria decipiens</i>	slender knotweed	3
<i>Pimelea serpyllifolia</i>	thyme riceflower	10
<i>Pittosporum undulatum</i>	Sweet Pittosporum	1
<i>Plantago coronopus</i>	Buck's-horn Plantain	5
<i>Poa billardiarei</i>	Beach Fescue	3
<i>Polygala myrtifolia</i>	Sweet Pea Shrub	4
<i>Pomaderris paniculosa</i>	Scurfy Pomaderris	3
<i>Pultenaea tenuifolia</i>	Slender Bush Pea	5
<i>Reichardia tingitana</i>	False Sow-thistle	1
<i>Rhagodia candolleana</i>	Seaberry Saltbush	24
<i>Rhagodia candolleana candolleana</i>	Seaberry Saltbush	4
<i>Roepera billardiarei</i>	Coast Twinleaf	17

Scientific Name	Common Name	# of records
<i>Salicornia blackiana</i>	Thick-head Glasswort	1
<i>Salicornia quinqueflora</i>	Beaded Samphire	3
<i>Samolus repens</i>	Creeping Brookweed	2
<i>Schoenoplectus tabernaemontani</i>	soft-stem bulrush	1
<i>Senecio elegans</i>	Red-purple Ragwort	2
<i>Senecio pinnatifolius</i>	pinnate-leaved groundsel	6
<i>Sixalix atropurpurea</i>	Sweet scabious	1
<i>Solanum furcatum</i>	forked nightshade	1
<i>Solanum laciniatum</i>	kangaroo-apple	1
<i>Solanum linnaeanum</i>	Yellow Bitter-apple	1
<i>Sonchus megalocarpus</i>	dune thistle	17
<i>Sonchus oleraceus</i>	Common Sow-thistle	1
<i>Sparaxis bulbifera</i>	Butter Silklily	1
<i>Spergularia media</i>	Greater Sea-spurry	1
<i>Spinifex hirsutus</i>	Coastal Spinifex	1
<i>Spinifex sericeus</i>	Beach Spinifex	17
<i>Sporobolus virginicus</i>	seashore dropseed	2
<i>Suaeda australis</i>	Austral Seablite	4
<i>Swainsona lessertiifolia</i>	coast Swainson-pea	15
<i>Tecticornia arbuscula</i>	Shrubby Glasswort	3
<i>Templetonia retusa</i>	Cookies Tongue	1
<i>Tetragonia implexicoma</i>	bower spinach	27
<i>Tetragonia tetragonoides</i>	Warrigal Greens	1
<i>Thelymitra flexuosa</i>	twisted sun-orchid	1
<i>Threlkeldia diffusa</i>	Coast Bonefruit	21
<i>Tradescantia fluminensis</i>	Wandering Trad	1
<i>Tragopogon porrifolius</i>	purple salsify	2
<i>Trifolium campestre</i>	hop trefoil	1
<i>Veronica gracilis</i>	Slender Speedwell	2
<i>Vicia sativa</i>	Common Vetch	1
<i>Zostera muelleri</i>	Dwarf Grass-wrack	1
MARINE		
<i>Achoerodus gouldii</i>	Western Blue Groper	1
<i>Alabes dorsalis</i>	Common Shore Eel	3
<i>Aldrichetta forsteri</i>	Yelloweye Mullet	1
<i>Anguilla australis</i>	Short-finned Eel	3

Scientific Name	Common Name	# of records
<i>Aplodactylus arctidens</i>	Marblefish	3
<i>Aracana aurita</i>	Shaw's Cowfish	3
<i>Argyrosomus japonicus</i>	Mulloway	2
<i>Arothron firmamentum</i>	Starry Toadfish	1
<i>Arotrolepis filicauda</i>	Threadfin Leatherjacket	1
<i>Arripis trutta</i>	Eastern Australian Salmon	1
<i>Bovichtus angustifrons</i>	Dragonet	4
<i>Chirodactylus spectabilis</i>	Banded Morwong	2
<i>Chrysophrys auratus</i>	Australasian Snapper	7
<i>Cyprinus carpio</i>	European Carp	4
<i>Dactylophora nigricans</i>	Dusky Morwong	5
<i>Diodon nichthemerus</i>	Globefish	7
<i>Enoplosus armatus</i>	Old Wife	2
<i>Eubalichthys mosaicus</i>	Mosaic Leatherjacket	1
<i>Favonigobius lateralis</i>	Southern Longfin Goby	5
<i>Girella zebra</i>	Zebrafish	6
<i>Gnathanacanthus goetzei</i>	Red Velvetfish	1
<i>Gymnapistes marmoratus</i>	South Australian Cobbler	1
<i>Haletta semifasciata</i>	Blue Weed-whiting	1
<i>Hippocampus abdominalis</i>	Bigbelly Seahorse	1
<i>Kyphosus sydneyanus</i>	Silver Drummer	3
<i>Meuschenia flavolineata</i>	Yellowstriped Leatherjacket	3
<i>Meuschenia freycineti</i>	Sixspine Leatherjacket	4
<i>Meuschenia galii</i>	Bluelined Leatherjacket	2
<i>Meuschenia hippocrepis</i>	Horseshoe Leatherjacket	7
<i>Notolabrus tetricus</i>	Bluethroat Wrasse	3
<i>Olisthops cyanomelas</i>	Herring Cale	1
<i>Parablennius tasmanianus</i>	Tasmanian Blenny	5
<i>Parma victoriae</i>	Scalyfin	3
<i>Pentaceropsis recurvirostris</i>	Longsnout Boarfish	2
<i>Phyllopteryx taeniolatus</i>	Common Sea Dragon	4
<i>Pseudocaranx georgianus</i>	Silver Trevally	1
<i>Pseudogoniistius nigripes</i>	Magpie Perch	5
<i>Scobinichthys granulatus</i>	Rough Leatherjacket	1
<i>Scorpius aequipinnis</i>	Sea Sweep	7
<i>Solegnathus spinosissimus</i>	Spiny Pipehorse	3

Scientific Name	Common Name	# of records
<i>Tetractenos glaber</i>	Smooth Toadfish	5
<i>Tetractenos hamiltoni</i>	Common Toadfish	1
<i>Tilodon sexfasciatus</i>	Moonlighter	4
<i>Limnodynastes dumerilii</i>	Eastern Banjo Frog	1
<i>Rawlinsonia ewingii</i>	Southern Brown Tree Frog	1
<i>Actinia tenebrosa</i>	Waratah Anemone	47
<i>Alope orientalis</i>	bald shrimp	5
<i>Amblypneustes elevatus</i>	Little Pink Urchin	1
<i>Armadillidium vulgare</i>	Common Pill Woodlouse	1
<i>Aulactinia veratra</i>	Green snakelock anemone	11
<i>Austromegabalanus nigrescens</i>	Giant rock barnacle	1
<i>Bathytoshia brevicaudata</i>	Smooth Stingray	2
<i>Botrylloides leachii</i>	ladder ascidian	1
<i>Callorhinchus milii</i>	Australian Elephantfish	1
<i>Carcinus maenas</i>	European Green Crab	14
<i>Catomerus polymerus</i>	Surf barnacle	7
<i>Chthamalus antennatus</i>	Six-plated Barnacle	16
<i>Corella eumyota</i>	Orange-tipped Sea Squirt	1
<i>Coscinasterias muricata</i>	Eleven-armed Sea Star	6
<i>Cyclograpsus audouinii</i>	Smooth Shore Crab	1
<i>Cyclograpsus granulosus</i>	Purple Mottled Shore Crab	4
<i>Echinocardium cordatum</i>	Sea Potato	1
<i>Euidotea bakeri</i>	Sea Centipede	7
<i>Galeolaria caespitosa</i>	Intertidal Tubeworm	12
<i>Guinusia chabrus</i>	Red Rock Crab	29
<i>Hadrosquilla perpasta</i>	Plump Mantis Shrimp	1
<i>Halicarcinus ovatus</i>	Three-pronged Spider Crab	5
<i>Heliocidaritis erythrogramma</i>	Western Pacific purple sea urchin	7
<i>Heterodontus portusjacksoni</i>	Port Jackson Shark	2
<i>Holopneustes porosissimus</i>	Short-spined urchin	6
<i>Holopneustes purpurascens</i>	Short-spine urchin	1
<i>Jasus edwardsii</i>	Southern Rock Lobster	1
<i>Lepas anatifera</i>	Pelagic Gooseneck Barnacle	5
<i>Lepas pectinata</i>	Small Goose Barnacle	1
<i>Leptograpsus variegatus</i>	Purple Rock Crab	2
<i>Lomis hirta</i>	Hairy Stone Crab	8

Scientific Name	Common Name	# of records
<i>Meridiastra calcar</i>	Carpet Sea Star	20
<i>Mictyris longicarpus</i>	Light-blue Soldier Crab	1
<i>Mictyris platycheles</i>	Soldier Crab	27
<i>Myliobatis tenuicaudata</i>	Southern Eagle Ray	1
<i>Nectocarcinus integrifrons</i>	rough rock crab	1
<i>Nectria ocellata</i>	Spotted Sea Star	11
<i>Notomithrax ursus</i>	Hairy Seaweed Crab	10
<i>Ommatoiulus moreleti</i>	Portuguese Millipede	3
<i>Oulactis muscosa</i>	Speckled rock anemone	4
<i>Ovalipes australiensis</i>	Sand Crab	4
<i>Palaemon serenus</i>	rock-pool shrimp	9
<i>Paragrapsus laevis</i>	Spotted Smooth Shore Crab	1
<i>Paragrapsus quadridentatus</i>	Notched Shore Crab	15
<i>Parascyllium ferrugineum</i>	Rusty Carpetshark	1
<i>Parascyllium variolatum</i>	Varied Carpetshark	1
<i>Parvulastra exigua</i>	Dwarf Cushion Star	23
<i>Petrolisthes elongatus</i>	New Zealand Half Crab	1
<i>Phlyctenactis tuberculosa</i>	Wandering Sea Anemone	1
<i>Phlyctenanthus australis</i>	mulberry anemone	3
<i>Physalia megalista</i>	Southern Bluebottle	3
<i>Physalia minuta</i>	Little Bluebottle	1
<i>Pilumnopus serratifrons</i>	Smooth-handed Crab	1
<i>Porcellio laevis</i>	Swift Woodlouse	1
<i>Porcellio scaber</i>	Common Rough Woodlouse	1
<i>Pyura gibbosa</i>	Lumpy sea tulip	1
<i>Pyura praeputialis</i>	Cunjevoi	1
<i>Sycozoa cerebriformis</i>	Brain ascidian	1
<i>Tetraclitella purpurascens</i>	Rosette barnacle	18
<i>Tosia australis</i>	Common Biscuit Star	4
<i>Trygonoptera imitata</i>	Eastern Shovelnose Stingaree	6
<i>Trygonorrhina dumerilii</i>	Southern Fiddler Ray	1
<i>Uniophora granifera</i>	Granular Sea Star	1
<i>Urolophus gigas</i>	Spotted Stingaree	3
<i>Velella velella</i>	By-the-wind Sailor	13
<i>Amblychilepas nigrita</i>	black keyhole limpet	9
<i>Amblychilepas oblonga</i>	oblong keyhole limpet	2

Scientific Name	Common Name	# of records
<i>Aplysia juliana</i>	Walking Seahare	4
<i>Aplysia sydneyensis</i>	Sydney Seahare	7
<i>Argonauta nodosus</i>	Knobbed Argonaut	2
<i>Ascarosepion apama</i>	Australian Giant Cuttlefish	14
<i>Ascarosepion novaehollandiae</i>	New Holland Cuttlefish	8
<i>Austreaeolis ornata</i>	Ornate facelinid	2
<i>Austrocochlea constricta</i>	Southern ribbed top snail	72
<i>Austrocochlea porcata</i>	Zebra Top Snail	3
<i>Austrolittorina unifasciata</i>	Little Blue Periwinkle	39
<i>Austromactra rufescens</i>	Reddish Trough Shell	1
<i>Austromytilus rostratus</i>	Beaked Mussel	29
<i>Barbatia pistachia</i>	Banded Ark	1
<i>Batillaria australis</i>	Australian Mud Whelk	3
<i>Bembicium auratum</i>	Gold-mouthed Conniwink	4
<i>Bembicium nanum</i>	Striped-mouth Conniwink	50
<i>Cabestana spengleri</i>	Spengler's Trumpet Snail	2
<i>Cabestana tabulata</i>	Shouldered Triton Snail	6
<i>Cellana tramoserica</i>	Variegated limpet	97
<i>Chlorodiloma odontis</i>	Checkered Periwinkle	19
<i>Cominella lineolata</i>	Lineated cominella	44
<i>Conuber conicum</i>	Conical Moon Snail	1
<i>Conus anemone</i>	Anemone Cone	19
<i>Cornu aspersum</i>	Garden Snail	1
<i>Decorisepia hedleyi</i>	Hedley's Cuttlefish	4
<i>Dicathais orbita</i>	Cart-Rut Shell	71
<i>Doratosepion braggi</i>	Slender Cuttlefish	2
<i>Ellatrinia merces</i>	Common Southern Bean Cowry	1
<i>Ercolania boodleae</i>	Boodlea Sapsucker	4
<i>Eumarcia fumigata</i>	Smoke cockle	1
<i>Haliotis rubra</i>	blacklip abalone	12
<i>Ischnochiton australis</i>	Austral Chiton	44
<i>Ischnochiton cariosus</i>	Corroded Ischnochiton	1
<i>Ischnochiton elongatus</i>	Elongate chiton	21
<i>Janthina janthina</i>	Violet Sea Snail	3
<i>Katelysia rhytiphora</i>	Ridged Venus	1
<i>Latona deltoidea</i>	Pipi	5

Scientific Name	Common Name	# of records
<i>Lunella torquata</i>	Rough turban shell	1
<i>Lunella undulata</i>	Common Warrener	76
<i>Mactra australis</i>	Australian Mactra	1
<i>Mactra pura</i>	Pure Trough Shell	1
<i>Montfortula rugosa</i>	Cap-shaped False Limpet	7
<i>Nerita atramentosa</i>	Australian Black Nerite	24
<i>Nerita melanotragus</i>	Black nerite	2
<i>Notocypraea angustata</i>	Brown Cowry	4
<i>Notocypraea comptonii</i>	Compton's cowrie	3
<i>Onchidella nigricans</i>	Leathery Sea Slug	17
<i>Paphies elongata</i>	Elongate wedge shell	1
<i>Patelloida alticostata</i>	Tall-ribbed Limpet	20
<i>Patelloida latistrigata</i>	Pied limpet	7
<i>Patelloida victoriae</i>	Victorian Limpet	1
<i>Phasianella australis</i>	Painted-lady Pheasant Shell	1
<i>Phasianella ventricosa</i>	Common pheasant shell	12
<i>Phyllodesmium serratum</i>	made-up phyllodesmium	1
<i>Placamen placidum</i>	Placid Frilled Venus	1
<i>Plaxiphora albida</i>	Giant chiton	16
<i>Pleurobranchaea maculata</i>	Grey Side-gilled Sea Slug	2
<i>Prothalotia pulcherrima</i>	Beautiful jewel top shell	26
<i>Sabia australis</i>	Cone-shaped Hoof Shell	11
<i>Scutus antipodes</i>	Elephant Snail	66
<i>Sepioteuthis australis</i>	Southern Calamari Squid	2
<i>Siphonaria diemenensis</i>	Striped False Limpet	28
<i>Siphonaria funiculata</i>	Corded Siphonaria	23
<i>Spirula spirula</i>	Ram's Horn Squid	3
<i>Theba pisana</i>	White Italian Snail	9
<i>Xenostrobus pulex</i>	Little Black Mussel	16
SPIDERS		
<i>Apricia jovialis</i>	Jovial jumping spider	1
<i>Maratus tasmanicus</i>	Tasmanian Peacock Spider	2
<i>Mituliodon tarantulinus</i>	Little Tarantula	1
<i>Neosparassus diana</i>	Badge Huntsman Spider	2
<i>Phonognatha graeffei</i>	Leaf-curling Spider	1
<i>Trichonephila edulis</i>	Australian Golden Orbweaver	1

Scientific Name	Common Name	# of records
BIRDS		
<i>Acanthagenys rufogularis</i>	Spiny-cheeked Honeyeater	13
<i>Acanthiza pusilla</i>	Brown Thornbill	6
<i>Acanthorhynchus tenuirostris</i>	Eastern Spinebill	1
<i>Actitis hypoleucos</i>	Common Sandpiper	4
<i>Anarhynchus bicinctus</i>	Double-banded Plover	49
<i>Anarhynchus leschenaultii</i>	Greater Sand-Plover	1
<i>Anarhynchus mongolus</i>	Siberian Sand-Plover	1
<i>Anarhynchus ruficapillus</i>	Red-capped Plover	94
<i>Anas castanea</i>	Chestnut Teal	5
<i>Anas superciliosa</i>	Pacific Black Duck	3
<i>Anthochaera carunculata</i>	Red Wattlebird	12
<i>Anthochaera carunculata carunculata</i>	Eastern Red Wattlebird	1
<i>Anthochaera chrysoptera</i>	Little Wattlebird	3
<i>Anthus australis</i>	Australian Pipit	1
<i>Ardea alba</i>	Great Egret	6
<i>Ardea alba modesta</i>	Eastern Great Egret	1
<i>Ardea pacifica</i>	White-necked Heron	1
<i>Ardenna tenuirostris</i>	Short-tailed Shearwater	13
<i>Arenaria interpres</i>	Ruddy Turnstone	10
<i>Cacatua sanguinea</i>	Little Corella	3
<i>Cacatua tenuirostris</i>	Long-billed Corella	1
<i>Calamanthus fuliginosus</i>	Striated Fieldwren	1
<i>Calidris alba</i>	Sanderling	9
<i>Calidris minuta</i>	Little Stint	2
<i>Calidris ruficollis</i>	Red-necked Stint	91
<i>Chalcites basalis</i>	Horsfield's Bronze Cuckoo	2
<i>Chroicocephalus novaehollandiae</i>	Silver Gull	48
<i>Circus approximans</i>	Swamp Harrier	7
<i>Cisticola exilis</i>	Golden-headed Cisticola	1
<i>Colluricincla harmonica</i>	Grey Shrike-thrush	3
<i>Columba livia domestica</i>	Feral Pigeon	4
<i>Coracina novaehollandiae</i>	Black-faced Cuckooshrike	1
<i>Corvus mellori</i>	Little Raven	2
<i>Coturnix pectoralis</i>	Stubble Quail	1
<i>Cracticus torquatus</i>	Grey Butcherbird	6

Scientific Name	Common Name	# of records
<i>Cygnus atratus</i>	Black Swan	9
<i>Egretta garzetta</i>	Little Egret	1
<i>Egretta novaehollandiae</i>	White-faced Heron	22
<i>Elanus axillaris</i>	Black-shouldered Kite	11
<i>Eolophus roseicapilla</i>	Galah	8
<i>Eudyptula minor</i>	Little Penguin	18
<i>Eudyptula minor novaehollandiae</i>	Australian Little Penguin	2
<i>Falco cenchroides</i>	Nankeen Kestrel	20
<i>Falco longipennis</i>	Australian Hobby	3
<i>Falco peregrinus</i>	Peregrine Falcon	8
<i>Fulica atra</i>	Eurasian Coot	3
<i>Fulmarus glacialis</i>	Southern Fulmar	1
<i>Gallinago hardwickii</i>	Latham's Snipe	1
<i>Gavicalis virescens</i>	Singing Honeyeater	49
<i>Gavicalis virescens sonorus</i>	Southeastern Singing Honeyeater	1
<i>Grallina cyanoleuca</i>	Magpie-lark	3
<i>Gymnorhina tibicen</i>	Australian Magpie	19
<i>Gymnorhina tibicen tyrannica</i>	Southeastern White-backed Magpie	1
<i>Haematopus fuliginosus</i>	Sooty Oystercatcher	53
<i>Haematopus longirostris</i>	Pied Oystercatcher	2
<i>Haliastur sphenurus</i>	Whistling Kite	3
<i>Hieraaetus morphnoides</i>	Little Eagle	1
<i>Hirundo neoxena</i>	Welcome Swallow	9
<i>Hydroprogne caspia</i>	Caspian Tern	5
<i>Larus dominicanus</i>	Kelp Gull	5
<i>Larus pacificus</i>	Pacific Gull	37
<i>Limosa lapponica</i>	Bar-tailed Godwit	4
<i>Macronectes halli</i>	Northern Giant Petrel	1
<i>Malurus cyaneus</i>	Superb Fairywren	21
<i>Microcarbo melanoleucos</i>	Little Pied Cormorant	13
<i>Milvus migrans</i>	Black Kite	1
<i>Morus serrator</i>	Australasian Gannet	9
<i>Neochmia temporalis</i>	Red-browed Finch	5
<i>Ninox boobook</i>	Australian Boobook	1
<i>Ninox strenua</i>	Powerful Owl	1
<i>Ocyphaps lophotes</i>	Crested Pigeon	5

Scientific Name	Common Name	# of records
<i>Pachyptila turtur</i>	Fairy Prion	7
<i>Passer domesticus</i>	House Sparrow	1
<i>Pelagodroma marina</i>	White-faced Storm-Petrel	3
<i>Pelecanus conspicillatus</i>	Australian Pelican	9
<i>Petroica phoenicea</i>	Flame Robin	3
<i>Phalacrocorax carbo</i>	Great Cormorant	26
<i>Phalacrocorax carbo novaehollandiae</i>	Australasian Great Cormorant	1
<i>Phalacrocorax fuscescens</i>	Black-faced Cormorant	4
<i>Phalacrocorax sulcirostris</i>	Little Black Cormorant	3
<i>Phalacrocorax varius</i>	Pied Cormorant	8
<i>Phylidonyris novaehollandiae</i>	New Holland Honeyeater	17
<i>Platalea flavipes</i>	Yellow-billed Spoonbill	2
<i>Platalea regia</i>	Royal Spoonbill	5
<i>Platycercus elegans</i>	Crimson Rosella	4
<i>Platycercus eximius</i>	Eastern Rosella	7
<i>Pluvialis fulva</i>	Pacific Golden-Plover	22
<i>Pluvialis squatarola</i>	Grey Plover	1
<i>Podargus strigoides</i>	Tawny Frogmouth	1
<i>Podiceps cristatus</i>	Great Crested Grebe	1
<i>Poliocephalus poliocephalus</i>	Hoary-headed Grebe	3
<i>Porphyrio melanotus</i>	Australasian Swamphe	3
<i>Porphyrio melanotus melanotus</i>	Southeastern Australasian Swamphe	1
<i>Psephotus haematonotus</i>	Red-rumped Parrot	1
<i>Puffinus gavia</i>	Fluttering Shearwater	4
<i>Rhipidura albiscapa</i>	Grey Fantail	5
<i>Rhipidura leucophrys</i>	Willie Wagtail	8
<i>Sericornis frontalis</i>	White-browed Scrubwren	9
<i>Spatula rhynchotis rhynchotis</i>	Australian Shoveler	1
<i>Spilopelia chinensis</i>	Spotted Dove	8
<i>Stictonetta naevosa</i>	Freckled Duck	1
<i>Stipiturus malachurus malachurus</i>	East Coast Southern Emuwren	2
<i>Strepera graculina</i>	Pied Currawong	3
<i>Sturnus vulgaris</i>	Common Starling	7
<i>Tachybaptus novaehollandiae</i>	Australasian Grebe	1
<i>Thalassarche cauta</i>	Shy Albatross	1
<i>Thalasseus bergii</i>	Great Crested Tern	31

Scientific Name	Common Name	# of records
<i>Thinornis cucullatus</i>	Hooded Plover	143
<i>Threskiornis molucca</i>	Australian White Ibis	12
<i>Threskiornis spinicollis</i>	Straw-necked Ibis	2
<i>Trichoglossus moluccanus</i>	Rainbow Lorikeet	1
<i>Tringa nebularia</i>	Common Greenshank	1
<i>Turdus merula</i>	Common Blackbird	3
<i>Vanellus miles</i>	Masked Lapwing	4
<i>Vanellus miles novaehollandiae</i>	Black-shouldered Masked Lapwing	3
<i>Zanda funerea</i>	Yellow-tailed Black Cockatoo	1
<i>Zosterops lateralis</i>	Silvereye	4
INSECTS		
<i>Acanthococcus coriaceus</i>	Gum Tree Scale	1
<i>Acrida conica</i>	Giant Green Slantface	2
<i>Agrotis infusa</i>	Bogong Moth	2
<i>Anax papuensis</i>	Australian Emperor	3
<i>Anestia ombrophanes</i>	Clouded Footman	1
<i>Anthela nicotloe</i>	Urticating Anthelid	1
<i>Apis mellifera</i>	European Honey Bee	3
<i>Archimantis sobrina</i>	Mallee Grass Mantis	1
<i>Austracris guttulosa</i>	Spur-throated Locust	1
<i>Austrolestes annulosus</i>	Blue Ringtail	1
<i>Austrolestes leda</i>	Wandering Ringtail	1
<i>Belenois java</i>	Caper White	2
<i>Callomelitta picta</i>	Painted Callomelitta	1
<i>Camponotus consobrinus</i>	Banded Sugar Ant	4
<i>Chauliognathus lugubris</i>	Plague Soldier Beetle	4
<i>Chloroclystis approximata</i>	Cherry Looper	1
<i>Chrysolopus spectabilis</i>	Botany Bay Diamond Weevil	4
<i>Ciampa arietaria</i>	Brown Pasture Looper	1
<i>Coccinella transversalis</i>	Transverse Ladybird Beetle	5
<i>Coccinella undecimpunctata</i>	Eleven-spotted Ladybird Beetle	1
<i>Conocephalus albescens</i>	whitish meadow katydid	1
<i>Cosmodes elegans</i>	Green-blotched Moth	1
<i>Crypsiphona ocularia</i>	Red-lined Looper	1
<i>Dasypodia selenophora</i>	Southern Moon Moth	4
<i>Delias aganippe</i>	Spotted Jezebel	1

Scientific Name	Common Name	# of records
<i>Delias harpalyce</i>	Imperial Jezebel	1
<i>Diamma bicolor</i>	Blue Ant	1
<i>Dindymus versicolor</i>	Harlequin Red Bug	2
<i>Diplacodes bipunctata</i>	Wandering Percher	1
<i>Dispar compacta</i>	Barred Skipper	1
<i>Echthromorpha intricatoria</i>	Cream-spotted Ichneumon	1
<i>Exaireta spinigera</i>	Garden soldier fly	1
<i>Gastrimargus musicus</i>	Australian Yellow-winged Locust	2
<i>Harmonia conformis</i>	Large Spotted Ladybird	1
<i>Hemicordulia tau</i>	Tau Emerald	2
<i>Heteronympha merope</i>	Common Brown	2
<i>Hippodamia variegata</i>	Spotted Amber Ladybird Beetle	6
<i>Hyleoides concinna</i>	Common Wasp-mimic Bee	1
<i>Iridomyrmex purpureus</i>	Southern Meat Ant	1
<i>Junonia villida</i>	Meadow Argus	1
<i>Laccotrephes tristis</i>	Australian Water Scorpion	1
<i>Lampides boeticus</i>	Long-tailed Pea-blue	3
<i>Lamprima aurata</i>	Golden Stag Beetle	2
<i>Leioproctus plumosus</i>	Plumose Leioproctus	1
<i>Leptopius duponti</i>	broad-back weevil	4
<i>Lissopimpla excelsa</i>	Orchid Dupe Wasp	1
<i>Micraspis frenata</i>	Striped Ladybird	3
<i>Miomantis caffra</i>	South African Mantis	1
<i>Myrmecia nigriscapa</i>	Black-scaped Bull ant	2
<i>Myrmecia pyriformis</i>	Inch Ant	1
<i>Myrmecia urens</i>	baby bull ant	1
<i>Nyctemera amicus</i>	Australian magpie moth	1
<i>Ocybadistes walkeri</i>	Green Grass-dart	3
<i>Orgyia anartoides</i>	Painted apple moth	1
<i>Orthorhinus cylindrirostris</i>	Elephant Weevil	1
<i>Oxycanus australis</i>	Southern Oxycanus	2
<i>Peltoschema orphana</i>	Fireblight Leaf Beetle	1
<i>Phrissogonus laticostata</i>	Apple Looper	1
<i>Physeema labyrinthica</i>	Dune Ticker Cicada	4
<i>Pieris rapae</i>	Cabbage White	10
<i>Podalonia tydei</i>	Tyde's Sand Wasp	2

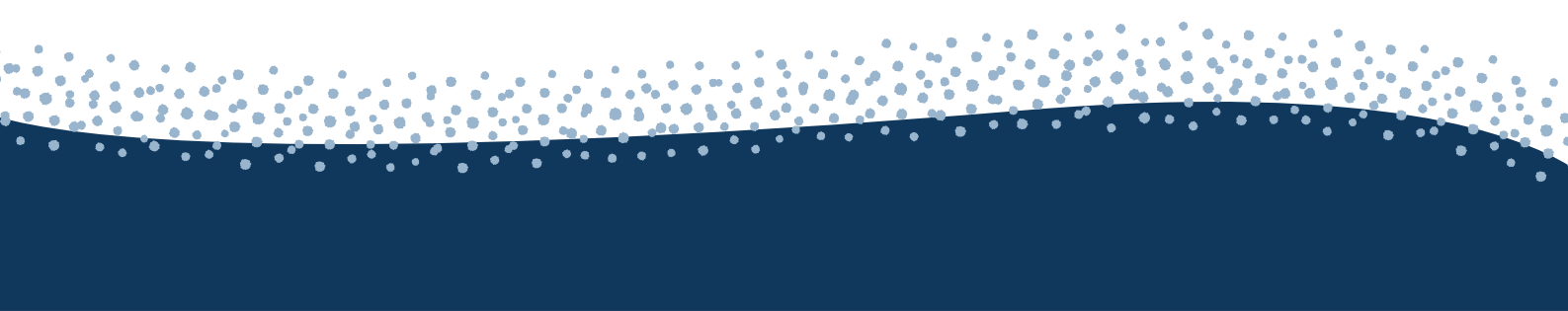
Scientific Name	Common Name	# of records
<i>Poecilometis strigatus</i>	Brown Shield Bug	3
<i>Prasinocyma semicrocea</i>	Common Gum Emerald	1
<i>Pterygophorus cinctus</i>	Bottlebrush Sawfly	1
<i>Pyrrhocoris apterus</i>	European Firebug	2
<i>Rhytidoponera metallica</i>	Green-head Ant	1
<i>Scioglyptis lyciaria</i>	white-patch bark moth	1
<i>Scopula rubraria</i>	Plantain moth	1
<i>Scutiphora pedicellata</i>	Metallic Shield Bug	1
<i>Tenodera australasiae</i>	Purple-winged Mantis	1
<i>Theclinesthes serpentata</i>	Saltbush Blue	4
<i>Trichilogaster acaciaelongifoliae</i>	Longleaf Wattle Gall Wasp	2
<i>Vanessa itea</i>	Yellow Admiral	2
<i>Vanessa kershawi</i>	Australian Painted Lady	8
<i>Zizina otis</i>	Common Grass-Blue	4
<i>Zizina otis labradus</i>	Common Grass Blue	1
MAMMALS		
<i>Arctocephalus pusillus</i>	Brown Fur Seal	3
<i>Arctocephalus pusillus doriferus</i>	Australian Fur Seal	6
<i>Balaenoptera borealis</i>	Sei Whale	5
<i>Kogia breviceps</i>	Pygmy Sperm Whale	3
<i>Mirounga leonina</i>	Southern Elephant Seal	1
<i>Mus musculus</i>	House Mouse	1
<i>Pseudocheirus peregrinus</i>	Common Ring-tailed Possum	1
<i>Rattus norvegicus</i>	Brown Rat	3
<i>Tachyglossus aculeatus aculeatus</i>	Eastern Short-beaked Echidna	5
<i>Trichosurus vulpecula</i>	Common Brushtail Possum	1
<i>Tursiops truncatus</i>	Common Bottlenose Dolphin	2
<i>Vulpes vulpes</i>	Red Fox	1
REPTILES		
<i>Amphibolurus muricatus</i>	Jacky Dragon	37
<i>Austrelaps superbus</i>	Lowlands Copperhead	2
<i>Carinascincus metallicus</i>	Metallic Coolskink	1
<i>Chelodina longicollis</i>	Eastern Snake-necked Turtle	1
<i>Christinus marmoratus</i>	Southern Marbled Gecko	1
<i>Lampropholis guichenoti</i>	Pale-flecked Garden Sunskink	1
<i>Pseudemoia entrecasteauxii</i>	Southern Grass Skink	1



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Scientific Name	Common Name	# of records
<i>Tiliqua scincoides</i>	Common Bluetongue	1
<i>Tiliqua scincoides scincoides</i>	Eastern Bluetongue	1

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APPENDIX 3. PRECINCT PRIORITISATION MATRIX

Management Site	EPBC Community	EPBC Fauna	EPBC Flora	EPBC Weighting	VROT Fauna	VROT Flora	VROT Weighting	EVC Score	Quality	Community Group Activity	Total score	Level Of Service
Barwon Estuary	2			60		6	12	16	20	0	108	High
Breamlea Spit West	1	1		34		1	2	19	20	10	85	High
Black Rock Grassland	1			30		2	4	8	16	0	58	High
Bluff Dune		1		4		3	6	10	20	10	50	High
Bancoora Dune		1		4		0	0	16	20	10	50	High
Ocean Grove West		1		4		4	8	15	12	10	49	High
Bluff headland				0		3	6	8	20	10	44	High
Ocean Grove East Dune		1		4		3	6	2	20	10	42	Medium
Breamlea Spit East		1		4		3	6	2	20	10	42	Medium
13th Beach West		1		4		2	4	9	20	0	37	Medium
13th Beach East		1		4		2	4	8	20	0	36	Medium
Black Rock Dune		1		4		0	0	10	20	0	34	Medium
13th Beach Centre		1		4		0	0	4	20	0	28	Medium
Bluff Woodland				0		1	2	5	16	0	23	Low
Ocean Grove Central Dune				0		2	4	5	12	0	21	Low
Blue Rocks Dune				0		1	2	7	12	0	21	Low
Barwon Heads Caravan Park				0		1	2	5	8	0	15	Low



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Riverview Family Caravan Park				0		1	2	5	4	0	11	Low
Breamlea Caravan Park				0		0	0	2	4	0	6	Low

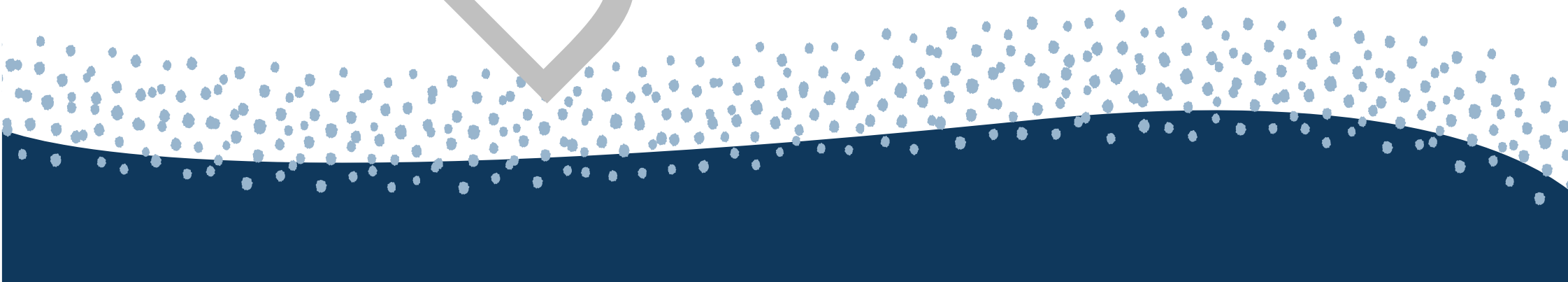
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APPENDIX 4. LEVEL OF SERVICE

Level of Service	Monitoring	General Weed Control Aims	Pest Animal Control	Volunteer Environmental Groups	Other threats
High Priority	Inspect site at least three times per year	- Treat all new and emerging weeds immediately. - Remove all mature plants from isolated infestations. - Eliminate all mature woody weeds within 5 years. - Reduce infestations of non-woody weeds appropriately.	Where required, and appropriate, implement integrated pest animal management with adjacent landholders.	- Support the efforts of volunteer environmental groups. - Encourage and assist with the planning of new projects by volunteer environmental groups as appropriate.	- Minimise impacts on biodiversity values through the prevention of: - inappropriate human access - Campfires - Illegal camping - Domestic pet access. - Rubbish dumping. - Dog faeces *Prioritise threat control at higher ranked sites over lower ranked sites.
Medium Priority	Inspect site at least twice per year	- Treat all new and emerging weeds immediately. - Remove all mature plants from isolated infestations.	Implement pest animal management in locations where pest animals are impacting biodiversity values.		

Low Priority		• Reduce cover of core weed infestations.	• Manage pest animals as part of any coordinated programs.		
	• Inspect site at least once per year	• Eliminate high threat emerging weeds. • Reduce infestations where they may impact on nearby values.	• Manage pest animals as part of any coordinated programs.	• Support the efforts of volunteer environmental groups.	

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APPENDIX 5. OBJECTIVE EVALUATION CHECKLIST

Natural Reserves staff to annually go through overall objectives and precinct objectives to rate objectives below in Table A4 as:

- Objective completed,
- Objective on track to be completed,
- Objective unlikely to be completed,
- Objective changed.

This will provide a level of understanding as to how adequately resources are meeting the proposed objectives. At the end of the strategy the objectives should be audited by a third party.

Table A4. Objectives checklist

Precinct/Issue	Objective	Objective completed?
All precincts		
Dense Shrub Competition	Two sites covering approximately 0.45 hectares will continue to be managed with project success determined by mid 2027. additional sites covering a minimum of an additional two hectares will be implemented over the next ten years	
Dune Stabilisation	Sea Wheat Grass and Marram grass will continue to be controlled at Bukareeyoo to protect the Coast Fescue population and Blue Rocks Dune. These species at this site will remain less than 5% cover.	
Change in hydrological regime of saline systems	The Barwon Coast Natural Resource Team will assist the Breamlea Coastcare Group with control of this species and collaborate with Parks Victoria to ensure a cross tenure approach is employed.	
Rabbits and hares	Current annual rabbit control program of warren fumigation, Pindone program and opportunistic shooting will continue.	
Foxes	Current ongoing fox control using PAPP, den fumigation and shooting will continue with a focus to protect the Hooded Plover.	
Domestic and Feral cats	Cat traps will be utilised when cats are reported within managed areas.	
Shifting Baseline Syndrome	Vegetation monitoring will follow the Barwon Coast Vegetation Monitoring Manual (Beacon Ecological 2026) to ensure that changes in vegetation composition is monitored over time. Barwon Coast will facilitate a community science 'bioblitz' every two years with a focus on fauna including invertebrate fauna.	
Domestic Dogs	Continued community engagement program to ensure dogs are under effective control and dog faeces collection bags are regularly available. Liaise with the City of Greater Geelong local laws to enforce dog faeces littering and dogs off lead.	
Litter	Continue the provision of bins at high visitation sites. Implement community engagement	

Precinct/Issue	Objective	Objective completed?
	program relating to the risks of litter to the environment and fauna. Continue to work with the City of Greater Geelong and issue fines where appropriate.	
Illegal rubbish dumping	Any dumped rubbish will be reported and removed immediately. Signage indicating applicable fines should be installed in locations where rubbish is regularly dumped. Continue to work with the City of Greater Geelong and issue fines where appropriate.	
Illegal Camping and Party Sites	Remove campsites when located in native vegetation and move on illegal campers in car parks.	
Hooded Plover	Barwon Coast will continue to support the Friends of the Hooded Plover with physical protection during breeding times and recommending updated dog regulations to the City of Greater Geelong to benefit Hooded Plover. Barwon Coast will continue to liaise with other local managers including the City of Greater Geelong, Surf Coast Shire, Great Ocean Road Coast and Parks Authority and Parks Victoria to collectively manage threats for this species. Fox, cat and weed control objectives also feed into protecting this species.	
Community Environmental Volunteer Groups	Environmental volunteer groups within the management area will be supported and capacity enhanced with a minimum of one contact to plan the following year and assistance including attendance at working bees as required. An annual working bee will be facilitated by Barwon Coast within the Thirteenth Beach area to try and foster a community group in this area.	
Ocean Grove Dunes		
Revegetate Moonah Woodland	Monitor and maintain existing revegetation areas.	
Myrtle-leaf Milkwort – Signs of control with majority of mature plants removed. Scattered across site	Effectively eradicate (remove all mature plants)	
Italian Buckthorn – Isolated juveniles		
Sallow Wattle – Isolated juveniles		
Bridal Creeper – Scattered across site on rear dunes.	Control annually	
Sea Spurge, Purple Groundsel (Very low cover noted)		
Dolichos Pea – Scattered across site in rear dunes.		
Sea Rocket – Sporadic along foredune		
Panic Veldt Grass – Some infestations in depressions	Contain to current levels	
Sea Wheat Grass – Consistent cover along primary foredune.		
Marram Grass – Sporadic along foredune		
Ocean Grove Main Beach		
Myrtle-leaf Milkwort – Signs of control with majority of mature plants removed. Scattered across site.	Effectively eradicate (remove all mature plants)	

Precinct/Issue	Objective	Objective completed?
Italian Buckthorn – Isolated juveniles.		
Sallow Wattle – Isolated juveniles.		
Norfolk Pine, Monterey Cypress – Mature trees adjacent to car parking areas.	Remove as trees decline and replace with locally indigenous species.	
Bridal Creeper – Scattered across site on rear dunes.	Control annually	
Sea Spurge, Purple Groundsel (Very low cover noted)		
Dolichos Pea – Scattered across site in rear dunes.		
Sea Rocket – Sporadic along foredune		
Buffalo Grass – Some isolated infestations	Control annually	
Sea Wheat Grass – Consistent cover along primary foredune.		
Marram Grass – Low cover within this precinct.		
Bukareeyoo		
Myrtle-leaf Milkwort – Signs of control with majority of mature plants removed. Scattered across site	Effectively eradicate (remove all mature plants)	
Italian Buckthorn – Isolated juveniles.		
Sallow Wattle – Isolated juveniles.		
Bridal Creeper – Scattered across site on rear dunes.	Control annually	
Sea Spurge, Purple Groundsel (Very low cover noted)		
Dolichos Pea – Scattered across site in rear dunes.		
Sea Rocket – Sporadic along foredune		
False Capers – Some patches of heavy infestation	Contain to current infestations	
Couch, Panic Veldt Grass, Rats Tail Grass, Cocksfoot – Some infestation areas	Contain to current infestations	
Sea Wheat Grass – Consistent cover along primary foredune.	Control annually	
Marram Grass – Isolated infestations		
Riverview Family Caravan Park		
Various woody weeds	Monitor for woody weed incursions, particularly on the southwestern boundary where it intersects with native vegetation.	
Barwon River Estuary		
Myrtle-leaf Milkwort – Juveniles present across site (west bank)	Effectively eradicate (remove all mature plants)	
Italian Buckthorn – Isolated juveniles		
African Boxthorn – Isolated individuals		
Tuart – Mature amenity trees around Frank Ellis Reserve playground	Remove as trees decline and replace with locally indigenous species.	
Bridal Creeper – Isolated infestations	Control annually	
False Capers – Isolated infestations		
Panic Veldt Grass – Some infestation areas	Control annually	
Sea Wheat Grass – Consistent cover along river		
The Barwon Bluff (Bluff Woodland)		
Myrtle-leaf Milkwort – Isolated juveniles.	Effectively eradicate (remove all mature plants)	
Italian Buckthorn – Isolated juveniles.		
Sallow Wattle – Isolated juveniles		
Black Flag – Isolated infestations	Effectively eradicate (less than 100 square metres)	
Bridal Creeper – High cover across site	Control annually	
Barwon Heads Caravan Park		
Various woody weeds	Monitor for woody weed incursions, particularly on the southern boundary	
Bridal Creeper	Control annually	
The Barwon Bluff (Bluff Dune)		
Myrtle-leaf Milkwort – Signs of control within site	Effectively eradicate (remove all mature plants)	

Precinct/Issue	Objective	Objective completed?
Mirror Bush – Small infestation in east of site.		
Coast Banksia – Small infestation of mature plants		
Bridal Creeper – Scattered across site on rear dunes.	Control annually	
Carpet Weed – Single infestation in dunes.	Effectively eradicate (<100 square metres)	
Fairy Crassula – Single infestation noted.		
Buffalo Grass – Infestation in foredune.	Effectively eradicate (<100 square metres)	
Marram Grass – Isolated infestation in Coastal Dune Scrub		
The Barwon Bluff (Bluff Headland)		
Revegetate Moonah Woodland	Monitor and maintain existing revegetation areas.	
Myrtle-leaf Milkwort – Isolated juveniles present across site	Effectively eradicate (remove all mature plants)	
Italian Buckthorn – Isolated juveniles.		
Cyclops Wattle – Isolated individuals.		
Mirror Bush– Isolated juveniles mostly in inaccessible locations on cliffs	Effectively eradicate (remove all mature plants) plants that are safely accessible.	
Bridal Creeper – Scattered across site	Control annually	
False Capers – Noted small infestation near path.	Effectively eradicate (less than 100 square metres)	
Black Flag – Isolated infestations		
Buffaloe Grass – Two small infestations in west of site	Effectively eradicate (less than 100 square metres)	
Thirteenth Beach (East Dune)		
Myrtle-leaf Milkwort – Isolated juveniles	Effectively eradicate (remove all mature plants)	
Italian Buckthorn – Isolated juveniles.		
Boneseed – Isolated individuals		
Boxthorn – Isolated individuals		
Acacia Cyclops – Isolated individuals		
Mirror Bush – isolated individuals		
Bridal Creeper – Scattered across site on rear dunes.	Control annually	
Sea Spurge, Purple Groundsel (very low cover noted)		
Sea Rocket – Sporadic along foredune		
Dolichos Pea – Scattered across site in rear dunes.		
False Capers – Some patches of heavy infestation	Effectively eradicate (less than 100 square metres)	
Gazania – Small infestation at bottom of Beacon steps.		
Blue Periwinkle – Small infestation on Stephens Parade		
Couch, Panic Veldt Grass, Buffalo Grass,– Some infestation areas	Contain	
Sea Wheat Grass – Consistent cover along primary foredune.		
Marram Grass – Isolated infestations	Effectively eradicate north of 13th Beach Road (less than 100 square metres)	
Thirteenth Beach (Central Dune)		
Maroonhood and Greenhood Pterostylis spp., Spider Orchids Caladenia spp. and Hemet Orchids Corybas spp. present in rear dune	Monitor orchid populations and undertake targeted weeding if required.	
Myrtle-leaf Milkwort – Isolated juveniles	Effectively eradicate (remove all mature plants)	
Tuart – Small infestation in west		
Italian Buckthorn – Single infestation in centre		
Bridal Creeper – Scattered across site on rear dunes.	Control annually	
Sea Spurge, Purple Groundsel (Very low cover noted)		
Sea Rocket – Sporadic along foredune		
Buffalo Grass – Small infestations in west	Effectively eradicate (less than 100 square metres)	

Precinct/Issue	Objective	Objective completed?
Sea Wheat Grass – Consistent cover along primary foredune.	Contain	
Marram Grass – Isolated infestations		
Thirteenth Beach (West Dune)		
Myrtle-leaf Milkwort – Isolated juveniles	Effectively eradicate (remove all mature plants)	
Mix of planted woody weeds moderate infestations	Contain	
Bridal Creeper – Scattered across site on rear dunes.	Control Annually	
Sea Spurge, Purple Groundsel (Very low cover noted)		
Sea Rocket – Sporadic along foredune		
Panic Veldt Grass– Some infestation areas	Contain	
Sea Wheat Grass – Sporadic cover along primary foredune.		
Marram Grass – Isolated infestations		
Agapanthus – Small infestation	Effectively eradicate (less than 100 square metres)	
South African Daisy – Small infestation		
Agave – Small Infestation		
Black Rock Grassland		
Boxthorn – Isolated individuals	Effectively eradicate (remove all mature plants)	
Sea Spurge, Purple Groundsel (Very low cover noted)	Control annually	
Kikuyu – Some infestation areas	Contain	
Marram Grass – Large infestations	Reduce cover.	
Black Rock Grassland		
Boxthorn – Isolated individuals	Effectively eradicate (remove all mature plants)	
Mirror Bush -Isolated individuals		
Kikuyu and Cocksfoot – Some infestation areas within Coastal Tussock Grassland	Effectively eradicate (less than 100 square metres) within areas of Coastal Tussock Grassland.	
Serrated Tussock – Small infestation in west.	Effectively eradicate (less than 100 square metres)	
Black Rock Dune		
Sea Wheat Grass – Consistent cover along primary foredune.	Contain	
Marram Grass – Isolated infestations		
Serrated Tussock – Two small infestations in east	Effectively eradicate (less than 100 square metres)	
African Daisy– Single infestation in east		
Cotoneaster – Small Infestation in east		
Gorse – Single infestation in north		
Blue Rocks Dune		
African Boxthorn – Some infestations in north. Previously controlled.	Effectively eradicate (remove all mature plants)	
Dolichos Pea – scattered west of Surf Club Lane	Control annually	
Bridal Creeper – Scattered west of Surf Club Lane		
Spear Thistle– Sporadic in north		
Panic Veldt Grass – Small infestations west of Surf Club Lane	Contain to current levels	
Sea Wheat Grass – Consistent cover along primary foredune.		
Marram Grass – Large, dense infestation in west of site. Sporadic along foredune.		
Breamlea Caravan Park		
Various woody weeds	Monitor and control woody weed incursions.	
Bancoora Dune		
African Boxthorn	Effectively eradicate (remove all mature plants)	
Bridal Creeper – Scattered west of Surf Club Lane.	Control annually	
Spear Thistle – Sporadic in north.		
Dolichos Pea – Scattered west of Surf Club Lane.		

Precinct/Issue	Objective	Objective completed?
Panic Veldt-grass – small infestations west of Surf Club Lane	Contain to current levels.	
Sea Wheat Grass – Consistent cover along foredune.		
Marram Grass – Large dense infestation in west of site. Sporadic along foredune.		
Breamlea Spit East		
Myrtle-leaf Milkwort – Scattered across site	Effectively eradicate (remove all mature plants)	
Bridal Creeper – Scattered across site on rear dunes.	Control annually	
Sea Spurge, Purple Groundsel (Very low cover noted)		
Dolichos Pea – Scattered across site.	Control annually	
Buffaloe Grass, Panic Veldt-grass – Some isolated infestations		
Sea Wheat Grass – Consistent cover along foredune.		
Marram Grass – Scattered along foredune and some small infestations within dune system.	Effectively eradicate (less than 100 square metres)	
African Boxthorn – Single infestation in centre.		
Cape Ivy – Single infestation in west		
Sweet Pittosporum – Single infestation in centre		
Aonium – Single infestation in centre		
Breamlea Spit West		
Myrtle-leaf Milkwort – Scattered across site	Effectively eradicate (remove all mature plants)	
Italian Buckthorn – Scattered in west of site	Control annually	
Bridal Creeper – Isolated infestations		
Dolichos Pea – Scattered across site.	Control annually	
Panic Veldt-grass, Buffaloe Grass, Kikuyu – Some isolated infestations		
Sea Wheat Grass – Consistent cover along foredune.	Effectively eradicate (less than 100 square metres)	
Marram Grass – Scattered along foredune and some small infestations within dune system.		
African Boxthorn – Single infestation in north.		

APPENDIX 6. MATURE TREE STRATEGY

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