



# **MEELUP REGIONAL PARK**

## **MANAGEMENT PLAN**

**2026**



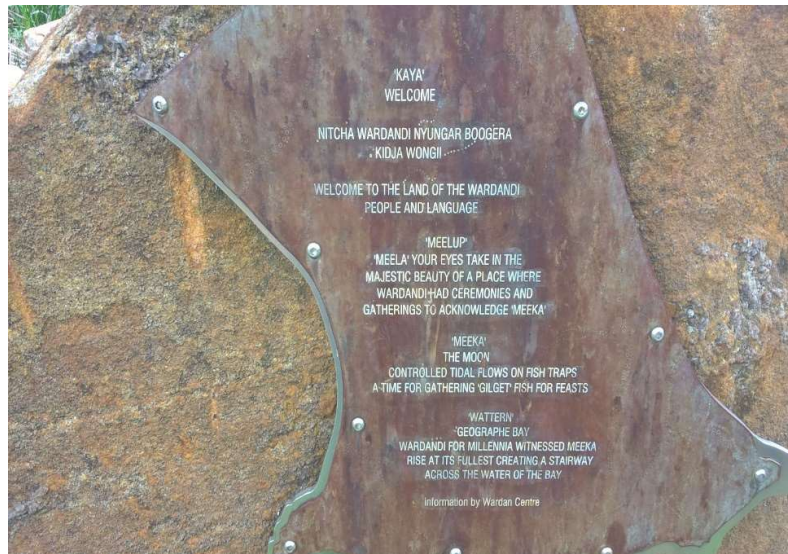
## ACKNOWLEDGEMENTS

A large number of people have assisted with the preparation of this Plan, in particular members of the Meelup Regional Park Management Committee, the Department of Biodiversity Conservation and Attractions, and City of Busselton staff.

The traditional owners of Meelup Regional Park, the Wadandi people, maintain a strong connection to their traditional country in the South West through identity and place, family networks, spiritual practice, resource gathering and natural resource management. A significant number of sites important to Wadandi people are located within the South West Capes area and within Meelup Regional Park. Within the Park, place names such as Ngari, Wannang, Meeka and Walgermia are of Aboriginal origin and carry meaning and significance. The importance of the cultural heritage values in Meelup Regional Park and the important knowledge that Wadandi people hold is recognised and respected.

The Park has significant European history as a place of recreation and resources. The Park continues to be very highly valued by the local community and wider region today.

**Photo 1: Commemorative plaque at Meelup Beach**



## LIST OF ABBREVIATIONS

|                   |                                                                                |
|-------------------|--------------------------------------------------------------------------------|
| BC Act 2016       | Biodiversity Conservation Act 2016 (WA)                                        |
| CALM Act 1984     | Conservation and Land Management Act 1984 (WA)                                 |
| The City          | City of Busselton                                                              |
| The Committee     | The Meelup Regional Park Management Committee                                  |
| DBCA              | Department of Biodiversity, Conservation and Attractions                       |
| DFES              | Department of Fire and Emergency Services                                      |
| DoH               | Department of Health                                                           |
| DoTMI             | Department of Transport and Major Infrastructure                               |
| DPIRD             | Department of Primary Industries and Regional Development                      |
| DWER              | Department of Water and Environmental Regulation                               |
| EPA               | Environmental Protection Authority                                             |
| EPBC Act 1999     | Environmental Protection and Biodiversity Conservation Act 1999 (Commonwealth) |
| EP Act 1986       | Environmental Protection Act 1986                                              |
| FoM               | Friends of Meelup Regional Park Incorporated                                   |
| GSWA              | Geological Survey of Western Australia                                         |
| KKAC              | Karri Karrak Aboriginal Corporation                                            |
| NCMP              | Ngari Capes Marine Park                                                        |
| SWALSC            | South West Aboriginal Land and Sea Council                                     |
| WC                | Water Corporation                                                              |
| The Working Group | The Meelup Regional Park Working Group                                         |

# MEELUP REGIONAL PARK

## MANAGEMENT PLAN

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## **PART A. INTRODUCTION**

### **1. PREFACE**

Meelup Regional Park (the Park) is a key natural, community and cultural resource in the South West of Western Australia. The City of Busselton has management over the Park and works with the community through the Meelup Regional Park Committee/Working Group and Friends of Meelup. Both the City and community are working towards closer collaboration with Wadandi cultural custodians in both management and on ground works in the Park.

The Wadandi People (Saltwater People) are the traditional owners of Meelup Regional Park. In 2022, the City of Busselton commissioned the Undalup Association to develop a Healthy Country Plan (HCP).

The Meelup Healthy Country Plan identifies actions and makes cultural management recommendations which have informed both this Management Plan and ongoing decisions made by the City and Meelup Regional Park Committee. The recommendations from the HCP seek to balance natural area management and cultural heritage with community use and tourism. Collaborating with cultural custodians in decision-making and on ground action is a key theme of the HCP.

Note: Wadandi Cultural Conservation Corp (WCCC) is the name for the Undalup Rangers.

Appendix 1 lists the current status of specific actions recommended in the HCP. Further recommended actions are ongoing.

### **2. OVERVIEW**

Meelup Regional Park is a 574 hectare Class A reserve vested in the City of Busselton for the purpose of conservation and recreation. The Park is managed in collaboration with a City appointed Meelup Regional Park Management Committee and Working Group and Wadandi cultural custodians.

Meelup Regional Park (the Park) is located on Cape Naturaliste in the south-western corner of Western Australia, on Wadandi *Boodja* (land), and is situated between the townsites of Dunsborough, Eagle Bay and Bunker Bay. The Park has an 11.5 kilometre coastline which intersects with the Ngari Capes Marine Park and Geographe Bay. The Park has an undulating surface rising to 100 metres above sea level, with ephemeral waterways, a diverse flora and predominantly pristine vegetation (Figure 1).

The primary aim of this Management Plan is to ensure that the significant natural and cultural values of the Park are protected. Key threats to the Park's flora and fauna include dieback and other plant diseases, introduced and feral animals, weeds and fire. The Park is experiencing significant growth in visitation due to population growth in surrounding areas and increasing tourism. The management of threats associated with visitor use and recreation, and maintenance of the Park's unique visual landscape, is a key component of this Plan.

The Park has a rich Aboriginal heritage and continues to be an important cultural place for the Wadandi people. The name 'Meelup' references the Wadandi words '*Meela*' ('eyes' or 'to see') and '*Meeka*' (moon). It is often called "place of the moon rising" because the full moon appears to rise out of the sea on a few days of the year.

Other areas within the Park recognised for their historic heritage values include the whaling station which was located at Castle Bay.



**FIGURE 1: LOCALITY MAP**

This Management Plan adopts the style of Management Plans produced by the Department of Biodiversity, Conservation and Attractions (DBCA) for reserves elsewhere in the State of Western Australia.

This Plan replaces the Meelup Regional Park Interim Management Plan 2022.

### **3. MANAGEMENT PLAN REVIEW PROCESS**

The Management Plan is to be reviewed regularly in consultation with the community and key stakeholders.

### **4. TERM OF THIS PLAN**

The Management Plan will guide management of the Park for a period of 10 years after which time the Management Plan will be reviewed and amended as required to ensure the information in the Management Plan is current. This Management Plan will remain in force until a new Plan is approved by the Minister for Lands.

### **5. REGIONAL CONTEXT**

The South West is known for its natural assets including Meelup Regional Park and Leeuwin-Naturaliste National Park, forests and beaches, diversity of nature-based recreational activities, its agricultural and horticultural assets, wineries and splendid coastal vistas.

Both Meelup Regional Park and Leeuwin-Naturaliste National Park serve as important gateways to the Ngari Capes Marine Park. These drawcards coupled with a mild climate attract more than 1.6 million overnight visitors each year to the City of Busselton and Shire of Augusta Margaret River region (Margaret River Busselton Tourism Association 2025).

## **6.KEY VALUES**

Meelup Regional Park key values include:

### **Natural Environment**

- Within one of 34 international biodiversity hotspots and one of 15 national terrestrial biodiversity hotspots.
- One listed threatened ecological community and diverse vegetation complexes.
- A diverse flora, with 480 native species recorded including declared rare flora species and disjunct species and populations that warrant further investigation
- Well represented fauna habitats.
- A diverse fauna and threatened species.

### **Cultural**

- A cultural landscape of immense importance to the Wadandi people. There are significant sites within the Park.
- Non-Aboriginal cultural heritage and historic sites associated with the French exploration of the south-west coast, and the whaling and fishing industries.

### **Visual Landscape**

- An exceptional landscape with stunning beaches, granite headlands, rocky outcrops, natural bushland and views over Geographe Bay afforded by the steep topography.
- Uniquely peaceful bays and coves facing northeast and sheltered from prevailing south-westerly winds.

### **Recreation**

- A significant recreation destination within the State, and the second most visited destination within the City of Busselton.
- A terrestrial environment that provides opportunities for a wide range of predominantly coastal recreation activities.
- A trail network that provides for both pedestrians and mountain bikes riders.
- Surfing locations and shore-based recreational fishing experiences from sandy beaches and rocky headlands.
- Access to marine-based activities in the adjacent Ngari Capes Marine Park.

### **Community**

- An important area for the local community, contributing to their way of life, sense of identity and enjoyment of the natural environment.
- Opportunities for community involvement in activities and experiences involved with nature conservation and visitor services.
- Opportunities for involvement of the community through the Meelup Regional Park Management Committee, Friends of Meelup and Meelup Volunteers.

### **Education and Research**

- Opportunities for visitors and educators to interpret and acquire knowledge regarding natural and cultural values of the Park.
- Geological features that give unique insights into the natural history of the area.
- Opportunities for research and monitoring of natural, recreation and cultural values.

## 7. FORMAT OF THIS DOCUMENT

The document is divided into the following parts:

**Part A Introduction**, in which the key values of the Park and the context of the Plan are presented.

**Part B Management Directions and Purpose**, in which the legal, regulatory and planning context is introduced and management framework for the Park is outlined.

**Part C Managing the Natural Environment**, in which the natural values are presented along with the threats to those values, and management for their protection.

**Part D Managing Cultural Heritage**, which examines the cultural and historic values of the Park, and how they can be identified and preserved.

**Part E Managing Recreation and Visitor Use**, in which the acceptable recreational uses of the Park are prescribed and management requirements to mitigate impacts associated with visitor use are outlined.

**Part F Managing Resource Use**, in which the Park's natural resources are outlined together with management requirements that are compatible with and enhance the Park's key values.

**Part G Involving the Community**, which outlines the mechanisms by which the community is involved in the management of the Park.

**Part H Research**, which outlines the scientific significance of the Park and describes the focus of future research priorities.

Parts A to H each include a summary of the guiding principles used to develop this Management Plan. The Plan focuses on the key management issues and outlines a management response to these key issues through the development of management objective(s) and implementation of appropriate management actions and strategies.



**PHOTO 2: MEELUP REGIONAL PARK - VIEW TOWARDS DUNSBOROUGH**

## **PART B. MANAGEMENT DIRECTIONS AND PURPOSE**

### **8. VISION**

The vision for Meelup Regional Park is:

*To manage Meelup Regional Park for conservation and environmental enhancement and allow recreation and other uses of the Park to occur to the extent that they do not impair the conservation values of the Park.*

### **9. STRATEGIC GOALS**

The overarching strategic management of Meelup Regional Park links to Environment Objective 6 of the City of Busselton Council Plan 2024-2034 (City of Busselton, 2024) to:

*Care for and enhance our natural areas and habitats, and*

*Oversee management of Meelup Regional Park as a key strategic reserve, in accordance with the Meelup Regional Park Management Plan*

A summary of the key strategies identified in the Management Plan are:

#### **Conservation**

- a) Conserve all native plant and animal species and communities and the natural processes that sustain them.
- b) Work with Wadandi custodians to conserve the living Aboriginal heritage of the Park.

- c) Conserve the non-Aboriginal heritage of the Park, including historical and archaeological sites.
- d) Conserve the Park's outstanding visual landscape values.

#### **Recreation**

- a) Manage recreation to minimise negative impacts on the Park's environmental and cultural values.

#### **Commercial**

- a) Allow appropriate commercial uses to occur within the Park that are consistent with the Park values and management objectives.

#### **Research and monitoring**

- a) Facilitate scientific research to improve management of the natural, cultural, social management aspects and threats to the Park.

#### **Education**

- a) Promote community stewardship of the Park through active community engagement, emphasising the Park's special natural, cultural, visual landscape, recreation, community and education and research values.

#### **Integration of management**

- a) Maintain and develop integrated and coordinated management arrangements between the City, Wadandi custodians, relevant government agencies and community.

### **10.INTERNATIONAL PERSPECTIVE**

The International Union for the Conservation of Nature (IUCN) defines protected area management categories, based on primary management objectives. Meelup Regional Park most closely equates to Category II National Park, a protected area managed mainly for ecosystem protection and recreation.

These protected areas are large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities. The primary objective is to protect natural biodiversity along with its underlying ecological structure and supporting environmental processes, and to promote education and recreation (Department of Environment n.d.).

### **11.LEGISLATIVE FRAMEWORK AND POLICY**

#### **State legislation**

##### *Land Administration Act 1997 (LA Act 1997)*

The LA Act 1997 provides for the administration of Crown land. Under the LA Act 1997, the Minister for Lands may place by way of a management order the care, control and management of a reserve with a management body. A management order for the purpose of 'conservation and recreation' has been placed with the City of Busselton. Under section 49 of the LA Act 1997, the City may submit to the Minister a plan for the development, management and use of Meelup Regional Park for the purpose of the management order.

##### *Local Government Act 1995 (LG Act 1995)*

The LG Act 1995 enables the City of Busselton to establish the Meelup Regional Park Committee, which

operates under the governance arrangements and terms of reference determined by the City Council.

*Conservation and Land Management Act 1984 (CALM Act 1984)*

National Parks are reserves vested in the WA Conservation Commission and are managed under the CALM Act 1984, subsidiary regulations and associated policy. While not directly applicable, the CALM Act 1984 provides guidance on the governance of natural areas and management for the purposes of conservation and recreation.

*Biodiversity Conservation Act 2016 (BC Act 2016)*

The BC Act 2016 provides for the protection of biodiversity, including native species, habitats, ecological communities, genes, ecosystems and ecological processes.

*Environmental Protection Act 1986 (EP Act 1986)*

The EP Act 1986 provides for an Environmental Protection Authority for the prevention, control and abatement of pollution and environmental harm for the conservation, preservation, protection, enhancement and management of the environment and for matters incidental to or connected with the foregoing.

*Aboriginal Heritage Act 1972 (AH Act 1972)*

The AH Act 1972 provides a framework for the recognition, protection, conservation and preservation of Aboriginal cultural heritage while recognising the fundamental importance of Aboriginal cultural heritage to Aboriginal people.

*Biosecurity and Agriculture Management Act 2007 (BAM Act 2007)*

The BAM Act 2007 prevents new animal and plant pests and diseases from entering Western Australia and manages the impact and spread of those pests already present in the State.

*Bush Fires Act 1954 (BF Act 1954)*

The BF Act 1954 makes provision for diminishing the dangers resulting from bush fires and for the prevention, control and extinguishment of bush fires. This Management Plan is required to ensure adequate fire management is provided in accordance with the BF Act 1954.

## **Commonwealth legislation**

*Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act 1999)*

The EPBC Act 1999 is a Commonwealth Act applicable to Meelup Regional Park due to the presence of listed endangered and threatened species and vegetation community in the Park and matters of National Environmental Significance (NES) protected under the EPBC Act 1999. Actions that have, or are likely to have, a significant impact on matters of NES may be referred to the Commonwealth Government Minister for the Environment for assessment and when appropriate, the making of a determination under the EPBC Act 1999.

## **Local laws**

Under the LG Act 1995, the City of Busselton may make Local Laws for the management and regulation of certain activities throughout the City district, which may apply to activities within the Park.

## **Policies**

*State Planning Policy 6.1: Leeuwin-Naturaliste Ridge (2003)*

The Policy provides a strategic framework for the Leeuwin Naturaliste Ridge by providing greater vision, guidance and certainty of land use within the Policy area. It recognises the need to protect the

unique ecological, social and landscape values and character of the Policy area. The Policy clarifies the priority of conservation in the decision making processes.

Meelup Regional Park is allocated the status of “Conservation Reserve”, and as such is subject to Policy LUS 2.5 - Conservation Reserves (Existing and Proposed) which states:

*“Maintaining or enhancing the conservation and landscape values within existing and proposed Conservation Reserves will be the primary determinant in decision-making on proposals for land use, subdivision or development within these areas.”*

### **Strategic Plans**

The Environment Strategy 2016 – 2021, integrates and aligns with the City’s strategies, plans and programmes and identifies with community objectives through transparent, accountable community engagement and reporting processes. The Environment Strategy 2016 – 2021, outlines the City’s response to local environmental pressures through the implementation of environmental actions and strategies. The implementation of this Meelup Regional Park Management Plan will help to fulfil the provisions of the Environment Strategy 2016 – 2021.

The Local Environmental Planning Strategy 2011, is part of the City’s planning framework and focuses on the key environmental issues relating to development and land use planning. Development proposals for the Park, although rare, do occur, and this document provides guidance to the City on key environmental matters pertaining to land use and development.

## **12.LAND TENURE AND CLASSIFICATION**

Reserve tenure is usually applied to land which because of its intrinsic community value should be preserved and maintained for the benefit of present and future generations. This is primarily because of its natural resources, its environmental, recreation, historical, social or cultural significance, or because it has special value for present or future generations (DoL 2013).

Meelup Regional Park (Reserve 21629) is an ‘A Class’ reserve gazetted in May 1993 for the purpose of ‘Conservation and Recreation’, with a formal management plan endorsed by the then Shire of Busselton Council and approved by the Minister for Lands pursuant to section 49 of the LA Act 1997. The Park was amalgamated from six separate reserves and currently comprises 16 lots.

## **13.MANAGEMENT FRAMEWORK**

### **Meelup Regional Park Management Committee**

Following creation of the Park in 1993, the then Shire of Busselton Council formed a Meelup Regional Park Management Committee pursuant to sections 5.8 and 5.9(2) (d) of the LG Act 1995. The key purpose of the Committee is to:

- Assist and advise the Busselton City Council with the management and promotion of the Park.
- Ensure that the full range of issues relevant to the making of decisions about the management and promotion of the Park are considered, including environmental, amenity, recreational, community, social, economic and financial considerations.
- To build and maintain productive working relationships between the Council, City Officers, Wadandi community, volunteers and users of the Park, as well as other stakeholders.

In accordance with the City's governance arrangements for Meelup Regional Park, the Committee may undertake a wide range of management activities including:

- Provide advice and/or recommendations to the City Council, on the strategic and operational management of the Park.
- Prepare and prioritise plans and Park maintenance activities.
- Coordinate conservation measures and protection of the Park.
- Plan, coordinate and manage in accordance with the City Council's budget allocation for Park management.
- Identify external funding opportunities to supplement the budget.
- Facilitate volunteer contributions to the management and maintenance of the Park.
- Liaise with government agencies, and other stakeholders on matters relating to the management of the Park.
- Educate the wider community on Park issues and management activities.
- Instigate research relevant to Park management.

## Resourcing

The City provides annual funding for Park operations and maintenance, which may be supplemented by grant funding. Community volunteers and the FoM, provide a significant and valuable resource, and volunteers undertake a wide range of maintenance projects and activities in the Park.

The City provides technical and administrative management support to the Committee and implements management activities including coordination of research, capital works and the ongoing maintenance of the natural environment, public areas and constructed assets including roads and buildings.

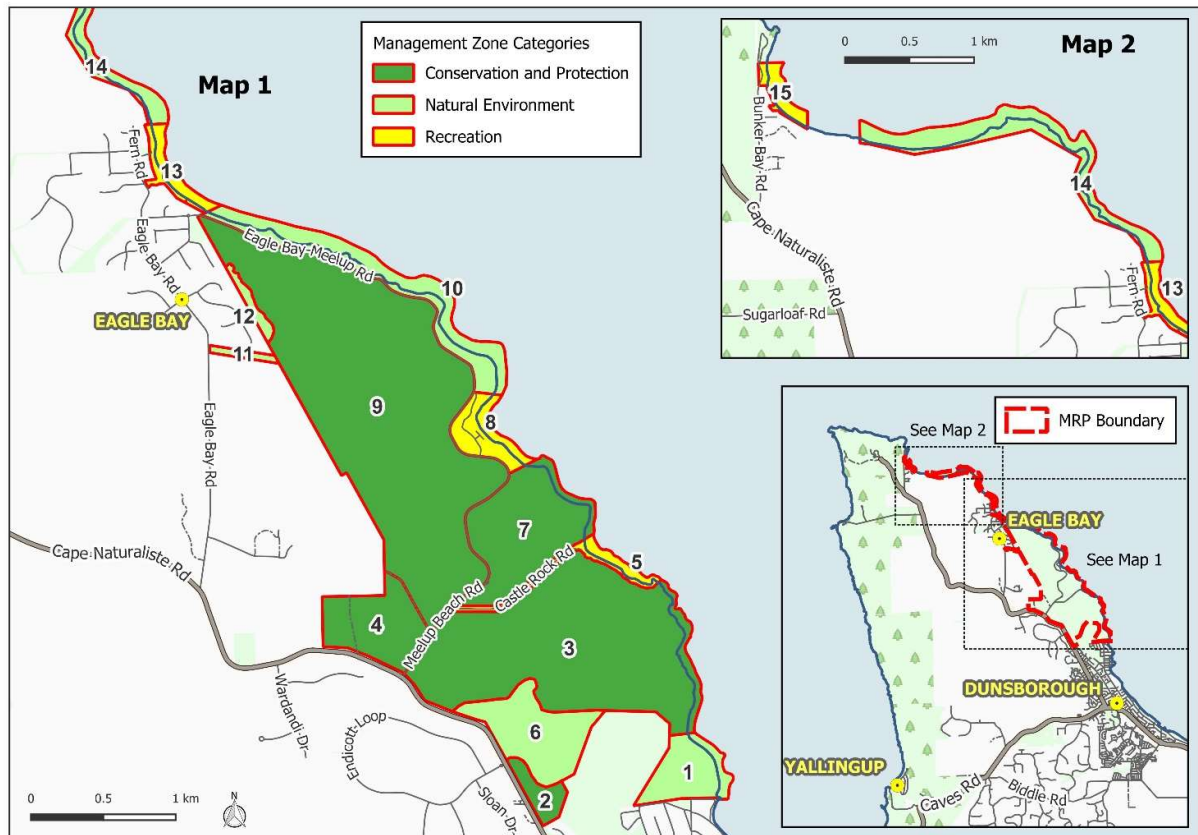
| Section 13 - Management Framework                                                  |                                                                                                                                                               |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objective 1: To provide a clear framework for Park management and decision making. |                                                                                                                                                               |
| Action No                                                                          | Management Action                                                                                                                                             |
| 1.1                                                                                | Maintain effective and efficient governance and management arrangements for the administration and implementation of this Plan.                               |
| 1.2                                                                                | Maintain direct community involvement in the on-going management of the Park through a City of Busselton appointed Meelup Regional Park Management Committee. |

## 14.MANAGEMENT ZONES

Categorisation of Management Zones will provide a spatial differentiation of protected natural areas and establish a framework for protection of conservation values, provision of appropriate recreation and, indicate the priority management objectives and levels of management required in each unit (Figure 2). The Management Zone categories developed for this Management Plan has been adapted from a widely applied system in Western Australia, with the following three categories applicable to the Park (Table 1).

1. Conservation and Protection (CP) areas have high conservation significance and conservation is the priority. Recreation is to be minimised and public access restricted. No new trails or other access are to be constructed and existing access may be closed.
2. Natural Environment (NE) areas are of high conservation significance. The protection of natural values is the highest priority for management, however appropriate nature-based recreational use is encouraged and catered for.

3. Recreation (R) areas are high use areas that experience the highest visitor numbers. Recreation areas have the highest level of visitor facilities and infrastructure. Conservation of natural values remains the highest priority and is pivotal to the area's recreational appeal.



**FIGURE 2: MANAGEMENT ZONES**

The evaluation process for the identification of Management Zones within the Park considered the following attributes:

- The conservation values within the Park, including threatened and significant flora, fauna and vegetation communities
- Existing use and recreation values
- Current dieback status and risk of infection
- Existing roads, firebreaks and trails
- Existing level of access and facilities
- Appropriate level of management intervention.

| Section 14 - Management Zones                                                                                                                                                          |                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>Objective 2: To implement a management scheme that provides for protection of areas of conservation and cultural significance, appropriate recreation and management responses.</b> |                                                                                                                             |
| Action No                                                                                                                                                                              | Management Action                                                                                                           |
| 2.1                                                                                                                                                                                    | Ensure Park management planning and management activity decisions are appropriate to the Park's Management Zone categories. |
| 2.2                                                                                                                                                                                    | Review Management Zone categories as understanding of the Park's environment develops.                                      |

**TABLE 1: MANAGEMENT ZONES**

| Zone #                                                                                 | Category & Description                                                           | Values                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CSA- Culturally Sensitive Area</b> as identified in the Meelup Healthy Country Plan |                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>1</b>                                                                               | <b>Natural Environment</b><br>Dunsborough to Curtis Bay                          | <b>Conservation Values:</b> Declared Rare Flora (DRF), Threatened Ecological Communities (TEC), significant fauna habitat, Wilyabrup vegetation complex, significant vegetation<br><b>Phytophthora dieback:</b> Infested or Unprotectable<br><b>Recreational Values:</b> Meelup Coastal trail, beach access, Bike trails<br><b>Cultural Values:</b> does not contain specific CSA<br><b>Fire Management:</b> mulch break at Curtis Bay utilised to create fire cell adjacent to Dunsborough                                                       |
| <b>2</b>                                                                               | <b>Conservation Protection</b><br>Dunsborough Golf Course to Cape Naturaliste Rd | <b>Conservation Values:</b> DRF, Wilyabrup vegetation complex, significant fauna habitat<br><b>Phytophthora dieback:</b> Infested<br><b>Recreational Values:</b> firebreaks used to access mountain bike trails<br><b>Cultural Values:</b> does not contain a specific CSA<br><b>Fire Management:</b> fire cell adjacent to Dunsborough, boundary firebreaks                                                                                                                                                                                      |
| <b>3</b>                                                                               | <b>Conservation Protection</b><br>Curtis Bay to Castle Bay                       | <b>Conservation Values:</b> DRF, priority flora, TEC, Wilyabrup vegetation complex, significant vegetation, creekline vegetation, significant fauna habitat<br><b>Phytophthora dieback:</b> Infested creekline, large portions of Uninfested vegetation<br><b>Recreational Values:</b> Meelup Coastal Trail, ex-Whale Lookout Trail closed<br><b>Cultural Values:</b> CSA at the Coastal Trail/Whale Lookout Trail intersection<br><b>Fire Management:</b> single fire cell, no boundary or internal firebreaks, road boundary with Castle Bay Rd |
| <b>4</b>                                                                               | <b>Conservation Protection</b><br>Burton Rd to Sheens Rd                         | <b>Conservation Values:</b> DRF, significant vegetation.<br><b>Phytophthora dieback:</b> largely Infested<br><b>Recreational Values:</b> N/A, access to private properties<br><b>Cultural Values:</b> contains a CSA at the Coastal Trail/Whale Lookout intersection<br><b>Fire Management:</b> firebreak at boundary between adjacent properties                                                                                                                                                                                                 |
| <b>5</b>                                                                               | <b>Recreation</b><br>Castle Bay                                                  | <b>Conservation Values:</b> Dolugup Brook creek line mouth, Wilyabrup vegetation complex<br><b>Phytophthora dieback:</b> Infested<br><b>Recreational Values:</b> Recreation area, beach access, facilities (barbeques, picnic area, toilets)<br><b>Cultural Values:</b> Cairn marks place of a historic whaling site. Dolugup Brook is a CSA<br><b>Fire Management:</b> N/A                                                                                                                                                                       |

|           |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>6</b>  | <b>Natural Environment</b><br>Zone 6                         | <b>Conservation Values:</b> Areas of excellent quality remnant vegetation, Wilyabrup vegetation complex, significant vegetation<br><b>Phytophthora dieback:</b> Infested<br><b>Recreational Values:</b> Mountain bike trails<br><b>Cultural Values:</b> Does not contain a specific CSA<br><b>Fire Management:</b> multiple firebreaks                                                                                                                                                                                                                                                                                                                           |
| <b>7</b>  | <b>Conservation Protection</b><br>Castle Bay to Meelup Beach | <b>Conservation Values:</b> DRF, priority flora, TEC, Wilyabrup vegetation complex, significant vegetation<br><b>Phytophthora dieback:</b> largely Uninfested<br><b>Recreational Values:</b> No access<br><b>Cultural Values:</b> Does not contain a specific CSA<br><b>Fire Management:</b> no internal firebreaks, road boundaries are edges                                                                                                                                                                                                                                                                                                                   |
| <b>8</b>  | <b>Recreation</b><br>Meelup Beach                            | <b>Conservation Values:</b> Eagle Bay sanctuary zone (Ngari Capes Marine Park), WRP habitat, Meelup Brook mouth/dam<br><b>Phytophthora dieback:</b> Not assessed<br><b>Recreational Values:</b> beach access, facilities (barbeques, picnic area, toilets)<br><b>Cultural Values:</b> Not identified as a CSA in the Meelup Healthy Country Plan but a potential Aboriginal Heritage Site<br><b>Fire Management:</b> N/A                                                                                                                                                                                                                                         |
| <b>9</b>  | <b>Conservation Protection</b><br>Zone 9                     | <b>Conservation Values:</b> Meelup Brook creek line, WRP habitat, significant vegetation, DRF, priority flora, TEC, large area dieback protectable/unprotectable vegetation, granitic apron, creek line and spring (important fauna habitat), banksia woodland, Wilyabrup vegetation complex, significant vegetation<br><b>Phytophthora dieback:</b> Infested, Unprotectable and Uninfested areas<br><b>Recreational Values:</b> Meelup Brook Trail, Lookout Trail, Eagle Bay Firebreak, Car Rally Trail<br><b>Cultural Values:</b> Meelup Brook is a CSA, Lookout granites are a CSA area<br><b>Fire Management:</b> Meelup Brook trail and Eagle Bay firebreak |
| <b>10</b> | <b>Natural Environment</b><br>Coastal Nodes                  | <b>Conservation Values:</b> DRF, priority flora, Wilyabrup vegetation complex, significant vegetation<br><b>Phytophthora dieback:</b> Uninterpretable<br><b>Recreational Values:</b> Special purpose shore-based fishing zone (Ngari Capes Marine Park), Meelup Coastal Trail, beach access, Point Picquet recreation area, Gannet Rock recreation area, Wannang carpark, Meeka carpark, Ngari carpark, Baudin carpark, beach nesting bird habitat<br><b>Cultural Values:</b> Does not contain a specific CSA, Baudin Memorial<br><b>Fire Management:</b> N/A                                                                                                    |
| <b>11</b> | <b>Natural Environment</b><br>Wildlife Corridor              | <b>Conservation Values:</b> Wilyabrup vegetation complex, significant vegetation, cockatubes, ESA<br><b>Phytophthora dieback:</b> Infested or Uninterpretable<br><b>Recreational Values:</b> Firebreak is an access track                                                                                                                                                                                                                                                                                                                                                                                                                                        |

|    |                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |                                                           | <b>Cultural Values:</b> does not contain a specific CSA<br><b>Fire Management:</b> firebreak adjacent to Eagle bay                                                                                                                                                                                                                                                                                                      |
| 12 | <b>Natural Environment</b><br>Fire Cell 12                | <b>Conservation Values:</b> ESA, granitic area<br><b>Phytophthora dieback:</b> Infested<br><b>Recreational Values:</b> Eagle Bay firebreak<br><b>Cultural Values:</b> does not contain a specific CSA<br><b>Fire Management:</b> fire cell burnt more frequently to create low fuel zone adjacent to Eagle Bay                                                                                                          |
| 13 | <b>Recreation</b><br>Eagle Bay                            | <b>Conservation Values:</b> Hooded plover habitat, Jingarmup Brook, Wilyabrup veg complex<br><b>Phytophthora dieback:</b> UnIntrepretable<br><b>Recreational Values:</b> beach access, Dual Use Path (DUP) from Fern Road to Eagle Bay beach, dog exercise area on beach, public amenities at Riedle Park and Eagle Bay Hall.<br><b>Cultural Values:</b> Does not contain a specific CSA<br><b>Fire Management:</b> N/A |
| 14 | <b>Conservation Protection</b><br>Eagle Bay to Bunker Bay | <b>Conservation Values:</b> DRF, priority flora, Wilyabrup veg complex, significant vegetation, hooded plover habitat<br><b>Phytophthora dieback:</b> N/A<br><b>Recreation Values:</b> Informal trail, beach access, Rocky Point recreation area<br><b>Cultural Values:</b> Does not contain a specific CSA<br><b>Fire Management:</b> N/A                                                                              |
| 15 | <b>Recreation</b><br>Bunker Bay Dog Exercise Zone         | <b>Conservation Values:</b> Hooded plover habitat<br><b>Phytophthora dieback:</b> N/A<br><b>Recreational Values:</b> beach access, adjacent to resort, café and toilets, dog exercise area<br><b>Cultural Values:</b> does not contain a specific CSA<br><b>Fire Management:</b> N/A                                                                                                                                    |

## 15.CROSS-BOUNDARY LAND MANAGEMENT

Meelup Regional Park has urban and rural neighbours, as well as neighbouring conservation estates managed by DBCA. The main cross-boundary land management issues pertinent to effective management of the Park, include;

- fencing,
- fire management,
- weed and pest animal control,
- access to and activities in and adjacent to the Park,
- natural resource management,
- signage,
- neighbour input, and
- communication, contacts and liaison.

A Good Neighbour approach develops and maintains good relationships with adjoining landowners for the mutual benefit of the Park and adjoining landowners. Several members of the Management Committee currently maintain relationships with landowners adjacent to the Park. The Friends of Meelup have also developed and maintain good relationships with adjoining landowners.

| Section 15 - Cross-boundary land management                                                               |                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Objective 3: To develop and maintain healthy neighbour relations for the benefit of the Park's management |                                                                                                                             |
| Action No                                                                                                 | Management Action                                                                                                           |
| 3.1                                                                                                       | Develop and implement a Good Neighbour practice to assist the management of cross-boundary issues for Meelup Regional Park. |

## 16.COMPATIBLE LAND MANAGEMENT

There are several isolated City reserves within the vicinity of the Park that may contribute towards the conservation of the Park's biodiversity. These are Reserves 42187 and 50575 (Jingarmup Brook), and Reserve 6229 (headwaters of the Meelup Brook). Management of these reserves should be undertaken with the Park in mind, particularly concerning species movement, water flow, fire, and weed and pest control.

Any future additions into the operational management arrangements for the Park should consider;

- proximity and connectivity to the Park,
- presence of threatened or priority species and ecological communities,
- contribution to protecting conservation, recreation and landscape values,
- extent and quality of vegetation,
- contribution to increasing biodiversity,
- contribution to management of threatening processes,
- contribution to facilitating management as an integrated unit, and
- current vesting.

| Section 16 - Compatible Land Management                      |                                                                                                                                                 |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Objective 4: to enhance the conservation values of the Park. |                                                                                                                                                 |
| Action No                                                    | Management Action                                                                                                                               |
| 4.1                                                          | Investigate the benefit of incorporating remnant bushland reserves located in the vicinity of the Park into the Park's management arrangements. |

## 17. NGARI CAPES MARINE PARK

Meelup Regional Park is bounded by the Ngari Capes Marine Park. The majority of the Marine Park adjacent to Meelup Regional Park coast has been zoned 'General Use', except for the 'Eagle Bay Sanctuary Zone' (which includes Meelup Beach), and the 'Eagle Bay Special Purpose Zone' (DEC 2013).

All forms of fishing are restricted in Sanctuary Zones and Special Purpose Zones (Shore Based Activities) are mainly conservation areas which allow beach or rock fishing (DEC 2013).

The *Ngari Capes Marine Park Management Plan 2013-2023* (DEC 2013) directs the management for the Ngari Capes Marine Park and should be referred to for direction in the management of marine waters adjacent to Meelup Regional Park.

The Plan has taken into account the management arrangements for the Ngari Capes Marine Park. Some management issues, such as signage, will require liaison between different management groups.



FIGURE 3: NGARI CAPES MARINE PARK

## **PART C. MANAGING THE NATURAL ENVIRONMENT**

### **18. GUIDING PRINCIPLES FOR MANAGING THE NATURAL ENVIRONMENT**

The key guiding principles for management of the Park's natural environment are:

1. Conservation and protection of the natural environment  
Natural processes and biodiversity are managed to maintain their inherent values.
2. Recognition of cultural and societal values  
The Park will be managed to maintain cultural traditions and attributes and to provide opportunities for recreation, education and research.
3. Protection from the negative impact of recreation  
Conservation and Environmental Enhancement is the key management priority. Recreation and other uses may be allowed to occur to the extent that they do not impair the Park's natural and cultural values.
4. Restoration of the natural environment  
Restoration will be undertaken to increase biodiversity and protect and enhance natural systems. Areas with high conservation significance are considered priorities for restoration.
5. Special protection of significant values  
Declared rare flora, priority flora species, threatened ecological communities, priority ecological communities, priority fauna, other specially protected fauna, outstanding natural and visual landscape features and sites of Aboriginal and historical significance are given priority for conservation and restoration.
6. Management of threats to Park values  
Threats to the environmental and cultural values of the Park attributed to climate change, tree decline and diseases, weeds, feral animals, wildfires and inappropriate use are monitored, investigated and managed.
7. Consistent with management policies  
Management actions are planned and implemented in a coordinated manner consistent with relevant legislation, principles and policies.
8. Apply Precautionary Principle  
In the case of threats of serious or irreversible environmental damage, the lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

### **19. INTERIM BIOGEOGRAPHIC REGIONALISATION AUSTRALIA**

Western Australia is grouped into 27 biogeographic regions, with Meelup Regional Park sitting on a narrow north-west extension of the Jarrah Forest bioregion. This narrow extension of Jarrah Forest bioregion adjoins the Warren bioregion to the south and the Swan Coastal Plain bioregion to the east.

## 20.CLIMATE

The climate of the South West, including Meelup Regional Park, is temperate with distinct wet and dry seasons. The average yearly rainfall between 1904 - 2026 is 794mm with the majority of rain occurring between April and October. A long-term decline in rainfall is apparent, with the average yearly rainfall between 2000 – 2025 reduced to 672.01mm. The annual mean temperatures for Cape Naturaliste range from a mean minimum of 10.3°C in winter and a mean maximum 26.7°C in summer (BoM 2026).

The wind pattern is generally a morning easterly followed by an afternoon south to south-westerly in summer. Northerly winds increase during winter months. Due to its north-east orientation, the Park coastline is sheltered from the strong onshore sea breezes that are experienced elsewhere in Western Australia.

### Climate change

In the South West of WA, the most significant impacts of human-induced climate change are reduced rainfall and subsequent streamflow, and an increase in average annual temperature. Climate change projections include increased drought frequency and duration, further reduction in stream flow, increased temperatures, more frequent and extreme fire danger and increases in extreme storm events (Hughes 2014, Western Australian Local Government Association n.d, DoE n.d.)

Further impacts include changes to animal and plant physiology, life cycle timing, and species distribution and abundance. Decreased rainfall in the Park may cause a reduction in wetlands and waterways and their associated ecology and vegetation. Indirect impacts may arise from changes in species competition and predation, or through alteration to the nature and intensity of existing biodiversity pressures (e.g. disease, salinisation, density and distribution of weeds, erosion, habitat fragmentation and loss of wetlands) (DEC 2010). Impacts to the landscape, infrastructure and facilities may occur from inundation, below ground saltwater incursion and sea level rise.

Species most likely to be affected are those;

- with narrow temperature or cool temperature requirements,
- with narrow geographic ranges closely associated with local environmental conditions,
- endemic to the region,
- at their range limits,
- dependent on relatively high rainfall, or
- unable to evolve in situ (DEC 2010).

Regional landscape fragmentation may limit species' ability to migrate and exacerbate the above factors. However, proximity to the Leeuwin-Naturaliste National Park, which provides a vegetated corridor to Cape Leeuwin, may assist the migration of some species.

The key climate change response principles identified for the Park are:

- Increase research to better understand the impacts of climate variations and change on the Park's biota.
- Implement an adaptive management approach focused on increasing the Park's resilience to any adverse pressures and impacts that result from human activities in the Park.
- Adopt the precautionary principle and manage the Park for uncertainty.
- Work with the community, government agencies and natural resource management groups, as appropriate, to develop appropriate responses to changing climate.

Improving the resilience of species and ecosystems helps to reduce their vulnerability to climate change. This includes continuance of management strategies regarding control of introduced plants and animals, fire management, dieback and other disease management and managing impacts associated with visitor use. It also includes maintenance of large areas of intact, good quality vegetation, free from visitor use; possible translocation of threatened native plants and animals; and identifying, creating and maintaining wildlife corridors in cooperation with landowners adjacent to the Park.

| Section 20 - Climate                                                          |                                                                                                                                              |
|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Objective 5: To protect the Park's values from the impacts of climate change. |                                                                                                                                              |
| Action No                                                                     | Management Action                                                                                                                            |
| 5.2                                                                           | Retain remnant vegetation connectivity within the Park and provide wildlife corridor linkages and climate refugia.                           |
| 5.3                                                                           | Work with relevant government agencies and landholders to enhance species adaption to climate change and connectivity of wildlife corridors. |
| 5.4                                                                           | Continually review and adapt management in response to new knowledge and understanding of climate change and its impact on biodiversity.     |

## 21.GEOLOGY, ROCKS, LANDFORMS AND SOILS

This section will give a geological account of the Park's rocks, landforms, landscape and soil types by using the Geological Survey of WA's (GSWA's) environmental geological methodology (Leonhard 1991). GSWA's methodology is site-specific about field locations and the spatial distribution of rock outcrops, and aims to provide an understanding of landform development, erosional processes and the extent of principal soil and rock types. Hence, the importance of this geological account to the ongoing management of soils, erosion, beaches and trails in the Park.

### Rock Types and Landforms

Under the GSWA methodology, rocks are classed as consolidated or competent and are identified in terms of mineral assemblages and petrology. In comparison, soils are classed as unconsolidated materials and are assessed not as plant growing media (Smurthwaite, 2017) but in terms of lithology (clay, sand, silt, gravel).

Mapping of the Park's geology resulted from the Management Committee's concern over the continuous erosion by water of the sandy and gravelly soils and its impacts upon the usage of the Park's tracks, firebreaks and carparks. The Park was mapped and the areal extent of its two rock types, granitic gneiss (aka granulite) and laterite (or duricrust), was delineated by field observations and the interpretation of topography, aerial photographs and satellite imagery.

Granitic gneiss is a metamorphic rock whose outcrops and boulders are widespread (approximately 60%) throughout the Park. They are present as the crest of hills and ridges and on flanks, escarpments, streambeds, coastal headlands, beaches and wave-cut platforms. Detailed petrographic investigations of the granitic gneiss' mineral assemblage and its texture/fabric (alternating bands of quartz, feldspar, pyroxene and ferromagnesian minerals) classifies the rock as being a granulite of the Dunsborough suite of the Leeuwin Complex.

During a 600 million year period (from 530 to 1100 Ma) in the Proterozoic Era, the original granite bedrock (coarse grained igneous rock) was subjected to prolonged periods of intense heat and pressure and was consequently metamorphosed into granitic gneiss during the Pinjarra Orogeny (a mountain-building episode). In 135 Ma the Gondwana super-continent broke up and Greater India separated from Australia and Antarctica. This rupture is likely marked by the intrusion of the Bunbury basalt sill along the base of the Darling Fault and resulted in the formation of the Leeuwin Block (aka Inlier).

The Park's eastern areas are very jointed, dissected and heavily eroded. This rugged landscape was carved by massive amounts of rain and vigorous stream action in the Permian Era (280 Ma). It is likely this increased rainfall greatly augmented the erosion of the Meelup and Dolgup Brooks and their catchment systems. Their headward erosion carved deep valleys and overland flow would have stripped the sheet laterite and gravel cover to expose the underlying bedrock to be dissected and eroded. Today this has left many 20 degree slopes and hundreds of rounded outcrops (known as tors, knolls and inselbergs or island-mountains). This process continues today at much slower rates.

The Park's four beaches are situated where the brooks deposit their loads of sand and gravels. The beaches are bordered by mobile sand dunes. The composition of each beach varies and is a mix of quartz sand grains, shell fragments, pockets of ilmenite-enriched sand, scattered pebble and cobble accumulations and granitic gneiss outcrops and scattered boulders. Each beach has its own unique profile resulting from a combination of season, aspect, slope and gravity plus the dynamics of winds, long-shore drift currents, tides and storms. The ilmenite grains are derived from granitic gneiss while the strandlines adjacent to the dunes are continually reworked by winds, tides and storm surges. The cobble and boulder beds and wave-cut platforms record previous sea levels.

Laterite is the Park's second rock type: it forms the plateaus and hills and ridges of the northern, western and southern areas. This rock type was developed through the intensive chemical weathering (lateritization) of granitic gneiss in the Eocene Era (25 to 40 Ma). During this time South West Australia had a similar climate to tropical South East Asia and northern Australia today.

Laterite has a thin profile (0.5 to 1.5 meters) which is formed in situ by the intense and prolonged chemical weathering of the granulite's feldspars which, over millennia, gradually transform their constituent iron and aluminium hydroxides into gibbsite, boehmite, hematite and maghemite. This suite of secondary minerals is then segregated by further chemical, physical and pedological processes into four horizons or zones: a surface capstone cemented by iron hydroxides, underlain by friable, mottled and pallid clays over weathered and then fresh granulitic bedrock. The fabric of the granulite can be discerned in the caprock and can be used to distinguish iron-enriched and/or quartz bearing variations.

## **Soils**

Soil formation is controlled by the interaction of climate, time, parent materials, ground water, and topography. Ultimately it represents a balance between the process of soil creation and its erosion. In the case of the Park, the chemical transformation of the hard granulitic bedrock has taken a very long time. Hardness of the parent rock is a limiting factor despite opportunities provided by granu-

lite’s multitude of joints, fissures and foliations. In contrast, the friability of the lateritic regolith facilitates its breakdown into deposits of partially weathered floaters, gravels, sands, silts and clays. Surface or overland flow and fluvial action removes these deposits and exposes more laterite to further weathering and landform denudation. Figure 4 illustrates the distribution of soil units in relation to granulite and laterite exposures, waterways and the coast. It is a generalised version of the detailed map from Smurthwaite (2017).

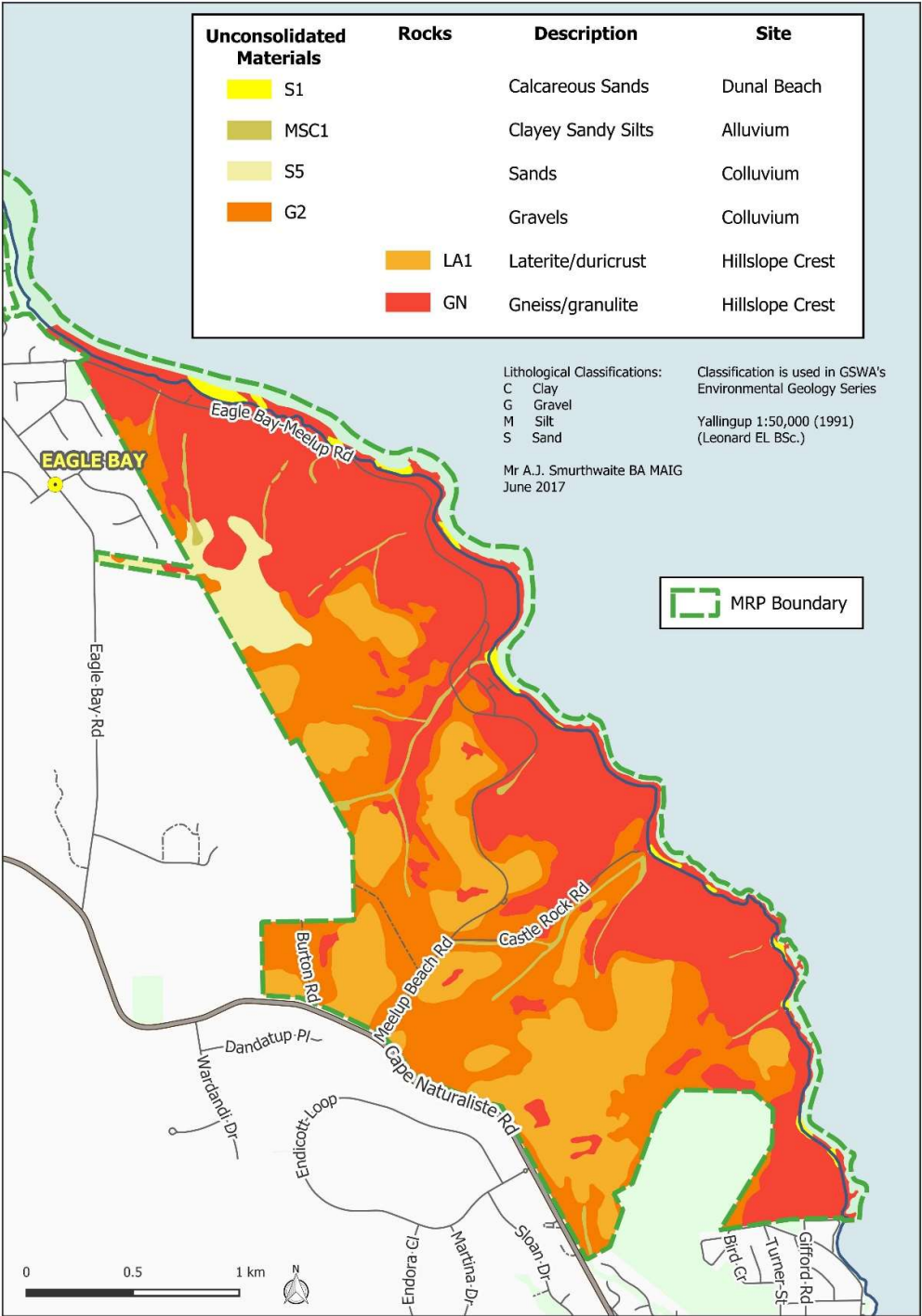


Figure 4: Geology of Meelup Regional Park



**PHOTO 3: GRANITIC GNEISS - ROUNDLY SHAPED OUTCROPS KNOWN AS TORS, KNOLLS AND INSELBERGS**

Smurthwaite (2017) has a matrix which describes and cross references each soil unit with a number of factors, such as;

- the unit's topographic position,
- landform (dune, hill, valley),
- physical properties (such as permeability, slope -stability, ease of excavation, shrinkage, and load- bearing capacity),
- lithology (clay, gravel, silt, sand),
- grain- size,
- relief,
- slope,
- dominant process (stream flow, run-off),
- erosional potential, and
- suitability or otherwise for specific land-uses.

The purpose of the matrix, when read with the map, is to provide an account of the unit's suitability to tolerate ground disturbance. The risk of erosion taking place can be assessed and mitigation measures undertaken to maintain the Park's tracks, firebreaks and carparks. Table 2 is a simplified version of the above-mentioned matrix.

**TABLE 2: SIMPLIFIED SOIL UNIT MATRIX**

| Unit                 | Classification | Landforms           | Risk           |
|----------------------|----------------|---------------------|----------------|
| Calcareous sands     | Alluvium       | Dunes, beaches      | Variable       |
| Clayey sandy silts   | Alluvium       | Valleys             | High           |
| Gravelly silty sands | Alluvium       | Valleys             | High           |
| Silty gravelly sands | Colluvium      | Knolls              | High           |
| Grey sands           | Colluvium      | Knolls              | High           |
| Silty gravelly sands | Colluvium      | Hills and ridges    | Medium         |
| Silty gravelly sands | Colluvium      | Hills and ridges    | Medium         |
| Silty sandy gravels  | Colluvium      | Hills and ridges    | Medium to high |
| Pisolitic gravels    | Colluvium      | Plateaus and ridges | Medium to high |

The six colluvial soils are underlain by a gravelly clay substrate and they are commonly covered by a thin veneer of coarse gravels. Intergrades often occur when discrete soil units blend with one another to form soil-landform associations (e.g. lateritic upland and rocky escarpments). Pockets of pisolitic gravel and granulite outcrops are often embedded in areas of silt and weathered rock detritus.

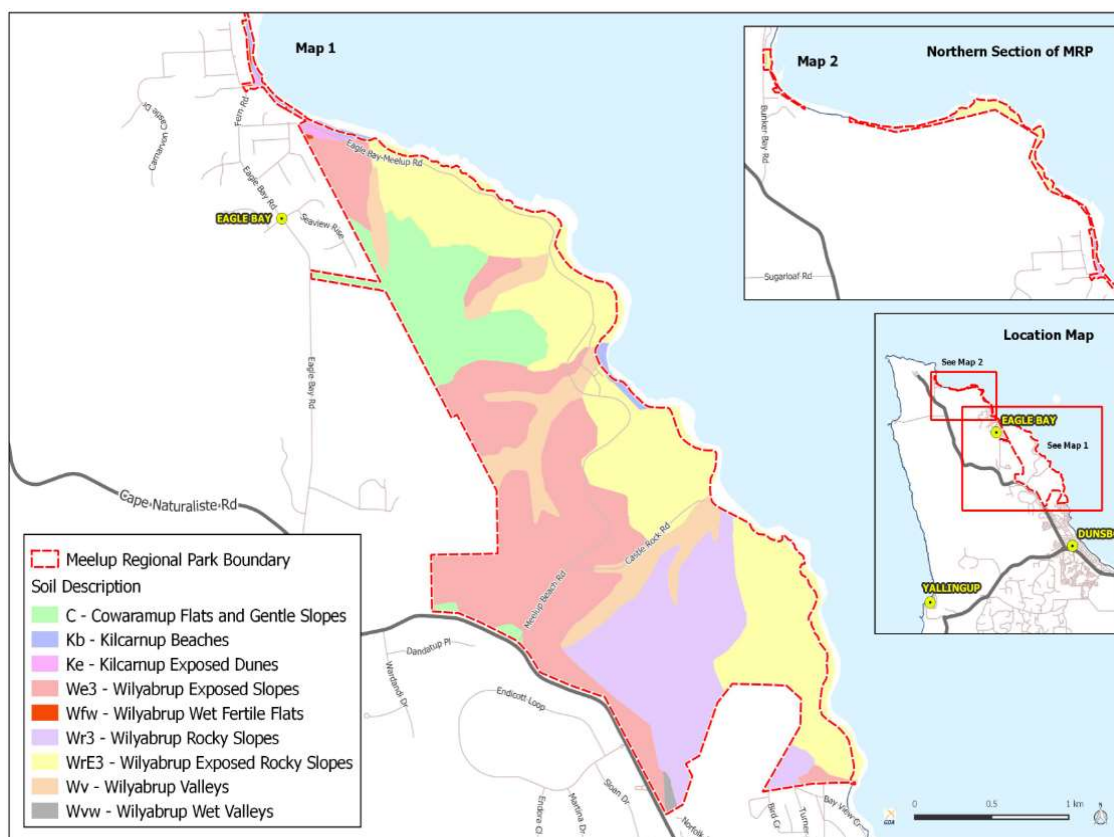
Steep slopes, together with localised rainfall downpours, generate overland flow which can rapidly cause hillslopes to become unstable. Talus or scree slopes grouped around rocky outcrops and knolls and beneath escarpments are especially vulnerable to disturbance and/or the loss of vegetation due to disturbances such as dieback or wildfire.

Figure 4 is based on the land capability report by Tille and Lantze (1990). Their mapping approach and emphasis is on landforms, aspects and rocky exposures and no specific soils are identified. The agricultural activity-orientated landform classification has been used in the delineation of vegetation complexes in the Park and is still used in the region.

The soil-landscape systems of the Park (Tille and Lantzke, 1990) are:

- **Cowaramup Uplands:** Jarrah- Marri forest is the principle vegetation of this system
- **Kilcarnup Dunes:** Coastal scrub is the predominant vegetation on this system
- **Wilyabrup Valleys System:** Jarrah-Marri forest predominates on this system.

The soil landscape systems are shown in Figure 5.



**FIGURE 5: LANDFORMS LANDSCAPE SYSTEMS**

### Acid sulphate soils

Acid Sulphate Soil (ASS) are an issue in low-lying water-logged areas of the Swan Coastal Plain. The risk of ASS being an issue in the Park is low as evidence suggests the Park's watercourses and swamps had a low to medium risk of containing ASS layers. Further, construction in these areas is highly unlikely.

### Threats

The main threats to the Park's geology, landforms and soils are:

- Extraction,
- Erosion,
- Contamination, and
- Inappropriate visitor use.

## Section 21 - GEOLOGY, ROCKS, LANDFORMS AND SOILS

**Objective 6: To protect and conserve geological features, landforms and soils and preserve the unique character of the Park's visual landscape.**

| Action No | Management Action                                                                                                                                          |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.1       | Identify and mitigate potential adverse impacts on the Park's geology, soils, landform, and visual landscape to preserve the unique character of the Park. |
| 6.2       | Maintain access ways and trails in good condition to prevent erosion and monitor key visitor areas to respond to new unauthorised trails                   |

## 22. WATERWAYS

Water is primarily managed for ecological purposes in the Park. All groundwater and surface water catchments in Meelup Regional Park are proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act). Under the Act, a license is required from DWER to take water, and a permit is required for works which may interfere with the bed and banks of waterways.

### Surface water

The waterways and wetlands of Meelup Regional Park are largely unmodified by clearing, drainage pollution, stock intrusion and altered stream flow regimes. As such, they have high conservation status and ecological values. The Park has eight small catchments containing 13 ephemeral waterways, six swamps and many springs and soaks (Figure 6). Some waterways, such as Jingarmup Brook and Meelup Brook, have the majority of their length outside the Park while other waterways, such as Do-lugup Brook, occur entirely inside the Park.



FIGURE 6: TOPOGRAPHY AND SURFACE WATER COURSES

The River Action Plan for the Cape Naturaliste Streams (Cape to Cape Catchment Group, (2006) identifies the characteristics, values, condition and management issues for the Dunsborough streams including Meelup Brook, Dolugup Brook and Jingarmup Brook. Approximately half of Meelup Brook is within the Park and its headwaters are on a small reserve to the east of Cape Naturaliste Road. Meelup Brook flows through agricultural land before reaching the Park. Within the Park, the brook has a number of minor tributaries and much of the riparian foreshore is in excellent condition, although there are some areas of erosion and weed infestation. Two on-stream dams exist on the lower half of Meelup Brook close to Meelup Beach.

Dolugup Brook is the smallest waterway and is entirely within the Park, with its headwaters to the south of Meelup Beach Road. The brook is ephemeral and flows adjacent to Castle Rock Road before reaching Castle Bay. It is in excellent condition except for some minor erosion and disturbances near the mouth caused by Castle Bay's carpark and road drainage.

Jingarmup Brook is the longest waterway and only has a small portion running through the Park. The headwaters are on farmland at the southern edge of Cape Naturaliste near Vidler Road. It flows north through farmland, then passes through rural residential and residential areas in Eagle Bay before entering the ocean on the western edge of Eagle Bay. The majority of the catchment has been cleared for agriculture and the foreshore is mostly degraded (Cape to Cape Catchments Group, 2006).

### **Water quality**

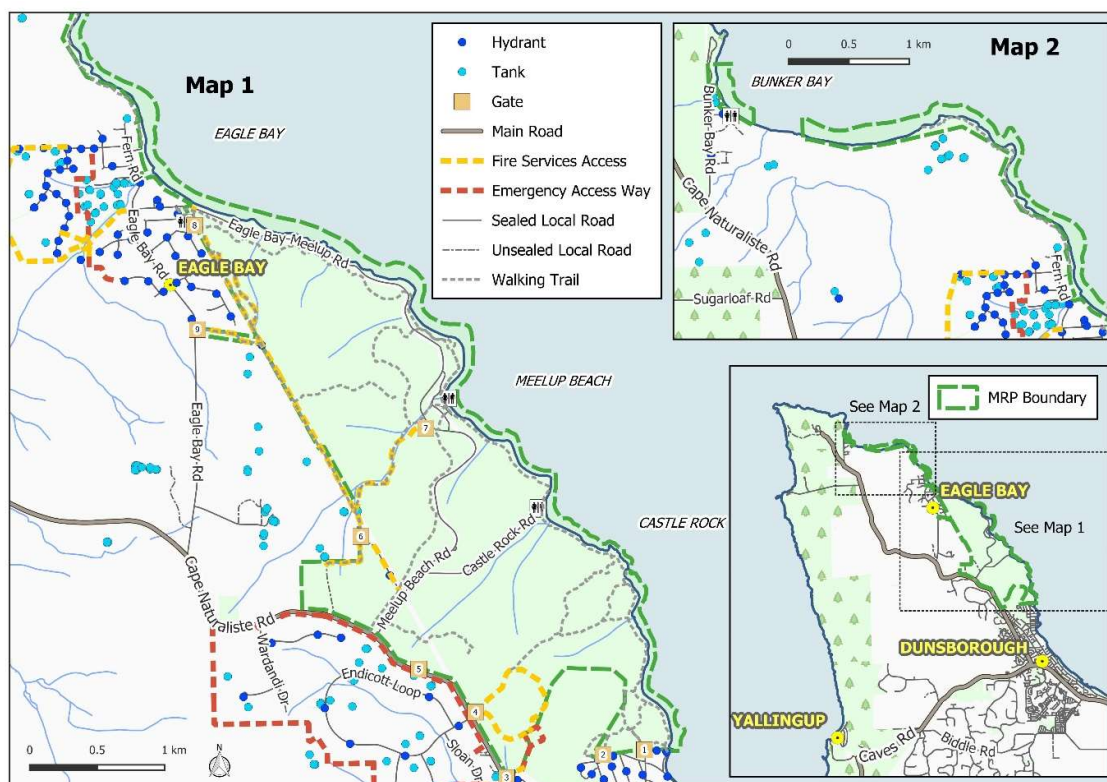
Water quality monitoring in Jingarmup Brook, Meelup Brook and Dolugup Brook has previously been undertaken through the Vasse Wonnerup Wetlands and Geographe Bay Water Quality Improvement Plan (Department of Water 2010). The aim of the Water Quality Improvement Plan (2010) is to provide a strategic approach to reducing nutrients in the Vasse Wonnerup Wetlands and Geographe Bay.

Several water quality issues have been identified within the Jingarmup Brook, including nutrient enrichment (elevated nitrogen), seasonal odour at its mouth arising from decomposition of algae and/or exposure of anoxic sediment, and high turbidity. The management objective for Jingarmup Brook is 'intervention', to prevent phosphorus rising and reduce nitrogen to recommended levels (DoW 2010).

Both Meelup Brook and Dolugup Brook were assessed as having very good water quality. The Dolugup Brook catchment is entirely within the Park and is relatively undisturbed. Meelup Brook it flows through agricultural and tourism businesses upstream of the Park and has three onstream dams and elevated nutrient levels as a result.

### **Water Supply Infrastructure**

Water is only supplied to Meelup Beach and fire hydrants at various locations throughout the Park. The locations of fire hydrants are detailed in the Water Infrastructure and Access Road map (Figure 7).



**FIGURE 7: WATER INFRASTRUCTURE AND ACCESS ROADS**

### Threats to Waterways and Wetlands

Threats to the Park's waterways and wetlands include:

- Recreational activities in sensitive waterways can potentially damage vegetation, causing erosion, sedimentation and spread dieback and weeds.
- Upstream water extraction/contamination. Land use activities within the water catchment upstream of the Park's boundaries, including both on-stream and off-stream activities, can impact surface water quality and stream flow in the Park.
- Infrastructure development. The provision of infrastructure within the Park has the potential to disturb vegetation, alter the local hydrology and impact water quality.
- Extraction. Ground water extraction within the Park poses a threat to these resources and the ecosystems that depend on them.

| Section 22 - Waterways and Wetlands                                                                                             |                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Objective 7: To protect and conserve existing surface and ground water resources of the Park, the Park's waterways and wetlands |                                                                                                   |
| Action No                                                                                                                       | Management Action                                                                                 |
| 7.1                                                                                                                             | Collaborate with relevant agencies and landholders to implement best practice waterway management |
| 7.2                                                                                                                             | Rehabilitate degraded areas, including erosion control, weed control and revegetation.            |
| 7.3                                                                                                                             | Ensure effective stormwater and drainage systems that maintain environmental flow.                |

### 23. NATIVE PLANTS AND VEGETATION COMMUNITIES

The South West of WA is internationally recognised as a global biodiversity hotspot for its rich plant diversity and high endemism. The Busselton to Augusta area is listed as one of Australia's 15 national biodiversity hotspots.

#### Native plants

The Park has a diverse flora with 480 species of native vascular plants recorded and is comparable to other reserves within the South West Botanical Province. Little is known or recorded about non-vascular plants in the Park, including fungi, lichen, algae, mosses and liverworts.

The largest families represented are Fabaceae (57 native, 10 weeds), Orchidaceae (37 native, 1 weed), Cyperaceae (34 native, 2 weeds), Poaceae (16 native, 19 weeds), Asteraceae (24 native, 10 weeds) and Myrtaceae (27 native). The largest genera are *Acacia* (16), *Schoenus* (15), *Caladenia* (14), *Stylidium* (13), *Lomandra* (10), *Drosera* (9), *Hibbertia* (8) and *Leucopogon* (8) (Webb 2013).

The BC Act 2016 provides for the protection of native flora that is likely to become extinct, rare or otherwise in need of special protection.

Of the significant species in the Park, 11 are listed as threatened, which includes four species listed as declared rare flora (DRF) and seven are assigned a priority flora status (Table 3). Priority flora may be rare or threatened, but there is insufficient information to determine their status. Unlike DRF, priority flora are not gazetted and do not have the same level of legislative protection. However, the priority flora list serves to highlight flora of special conservation interest and to encourage appropriate management. Taxa are grouped from Priority 1 to Priority 4 according to the perceived urgency for further survey (DEC 2010). Appendix 2 provides further information on threatened species ranking and priority codes.



**PHOTO 4: CAPE SPIDER ORCHID (*CALADENIA CAESIA* SUBSP. *MARITIMA*)**

DBCA develops and implements recovery plans for threatened species, which outlines actions that need to be taken to prevent these species from further decline and eventual extinction. The Federal Minister for Environment may also make or adopt and implement recovery plans under the EPBC Act 1999.

**TABLE 3: THREATENED AND PRIORITY FLORA AND RANKINGS**

| Species                                                                  | State | Commonwealth |
|--------------------------------------------------------------------------|-------|--------------|
| EN: Endangered, CR: Critically endangered                                |       |              |
| P3: Priority 3: Poorly known species, some on conservation lands         |       |              |
| P4: Priority 4: Rare, threatened or other taxa in need of monitoring     |       |              |
| Bussell's spider orchid*<br><i>Caladenia busselliana</i>                 | CR    | EN           |
| Cape spider orchid<br><i>Caladenia caesarea</i> subsp. <i>maritima</i> * | CR    | EN           |
| Dunsborough spider orchid<br><i>Caladenia viridescens</i> *              | CR    | EN           |
| Giant spider orchid<br><i>Caladenia excelsa</i>                          | EN    | EN           |
| Meelup mallee<br><i>Eucalyptus x phylacis</i> *                          | CR    | EN           |
| <i>Acacia latericola</i> (glabrous variant)                              | P3    |              |
| <i>Boronia tenuis</i>                                                    | P4    |              |
| <i>Calothamnus graniticus</i> ssp. <i>graniticus</i>                     | P4    |              |
| <i>Eucalyptus rudis</i> ssp. <i>cratyantha</i>                           | P4    |              |
| <i>Eucalyptus virginea</i>                                               | P4    |              |
| <i>Thelymitra variegata</i>                                              | P3    |              |
| <i>Meionectes tenuifolia</i>                                             | P3    |              |

\*Interim Recovery Plan

Two of the Park's priority listed species (*Boronia tenuis* and *Eucalyptus virginea*) are significantly disjunct from their typical area of occurrence. *Caladenia caesarea* ssp. *maritima* and *Eucalyptus x phylacis* (the Meelup mallee) are endemic to Meelup Regional Park and *Caladenia viridescens* is only known from the Park and other bushland areas within 10km of Meelup (Webb 2013).

The Cape Naturaliste endemic *Calothamnus graniticus* ssp. *graniticus* (City of Busselton floral emblem) is only known from Meelup Regional Park and nearby Sugarloaf Rock.



**Photo 5: *Calothamnus graniticus* ssp. *graniticus* (City of Busselton floral emblem)**

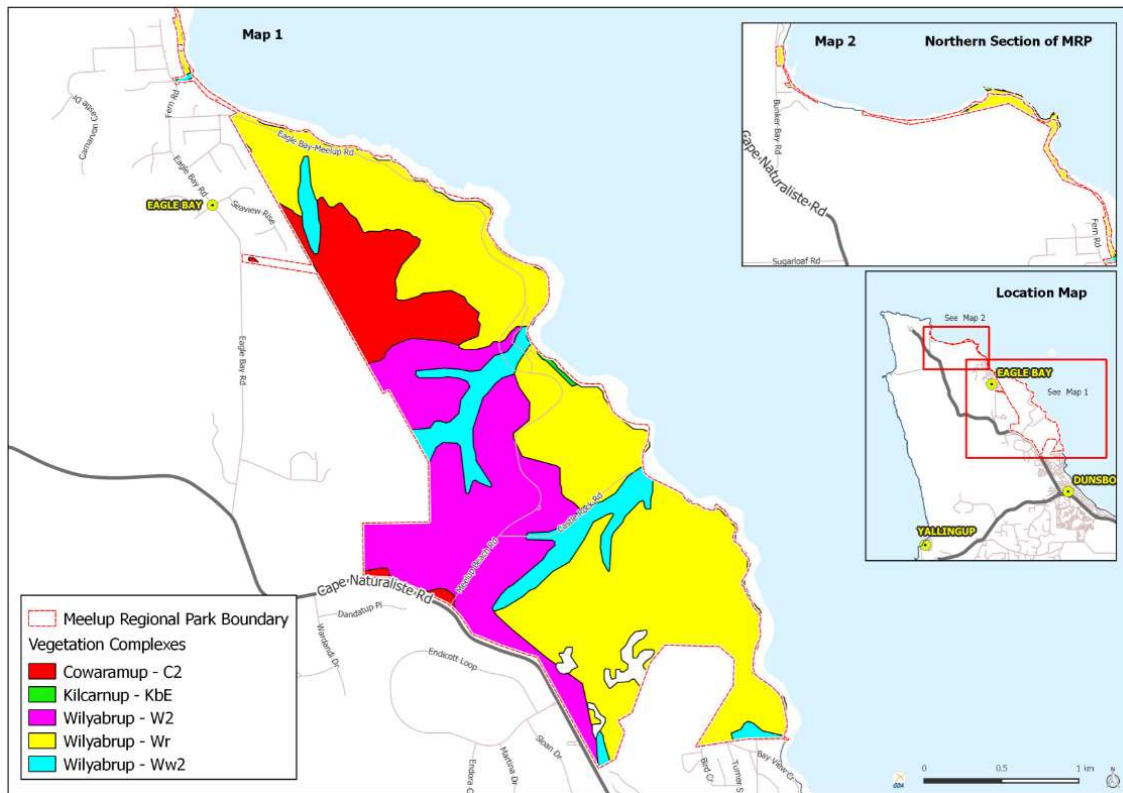
The critically endangered Meelup mallee, *Eucalyptus x phylacis*, is a small mallee to 5 metres with distinctive coarse, non-fibrous bark overlaying thick corky bark. The mallee was first collected in 1982 and named in 1992 and is only known from a single population in the Park. It is considered a hybrid between *Eucalyptus virginea* and *Eucalyptus decipiens* and research by Kings Park and Botanical Gardens indicates that the population is a single plant.

The distance between the mallee ramets suggests that the plant could be 6600 years old, possibly one of the oldest eucalypts on record (Patten 2004). The location of the mallee is restricted to protect the species. DBCA undertake annual monitoring is necessary to observe the ongoing health of the species, identify any concerns and instigate necessary recovery actions.

## Vegetation complexes

Vegetation complex mapping is the mapping of vegetation based on landform, soils and climatic zones and their relationship to vegetation (primarily understorey vegetation).

Five vegetation complexes are mapped for the Park (Figure 7), as per Havel and Mattiske (2000): Cowaramup (C2), Kilcarnup (KbE) and three Wilyabrup complexes; Wr, W2, and Ww2 (Webb 2013).



**FIGURE 8: VEGETATION COMPLEXES**

The Park's vegetation complexes are highly restricted and poorly reserved. The Wilyabrup (Wr) vegetation complex is one such example, with the Park supporting almost 50% of its remaining extent (Table 4). All occurrences of the Wilyabrup (Wr) complex support significant populations of endemic and disjunct flora, and in the context of the Leeuwin Block occurrences in Meelup, are the largest and the richest. The National Objectives and Targets for Biodiversity Conservation 2001-2005 (Department of the Environment and Heritage 2001) recognised that in order to protect Australia's biological diversity there needs to be the minimum retention of 30% of the pre-clearing extent.

**TABLE 4: EXTENT OF THE MEELUP RESERVE SYSTEM VEGETATION COMPLEXES (WEBB 2013)**

| Vegetation complex     | Pre-European extent (ha) | Extent remaining (ha) | % remaining | % in formal reservation | Extent in Meelup(ha)* |
|------------------------|--------------------------|-----------------------|-------------|-------------------------|-----------------------|
| <b>Cowaramup (C2)</b>  | 13,683                   | 4,889                 | 36          | 6                       | 60                    |
| <b>Kilcarnup (KbE)</b> | 355                      | 285                   | 80          | 69                      | 5                     |
| <b>Wilyabrup (W2)</b>  | 4,101                    | 1,407                 | 34          | 2                       | 145                   |
| <b>Wilyabrup (Ww2)</b> | 1,328                    | 519                   | 39          | 0                       | 52                    |
| <b>Wilyabrup (Wr)</b>  | 1,111                    | 799                   | 72          | 9                       | 390                   |

(\* - includes partly cleared and regenerating vegetation)

## Vegetation associations

Trudgen and Trudgen (2010) define vegetation associations as covering two or more plant communities with similar structure and dominant species (Webb 2013). Meelup Regional Park supports an intact granitic landscape and associated vegetation from the top of the landscape to the bottom; the vegetation of the reserve system is linked to its topographic position.

The Flora and Vegetation of the Meelup Reserve System (Webb 2013) mapped the Meelup vegetation at the association level, detailing the following eight vegetation associations with associated plant communities (Figure 8):

1. Jarrah, marri forests
2. Jarrah, marri woodland
3. Banksia woodland
4. Granitic heath
5. *Calothamnus graniticus* closed heath
6. Granitic apron
7. Creek lines
8. Coastal vegetation



PHOTO 6: JARRAH, MARRI WOODLANDS WITHIN THE PARK

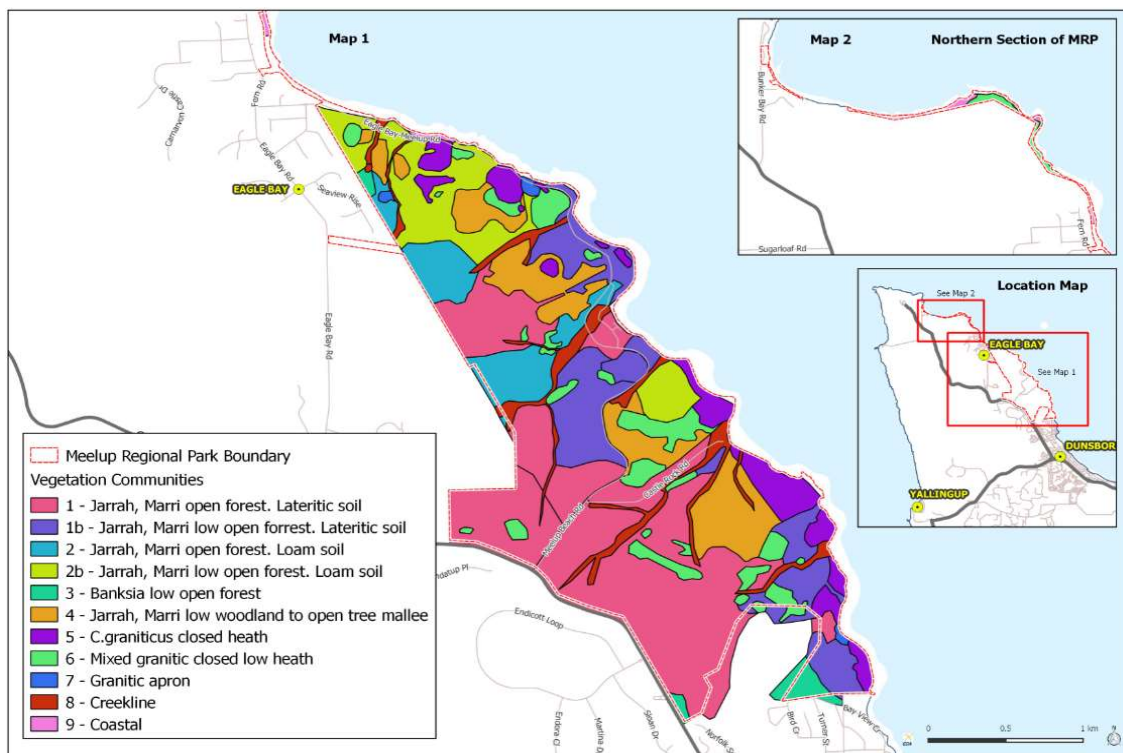


FIGURE 9: MEELUP REGIONAL PARK VEGETATION COMMUNITIES

## Significant vegetation

Keating and Trudgen (1986) indicate that the Park contains a significant variety of vegetation types that are poorly represented elsewhere. In particular, the jarrah, marri woodland and forest vegetation found in the Park is of significant diversity, good condition and the only area of such vegetation of a

substantial extent, in reservation (Webb 2013). In addition, the granitic heath vegetation is thought to be restricted to the Park.

These forms of vegetation comprise approximately 116 hectares of the Park's vegetation (70 hectares jarrah, marri woodland and 46 hectares granitic heath), appear to be highly restricted, support the majority of the Park's threatened and significant flora, are exceptionally diverse and are of excellent condition. Because of their limited extent it is considered that they should be assessed for nomination as a threatened ecological community (Webb 2013).

The survey undertaken by Keating and Trudgen in 1986, also identified a number of other plant communities that are considered significant in the Park (Webb 2013). The dominant subspecies of *Calothamnus graniticus* ssp. *graniticus* and its associated vegetation is only known from the tip of Cape Naturaliste in Meelup Reserve and at Sugarloaf Rock (Webb 2013) and is listed as a Priority species (Webb 2023). The threatened ecological community (TEC) "Meelup granites" or "*Calothamnus graniticus* heaths on south west coastal granites" is currently listed in WA as Vulnerable and recorded as occurring in several locations in the Park within the heath on granite areas (Webb 2013).

Small areas of the Meelup landscape support a granitic apron vegetation, which is also considered of high conservation significance in the broader Leeuwin Block context, as there is only one other location on the Leeuwin Block where comparable vegetation is known. This vegetation comprises edges of outcropping granite covered in shallow soil of varying depths, resulting in the soil alternating between waterlogged and dry throughout the seasons. These areas can support a plant community ranging from an annually renewed herbland taxa to a wetland taxa influenced scrub community (Webb 2013).

The coastal fringing vegetation is also considered to be of high conservation value, particularly the form on loamy soils associated with outcropping granite. The sheltered nature of the Park's coastline has allowed for a unique combination of woodland and heath vegetation to combine with a number of taxa typically associated with the coastal fringe to form a very attractive and otherwise un-replicated coastal flora (Webb 2013).

### **Vegetation Corridors**

Corridors of remnant vegetation provide important ecological linkages for the natural movement of wildlife, and are crucial for helping species respond to climate change. The Park provides connectivity to several South West Regional Ecological Linkages (SWREL). The SWREL project identifies regional scale ecological linkages and aims to respond to the issues of fragmentation and climate change through land use planning policy and procedures. The SWREL axis lines are a series of vegetation patches which, due to their proximity, act as habitat stepping stones thereby facilitating ecological processes and movement of organisms at the landscape scale (ngn environmental 2015).

Apart from a section along Bunker Bay, the Park provides secure tenure to mostly remnant vegetation along the coastal fringe from Dunsborough through to Cape Naturaliste (and Leeuwin Naturaliste National Park). This is recognised as unique for a single reserve along Geographe Bay. There is also a linkage via Zone 11 and two linkages identified to the Leeuwin-Naturaliste National Park to the east (ngn environmental 2015).

Jingarmup Brook and Meelup Brook provide habitat corridor opportunities. Jingarmup Brook has limited potential as only a very small portion is within the Park boundary and the majority is extensively cleared. Meelup Brook provides a good opportunity to work with upstream landholders to revegetate and provide a riparian corridor to its headwaters (Reserve 6229). The City of Busselton has the management order for Reserve 6229.

## Threats to Flora and Vegetation

Threats to the flora and vegetation communities of the Park are:

- Climate change.
- Disease and tree decline.
- Inappropriate use, access and recreational activities.
- Wildfire and inappropriate fire management.
- Weeds.
- Litter and garden waste dumping
- Road reserve maintenance
- Introduced animals such as rabbits
- Importation of soil into the Park.
- Unauthorised removal of rare flora.

| Section 23 - Native plants and vegetation communities management                                                                                              |                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objective 8: To protect and conserve native plants and vegetation communities with an emphasis on threatened and priority species and significant vegetation. |                                                                                                                                                                 |
| Action No                                                                                                                                                     | Management Action                                                                                                                                               |
| 8.1                                                                                                                                                           | Avoid clearing vegetation to facilitate visitor facilities and infrastructure within the Park.                                                                  |
| 8.2                                                                                                                                                           | Monitor annual weed control programme to ensure there are no potential impacts to threatened and priority flora and significant vegetation.                     |
| 8.3                                                                                                                                                           | Provide support to the DBCA with monitoring of important species and vegetation communities within the Park, and with the implementation of DRF recovery plans. |
| 8.4                                                                                                                                                           | Undertake revegetation of degraded areas that are unlikely to naturally regenerate using local provenance native species.                                       |
| 8.5                                                                                                                                                           | Continue the annual monitoring programme of the Meelup mallee with DBCA.                                                                                        |
| 8.6                                                                                                                                                           | Monitor quadrats associated with the flora survey as appropriate or every five years.                                                                           |
| 8.7                                                                                                                                                           | Ensure contractors, staff and volunteers working in the Park are adequately informed about the protection of threatened and priority flora.                     |
| 8.8                                                                                                                                                           | Develop a roadside vegetation management plan to conserve threatened and priority flora, significant vegetation communities, and visual amenity.                |
| 8.9                                                                                                                                                           | Develop a procedure for the management and maintenance of the Park's road reserve vegetation.                                                                   |

## 24. NATIVE ANIMALS

The Park is important for fauna habitat due to several factors;

- the Park is a reasonably sized natural habitat located adjacent to the extensive Leeuwin-Naturaliste National Park,
- its connectivity to four regional ecological linkages,
- fauna habitats are mostly in good condition with high diversity of fauna species present,
- there are conservation significant fauna species within the Park,
- the importance of the persistence of conservation significant fauna in the local area,
- the limited number of introduced species (Hart, Simpson and Associates Pty Ltd 1997), and
- its location in a region of growing population and increasing urbanisation.

A series of fauna surveys were undertaken during 1994, 1996 and 1997, the results of which are summarised in a single report (Hart *et al* 1997). In 2014 a second fauna survey was undertaken, introducing new surveying methods, targeting a wider range of fauna and surveying representative habitat based on more recent vegetation information.

The resultant report found that of the total 293 vertebrate fauna taxa (13 amphibians, 205 birds, 33 mammals, 42 reptiles) that occur within 10km of the Park, 102 fauna species were observed within the Park, excluding fish and invertebrates.

Of the fauna recorded, eight species are of conservation significance and are listed by State and/or Federal agencies as migratory, vulnerable or endangered (Table 6). DBCA develops and implements recovery plans for threatened species, which outlines actions that need to be taken to prevent these species from further decline and eventual extinction. Six of the eleven introduced species recorded locally were also found in the Park. A full list is included in the report (ngn environmental, 2015).

There has been limited fish and freshwater crayfish surveying in-stream of Meelup Brook, Dolugup Brook and Jingarmup Brook.

### Threats to Native Fauna

Major threats to the Park's native fauna are:

- Introduced animals including foxes, cats and rabbits
- Domestic animals, primarily dogs and cats.
- Inappropriate use, access and recreational activities.
- Wildfire and inappropriate fire management.
- Disease and tree decline.

The listing category abbreviations for significant fauna, conservation status and habitats under the EPBC Act 1999, BC Act 2016 and International Union for Conservation of Nature, are summarised in Table 5.

**TABLE 5: CATEGORY ABBREVIATIONS FOR THE SIGNIFICANT FAUNA AND CONSERVATION STATUS**

| State BC Act 2016                                                                                                                                                                      | Commonwealth EPBC Act 1999                                   | Criteria set by DBCA                                                               | Criteria set by IUCN                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 1: Schedule Rare or likely to become extinct:<br>VU- Vulnerable<br>EN- Endangered<br>S2- Extinct<br>S3-Protected under International Agreements<br>S4- Other specially protected fauna | VU- Vulnerable<br>EN- Endangered<br>CE-Critically Endangered | Priority 1-3: Poorly known species<br><br>Priority 4-5: Taxa in need of monitoring | VU: Vulnerable<br>EN: Endangered<br>CE: Critically Endangered<br>NT: Near Threatened<br>LC: Least concern |

**TABLE 6: RECORDED SIGNIFICANT FAUNA, CONSERVATION STATUS AND HABITATS IN THE PARK**

| Species                                                                           | State  | Commonwealth | IUCN  | Habitat                                                                                      |
|-----------------------------------------------------------------------------------|--------|--------------|-------|----------------------------------------------------------------------------------------------|
| <b>Mammals</b>                                                                    |        |              |       |                                                                                              |
| Western false pipestrelle<br><i>Falsitrellis mackenziei</i>                       | P4     |              | NT    | Roost in tree hollows                                                                        |
| Nguraren or western ringtail possum<br><i>Pseudocheirus occidentalis</i>          | CE     | CE           | VU    | Forest and dense woodlands. Requires tree hollows and/or dense canopy for refuge and nesting |
| Wambenger or brush-tailed Phascogale<br><i>Phascogale tapoatafa spp</i>           | VU     | NT           | NT    | A variety of forest and woodland habitats                                                    |
| Chuditch or western quoll<br><i>Dasyurus geoffroii</i>                            | VU     | VU           | NT    | Wooded habitat, including eucalypt forest, dry woodland, mallee shrubland, riparian forest   |
| Quenda or southern brown bandicoot<br><i>Isodon obesulus fusciventer</i>          | P5     |              | LC    | Dense understorey vegetation, particularly around swamps and along waterways                 |
| Kwoora or western brush wallaby<br><i>Macropus irma</i>                           | P4     |              | LC    | Forest and woodland supporting a dense shrub layer                                           |
| <b>Birds</b>                                                                      |        |              |       |                                                                                              |
| Karrak or forest red-tailed black cockatoo<br><i>Calyptorhynchus banksii naso</i> | VU     | VU           | LC    | Eucalypt forests                                                                             |
| Ngoorlak or Baudin's cockatoo<br><i>Calyptorhynchus baudinii</i>                  | EN     | EN           |       | Eucalypt forests                                                                             |
| Ngoorlak or Carnaby's cockatoo<br><i>Calyptorhynchus latirostris</i>              | EN     | EN           |       | Eucalypt forests                                                                             |
| Birranga or rainbow bee-eater<br><i>Merops ornatus</i>                            | S3 Mig |              | LC    | Most vegetation types, open country                                                          |
| Barking owl<br><i>Ninox connivens</i>                                             | P2     |              | LC    | Forest and woodland supporting a dense shrub layer                                           |
| Caspian tern<br><i>Sterna caspia</i>                                              | S3 Mig |              | LC    | Coastal                                                                                      |
| Hooded plover (western subspecies)<br><i>Thinornis rubricollis tregellasi</i>     | P4     |              | VU C1 | Above the high tide mark on wide, sandy beaches                                              |
| <b>Reptiles</b>                                                                   |        |              |       |                                                                                              |
| Dell's Ctenotus<br><i>Ctenotus delli</i>                                          | P4     |              |       | Not known                                                                                    |

| Section 24 - Native Animals                                                                                                       |                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objective 9: To protect and conserve naturally occurring fauna species in the Park, particularly threatened and priority species. |                                                                                                                                                                    |
| Action No                                                                                                                         | Management Action                                                                                                                                                  |
| 9.1                                                                                                                               | Liaise with the DBCA and with neighbouring landowners on the management of native animals and implementation of recovery plans for threatened species in the Park. |

## 25. ENVIRONMENTAL WEEDS

Environmental weeds are introduced plants that establish themselves in natural ecosystems and modify natural processes. Weeds impact on ecosystems by competing with native plants for space, nutrients, water and light; removing food sources and habitat for native fauna; and altering fire regimes. The Park has 91 known introduced species (Webb 2013).

The edge effect is evident in the Park: weeds are primarily found adjacent to recreational area, trails and firebreaks, and neighbouring properties. Weeds are also found along waterways, wetlands, historic gravel pits and Management Zone 6. Weeds are often introduced by visitors and vehicle movement.



Photo 7: Arum lily control within the Park

The Environmental Weed Strategy for Western Australia (1999) ranks weed species against three criteria – invasiveness, distribution and environmental impact. Out of this process, 34 weeds were rated as high priority for control. Table 7 identifies which of these weeds occurs in the Park.

The Department of Primary Industry and Regional Development (DPIRD) has identified problematic weeds as declared pests under the *BAM Act 2007* and lists them in the Western Australian Organism List (WAOL) Declared weeds in the Park (Table 7) come under the C3 control category, which means they are established in Western Australia but may warrant management of spread, impact and distribution.

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<sup>2</sup>The Western Australian Organism List is available on the Department of Primary Industries and Regional Development Website: [agric.wa.gov.au/organisms](http://agric.wa.gov.au/organisms)

**TABLE 7: WEEDS OF SIGNIFICANCE IN MEELUP REGIONAL PARK**

| Species                                              | Weed of National Significance | Western Australia Organism List | Environmental Weeds of Concern in the Park |
|------------------------------------------------------|-------------------------------|---------------------------------|--------------------------------------------|
| Bridal creeper<br><i>Asparagus asparagoides</i>      | Yes                           | Yes                             | Yes                                        |
| Mediterranean turnip<br><i>Brassica tournefortii</i> |                               | Yes                             |                                            |

|                                                         |     |     |     |
|---------------------------------------------------------|-----|-----|-----|
| Double gee<br><i>Emex spinosa</i>                       |     | Yes |     |
| Flax-leaf broom<br><i>Genista linifolia</i>             | Yes | Yes | Yes |
| Tagasaste<br><i>Chamaecytisus palmensis</i>             |     | Yes | Yes |
| Hare's tail grass<br><i>Lagurus ovatus</i>              |     | Yes |     |
| One-leaf cape tulip<br><i>Moraea flaccida</i>           |     | Yes | Yes |
| Rose pelargonium<br><i>Pelargonium capitatum</i>        |     | Yes | Yes |
| Guildford grass<br><i>Romulea rosea</i>                 |     | Yes | Yes |
| Harlequin flower<br><i>Sparaxis bulbifera</i>           |     | Yes |     |
| Apple of sodom<br><i>Solanum linnaeanum</i>             |     | Yes | Yes |
| Watsonia<br><i>Watsonia spp</i>                         |     | Yes | Yes |
| Arum lily<br><i>Zantedeschia aethiopica</i>             |     | Yes | Yes |
| Brisbane golden wattle<br><i>Acacia fimbriata</i>       |     | Yes | Yes |
| Flinders range wattle<br><i>Acacia iteaphylla</i>       |     | Yes | Yes |
| Sydney golden wattle<br><i>Acacia longifolia</i>        |     | Yes | Yes |
| Manna wattle<br><i>Acacia micobotyra</i>                |     |     | Yes |
| Queensland silver wattle<br><i>Acacia podalyrifolia</i> |     |     | Yes |
| Dolichos pea<br><i>Dipogon lignosus</i>                 |     | Yes | Yes |
| Victorian teatree<br><i>Leptospermum laevigatum</i>     |     | Yes | Yes |
| Sweet pittosporum<br><i>Pittospermum undulatum</i>      |     | Yes | Yes |
| Milkwort<br><i>Polygala myrtifolia</i>                  |     | Yes | Yes |
| Pyp grass<br><i>Ehrharta villosa</i>                    |     | Yes | Yes |
| Olive <i>Olea europaea</i>                              |     | Yes | Yes |

An extensive weed survey was undertaken by the Committee in 2011, with an assessment of all trails and firebreaks, recreation nodes, waterways, wetlands, gravel pits and former waste facility landfill area in Management Zone 6 (Fisher 2011). This valuable resource provides a baseline for future weed surveying and recommends prioritisation of weed control. Meelup Regional Park Weed Control Guidelines have been developed for contractors to maximise the efficacy and minimise the impacts of weed control on Park users and the environment.

An annual weed inspection is undertaken of key sites within the Park and weed control is prioritised based on financial resources and an assessment of:

- Invasiveness; how rapidly and aggressively the weed can spread.
- Distribution; where it is located and the population's extent. Control should be prioritised for newly established weed populations, areas of good quality bushland and rehabilitation areas.
- Ecological impact on the environment; taking into account the two considerations above and the weed's potential to alter the composition, especially the formation of monocultures, in the natural environment. In addition, weeds that have the potential to impact on rare and threatened flora and fauna need to be prioritised for control.
- Potential and current distribution and feasibility of control.

Non-native trees have been planted for rehabilitation, aesthetic or shading purposes in some locations in the Park, namely at Eagle Bay, Meelup Beach and Management Zone 6. These include New Zealand Christmas trees (*Metrosideros excelsa*), coastal mirt (*Eucalyptus utilis*) and non-native *Eucalyptus* species. Some of these species have naturalised and are spreading to other areas of the Park, or are preventing natural regeneration. These populations are regularly monitored and either;

- retained where they pose no threat of spreading or affecting adjacent conservation values,
- incrementally removed and replaced if they are determined inappropriate, are impacting on natural regeneration or revegetation efforts or have naturally senesced, or
- removed where they are self-seeding.

| Section 25 - Environmental Weeds                                                               |                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objective 10: To minimise the impact of environmental weeds on the natural environment values. |                                                                                                                                                                              |
| Action No                                                                                      | Management Action                                                                                                                                                            |
| 10.1                                                                                           | Develop and implement a priority weed control action plan, based on assessment of invasiveness, distribution and potential environmental impacts within the Park.            |
| 10.2                                                                                           | Regularly review effectiveness of weed control programme and monitor the impact of weed control on native flora and maintain an effective mapping system of weed management. |
| 10.3                                                                                           | Regularly review the Park's annual weed control programme and maintain a mapping system of weed management.                                                                  |

## 26.FERAL ANIMALS

Feral animals are introduced species that have become established as wild or naturalised populations (Table 8). Introduced species impact on ecosystems through predation, habitat modification, competition for food and habitat, introduction of disease, and environmental degradation.

**TABLE 8: INTRODUCED SPECIES IN MEELUP REGIONAL PARK**

| Species                                            | WAOL control category |
|----------------------------------------------------|-----------------------|
| <b>Mammals</b>                                     |                       |
| Black rat ( <i>Rattus rattus</i> )                 |                       |
| Rabbit ( <i>Oryctolagus cuniculus</i> )            | C3 management         |
| Fox ( <i>Vulpes vulpes</i> )                       | C3 management         |
| Feral cat ( <i>Felis catus</i> )                   |                       |
| <b>Fish</b>                                        |                       |
| Rosy barb ( <i>Puntius conchonius</i> )            |                       |
| <b>Birds</b>                                       |                       |
| Laughing kookaburra ( <i>Dacelo novaeguineae</i> ) |                       |

The house mouse (*Mus musculus*) is also expected to be present but has not been recorded. Foxes have contributed to the extinction and decline of many ground-nesting birds, small to medium sized mammals (35g to 5.5kg) and reptiles. Cats are also considered to have a significant impact; however the evidence of their effect on fauna in the South West is scarce. Rabbits compete with native fauna for food and can impact on the regeneration of native vegetation through grazing.

Kookaburras are considered an 'acclimatised species' or 'fauna living in a wild state as a result of being released or escaping from confinement or because it is offspring of fauna that has been released or has escaped from confinement'. They are protected under the BC Act 2016.

Rosy barb (*Pethia conchonius*) have been recorded in Jingarmup Brook (Beatty *et al* 2006). Although they were recorded outside of Meelup Regional Park, a small section of Jingarmup Brook is within the Park and it is therefore possible that this species exists within Park boundaries. This was the first wild population of the species recorded in WA.

Upstream dams may provide a mother stock of this feral species and so it may prove difficult to completely eradicate them from the stream system. Further research is required on the source and potential eradication of this species.

### Control of Feral Animals

An annual introduced animal control programme is undertaken in the Park, using 1080 poisoned oats and calicivirus virus for rabbits, 1080 baits for foxes and cage traps for feral cats. Baiting results indicate a relatively consistent bait take by foxes, which supports the importance of continuing a baiting programme. Feral cats have been observed in the Park and a trapping programme is ongoing.

| Section 26 - Feral Animals                                                        |                                                                                                                                                                            |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objective 11: To minimise the impact of feral animals on the Park's biodiversity. |                                                                                                                                                                            |
| Action No                                                                         | Management Action                                                                                                                                                          |
| 11.1                                                                              | Implement a feral animal control programme within the Park and in collaboration with adjoining landowners and review the effectiveness of the programme annually.          |
| 11.2                                                                              | Engage with neighbouring landholders to facilitate a coordinated and extended feral animal management programme beyond the Park's boundary.                                |
| 11.3                                                                              | Investigate the potential for a rosy barb (feral fish) monitoring project to determine their presence in Jingarmup Brook, and implement management actions as appropriate. |
| 11.4                                                                              | Conduct regular surveys to identify potential impacts of feral animals on the Park's threatened fauna population.                                                          |

## 27.TREE DECLINE AND DISEASE

### Tree decline

For several decades, decline in the health of certain tree species has been anecdotally observed in the Park and wider South West Region, including *Agonis flexuosa*, *Eucalyptus rudis*, *E. gomphocephala*, *E. marginata* and *Corymbia calophylla*. Higher temperatures, declining rainfall and lowered water tables are thought to be the primary stressors, with vulnerable trees susceptible to secondary impacts from insects and disease, resulting in the eventual death of trees (Australian Broadcasting Corporation 2012).

The decline of key tree species in the Park will have significant impacts on the Park's ecology and threatened species such as the western ringtail possum and Carnaby's, Baudin and forest red-tailed black cockatoos. Dying trees can pose a safety hazard to visitors from falling branches and limbs. The reduction in the health and number of trees can also impact on the visual amenity and character of the Park, with these species providing an important component of the Park's visual landscape.



**Photo 8: Carnaby's Black Cockatoo (*Zanda latirostris*)**

Vegetation condition change has been analysed using Landsat multi spectral imagery for the period February 1988 to January 2015. The data shows that the vegetation condition of the Park reflects the widespread trend of decreasing rainfall and increasing fire intensity and size (Zdunic and Huntley 2015).

### **Tree Disease**

Several plant diseases are present in the Park such as pythiaceous root rots (*Phytophthora* species), Armillaria root rots, stem cankers, rusts, and leaf spots and blights. Of these, *Phytophthora cinnamomi* or dieback, is a key focus of Park management.

These diseases are exacerbated by numerous stressors in which increase plant susceptibility to disease. These stressors include drought stress from falling water tables and reduced rainfall, increased temperatures, altered seasonal patterns and insect attack. Changing species composition impacts dependant fauna, resulting in altered ecosystems and exacerbating other stressors. Management actions include appropriate hygiene measures, controlling human and vehicle access from areas of intact vegetation, creating or enhancing vegetation corridors, weed control and rehabilitation of degraded areas.

### ***Phytophthora* dieback**

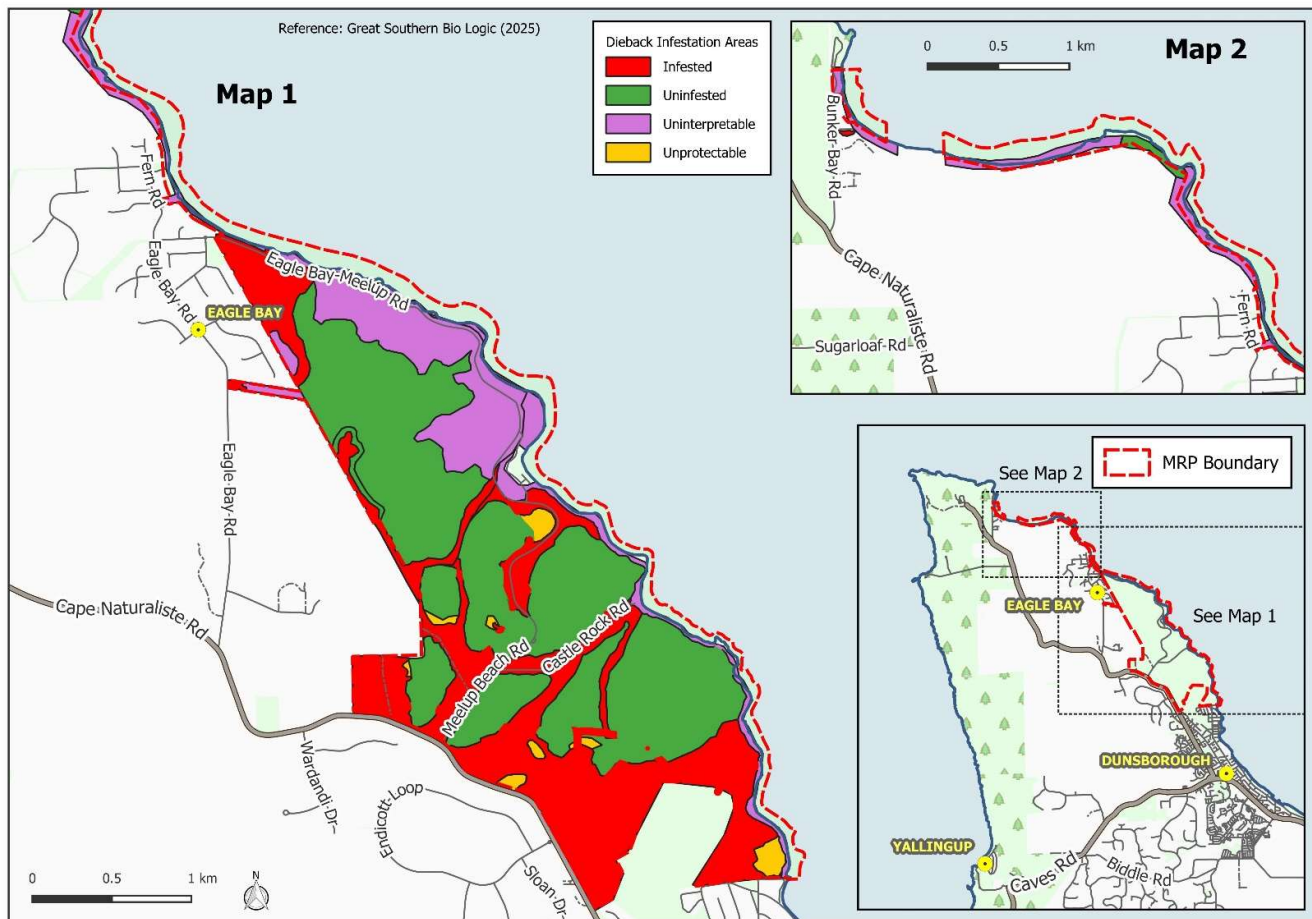
*Phytophthora* dieback is caused by the pathogen *Phytophthora cinnamomi*, which is an oomycete or water mould. Over 40% of Western Australian plant species are susceptible to *P. cinnamomi* (Shearer *et al* 2004). Changes in species composition impact native fauna that depend on this vegetation for food and habitat. *Phytophthora* dieback poses a serious threat to the Park's biodiversity values and is a high priority for Park management.

Approximately 25% of the Park is infested with *P. cinnamomi*, including the area between the Dunsborough townsite and Meelup Beach Road



**Photo 9: Grass tree death caused by *P. cinnamomi***

and all riparian zones (Figure 9). Uninfected sections of the Park remain under threat as they contain susceptible species including jarrah, banksia and grass trees (*Xanthorrhoea sp.*). *Phytophthora crypto-gea* has also been identified in Zone 11. This pathogen was identified as the cause of death of a cluster of *Xanthorrhoea preissii* (Dieback Treatment Services 2012).



**FIGURE 10: DIEBACK MAP OF MEELUP REGIONAL PARK (GREAT SOUTHERN BIO LOGIC 2025)**

Detection of the disease is based on visual assessment of vegetation condition and presence of symptoms in conjunction with soil analysis to detect the pathogen; however, sampling can fail to detect the pathogen in clearly infected areas. An area is declared Infested if symptoms and/or pathogens are detected. The Park was most recently surveyed for *Phytophthora* dieback in 2025 (Great Southern Bio Logic 2025) which showed that 25% of the Park is infested with *Phytophthora cinnamomi* and another 13% of the Park is at risk of infestation by autonomous spread. The majority of Management Unit 16 is Uninfested.

Introduction or spreading of *Phytophthora* dieback into an area can be considered serious environmental harm under the EP Act 1986. There are several publications that provide general guidelines on the management of *Phytophthora* dieback, including:

- *Managing Phytophthora dieback in bushland* (Dieback Working Group 2005)
- *Phytophthora cinnamomi and disease caused by it* (DEC 2003)
- *Managing Phytophthora dieback – Guidelines for local government* (DWG 2000)

Management of *P. cinnamomi* within the Park should focus on Uninfested and Infested areas that have significant environmental values, such as DRF or TECs. A number of Management Zones are dieback free and prevention of infestation of these areas is a high priority. Access to these areas needs to be restricted and strict hygiene measures implemented. This is particularly important for Management Zone 3 where firebreaks have been cleared along a ridge into dieback free bushland. The movement of visitors and vehicles from Infested to Uninfested areas should not be permitted, or at a minimum carefully managed to prevent the movement of infected soils to Uninfested areas.



**Photo 10: Dieback cleaning disinfection station on walk trail**

Management of *Phytophthora* dieback will aim to:

1. Implement practices which mitigate the damaging effects of *P. cinnamomi* where it has already established.
2. Contain or prevent further autonomous spread at the boundaries of existing infestations. This may include the realignment or re-surfacing of firebreaks and trails, as well as phosphite application.
3. Reduce the rate of vectored spread and establishment of new infestations within Uninfested Protectable areas by:
  - a. ensuring hygiene management is implemented for new developments where appropriate (e.g. recreational facilities and upgrades, realignments of trails and firebreaks);
  - b. restricting operations to dry soil conditions;
  - c. applying phosphite in priority areas, and minimising or prohibiting access into these areas.

Management priority will be on the reduction of vectored spread and prevention of human-assisted establishment of infestation within protectable areas.

Due to the relatively small size of Meelup Regional Park and the apparently slow spread of *P. cinnamomi*, boundary re-checks are recommended every five years. Treatment with phosphite injection or spraying in priority areas should be undertaken every three to five years. Dieback surveys should be undertaken prior to new developments that require soil movement, such as new firebreaks or tracks.

Infested areas still have significant natural environment values that need to be preserved. Mapping is conservative, and land within Infested areas can contain symptom free vegetation.

### ***Armillaria luteobubalina***

*Armillaria luteobubalina* is a native soil-borne fungus which spreads through root to root contact with infected trees, especially decayed stumps and roots. The fungus causes root rot and potential tree death in disturbed areas by destroying the food and water transport systems of its host, then living on the dead plant's tissue for many years. Symptoms include branch death, yellowing foliage, poor vigour and darkening and rotting of larger roots.

The range of species susceptible to the fungus is large and poorly defined (at least 50 families and more than 200 species), with little information on the presence of resistant or tolerant species. Shearer and Tippet (1988) and Shearer *et al.* (1997, 1998) found that many species that resist infection by *P. cinnamomi* are susceptible to *A. luteobubalina* (DEC 2010). Seventeen percent of the Park's vegetation was mapped as infected with *A. luteobubalina* in 1994 (Helyar 1994), however, no follow up surveys have been undertaken.

*A. luteobubalina* is an integral part of ecosystem functioning and is not detrimental in an intact natural ecosystem. Problems occur post disturbance and controlling *A. luteobubalina* in natural ecosystems would likely exacerbate the problem (R. Robinson, personal communication, n.d.).

The main management action is to limit the introduction of the disease through observation and hygiene measures, particularly when carrying out rehabilitation of disturbed areas.

### Aerial cankers

Aerial cankers pose a significant risk to vegetation in the Park. Fungi (*Quambalaria*, *Edothisella* and *Sporothrix* spp) can cause canker-like lesions on the trees, which result in eventual tree death. It has been identified as a major threat to the *Eucalyptus x phylaxis* population in which stem death is evident, as well as *C. calophylla*. The impact of canker within the Park is limited to anecdotal evidence.

### Quambalaria shoot blight

*Quambalaria pitereka* is a fungal pathogen responsible for leaf and shoot blight known as Quambalaria Shoot Blight (QSB). QSB is known from eucalypt plantations of NSW and Queensland, but has recently emerged in WA, affecting the leaves, buds, flowers and fruit of WA host tree species (*C. calophylla* and *C. ficifolia*) (Marbus 2010). Management of this pathogen is limited due to its occurrence in natural areas, making individual tree treatment with fungicide difficult. Damage to *C. calophylla* flowers is likely to cause substantial losses of foraging resources over summer.

## Section 27 - Tree Decline and Disease

### Objective 12:

- a) To monitor and manage tree decline and its impacts on the Park's environment; and
- b) To identify and control the spread of plant diseases and to protect areas currently free of disease.

| Action No | Management Action                                                                                                                                                                                              |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12.1      | Maintain the dieback management programme to protect Uninfested conservation and protection areas.                                                                                                             |
| 12.2      | Maintain and strengthen dieback and hygiene management plans for the Park and promote use of trail markers, trail dieback hygiene stations and limestone capping for fire breaks and trails where appropriate. |
| 12.3      | Continue to conduct dieback surveys as appropriate and at intervals of not more than 5 years duration to monitor and document the spread of dieback within the Park.                                           |
| 12.4      | Create no new trails or firebreaks in areas identified as Uninfested with dieback.                                                                                                                             |
| 12.5      | Investigate options for the treatment of trees with signs of decline.                                                                                                                                          |
| 12.6      | Utilise image mapping and analysis to periodically monitor changes in vegetation condition, to inform vegetation management decisions.                                                                         |

## 28.FIRE

Fire is a natural occurrence in Meelup and the Wadandi people used fire to manage parts of the landscape. However, inappropriate fire regimes can have severe adverse impacts on the Park's native flora, fauna and vegetation communities.

Uncontrolled fire also poses a serious risk to life, property and infrastructure. Dunsborough, Eagle Bay and semi-rural subdivisions are located adjacent to the Park whilst peak visitor use coincides with the summer high-risk period.

An Ecological Fire Management Plan (Natural Area 2020) has been developed to assess each ecological community in the Park and suggest burn intervals based on vegetation type. Other factors that should be considered when prescribing fire mitigation actions are;

- time since last burn,
- fire fuel load,
- presence of sensitive flora and fauna,
- species response to fire,
- proximity to assets, particularly neighbouring property,
- DFES, DBCA and City permit requirements,
- water supplies, access and egress routes, the strategic firebreak system, firefighting resources, and education and liaison, and
- the potential for *Phytophthora* dieback and weeds spread, particularly in conservation and protection zones.

Specifics relating to Wadandi burning practices and flora and fauna are briefly summarised below. For further information please refer to the Ecological Fire Management Plan. It is stressed that the suggested burn intervals for each vegetation community below do not represent a planned burning roster but information to consider. Future research is required to assess the fire response of key vegetation communities and plant species to further develop an ecologically informed burn roster.

### Ecological Fire Management Plan Recommendations:

1. Wadandi Burning Practices
  - a. Cool burns were carried out in autumn,
  - b. Burning to occur at dusk when moisture levels increase,
  - c. Consider wind conditions,
  - d. Flames should never exceed a meter high, and
  - e. Burning to be in mosaics and buffer zones should be created around certain ecosystems, such as granite outcrops. *Xanthorrhoea* species (balgas/grass trees) should not be burnt all at once
2. *Calothamnus graniticus* heaths (Department of Parks and Wildlife (DPaW) 2016a)
  - a. *C. graniticus* heaths are a delicate ecosystem and should not be deliberately burnt during hazard reduction burns. Similarly, soil and vegetation disturbance and the use of flame retardants should be avoided.
3. A burn interval of 15 to 45 years should be maintainedGeophyte populations (including orchids) (DPaW 2016b)
  - Geophytes should not be deliberately burnt during hazard reduction burns. Similarly, soil and vegetation disturbance and the use of flame retardants should be avoided.
  - A burn interval of 15 to 45 years should be maintained.
  - Burn timing:
    - Mid-November to March: dormant phase, burns are unlikely to impact plants
    - March to April: burning recommended

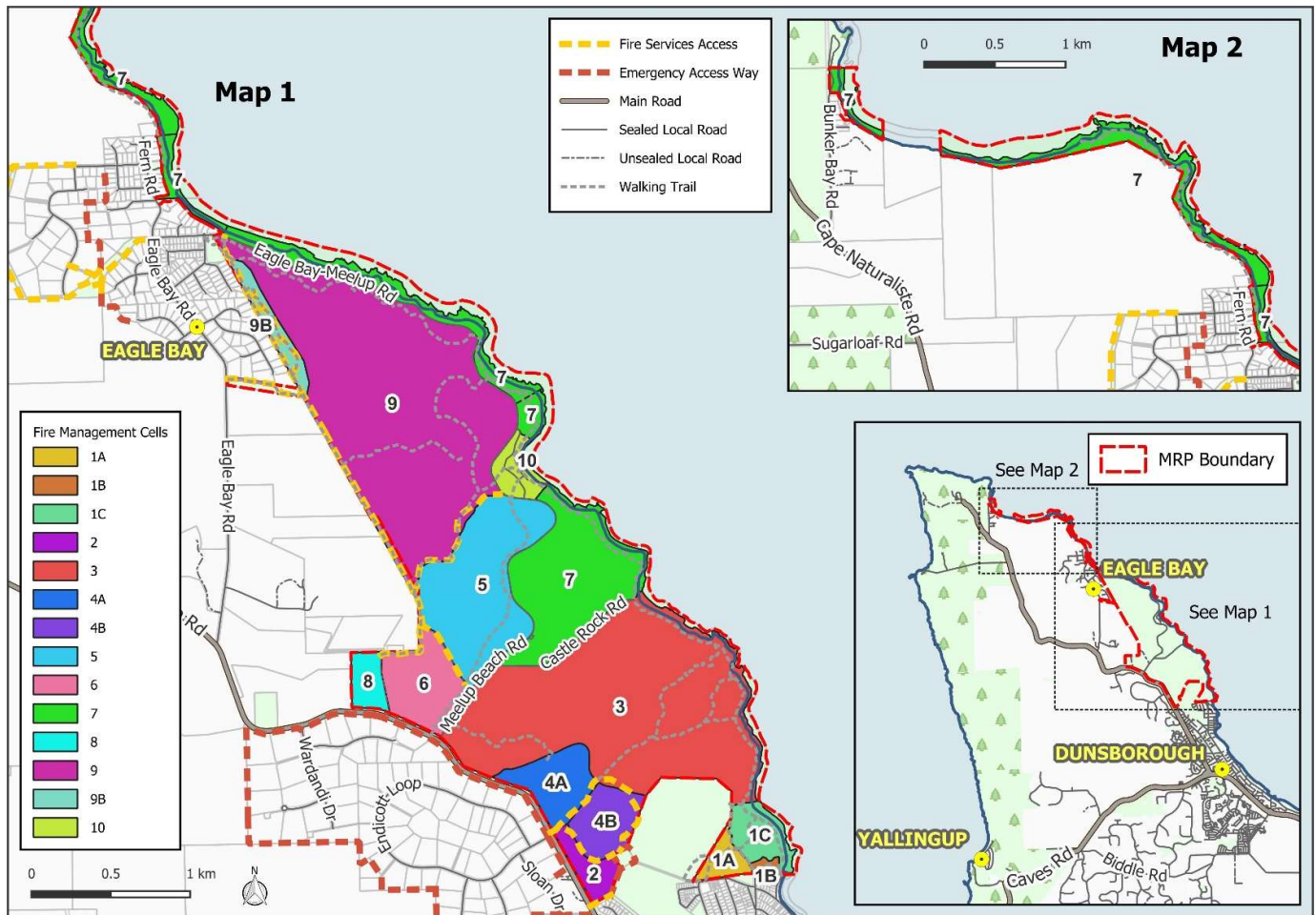
- Mid-May to September: active growing and flowering phase, burns not recommended
- Mid-October to November: burning recommended
- If burns are required, maintain mosaics with unburnt patches.
- Pre-burn survey recommended
- 4. Western Ringtail Possum (*Pseudocheirus occidentalis*) (DPaW 2008)
  - Population monitoring pre and post burn is recommended
  - Pre and post predator control programmes are recommended
  - Canopy cover is essential for Western ringtail possums:
    - char height should not exceed two meters,
    - habitat trees, identified dreys, dense mid-story and *Xanthorrhoea* skirts should be raked around
    - Burn intervals:
      - A minimum 20 year burn interval is recommended to allow canopy regrowth
      - Moderate to high intensity burn recommended every 30 to 50 years to assist with dense mid-story regrowth and tree hollow formation
      - Adjacent habitat areas should be burnt 5 – 10yrs apart
- 5. Black Cockatoos (DPaW 2009)
  - Char height should be less than 2 meters
  - Habitat trees and trees likely to develop hollows should be raked around
  - Conduct low intensity burns in mild conditions (late autumn or spring after rain)
  - Conduct moderate intensity burns at 15 to 25 year intervals to promote hollow development, vegetation regeneration and seed release and germination

**TABLE 9: MINIMUM RECOMMENDED BURN INTERVAL FOR VEGETATION ASSOCIATIONS IN THE PARK**

| Vegetation Association              | Minimum Recommended Burn Interval (years) |
|-------------------------------------|-------------------------------------------|
| Banksia Woodland                    | 10                                        |
| <i>Calothamnus graniticus</i> Heath | 16                                        |
| Coastal                             | 16                                        |
| Creekline                           | 10                                        |
| Granitic Apron                      | 16                                        |
| Granitic Heath                      | 16                                        |
| Jarrah Marri Forest – Laterite      | 10                                        |
| Jarrah Marri Forest – Loam          | 10                                        |
| Jarrah Marri Woodland               | 10                                        |

Currently, hazard reduction burns are carried out in fire cells as required. A map of the fire management cells and infrastructure is provided in Figure 10.

| Section 28 - Fire                                                                                                                                                                                    |                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| <b>Objective 13: To manage fire to protect and promote the conservation of biodiversity and cultural and natural values, whilst providing for the protection of human life and community assets.</b> |                                                                                                            |
| Action No                                                                                                                                                                                            | Management Action                                                                                          |
| 13.1                                                                                                                                                                                                 | Implement the Meelup Regional Park Ecological Fire Management Plan in conjunction with Wadandi custodians. |
| 13.2                                                                                                                                                                                                 | Implement fire ecology research to guide future fire management within the Park.                           |
| 13.3                                                                                                                                                                                                 | Review fire management planning for the Park in collaboration with the DBCA and traditional custodians.    |



**FIGURE 11: FIRE MANAGEMENT CELLS**

## 29. REHABILITATION

Historical land use, visitor access and urban proximity have contributed to the degradation of certain areas, resulting in loss of native vegetation and the introduction of weeds and disease. Degradation impacts the natural environment and visual amenity of the Park.

Areas of the Park requiring rehabilitation include Zone 6, informal and closed trails, disused vehicle tracks and degraded riparian, coastal and bushland areas. The edge effect is observable around the coastal nodes and the reserve-urban interface.

Annual revegetation activities undertaken in the Park focus on specific sites for intensive weed control and planting with local native species to rehabilitate degraded areas. Measures to prevent degradation should be implemented concurrently with rehabilitation where required.

### Management Zone 6

Zone 6 contains historic gravel extraction areas and a rehabilitated landfill site. The Zone is mapped as Phytophthora dieback Infested, has significant erosion issues and previous revegetation (circa 1993) utilised non-native species where are spreading to adjacent areas and pose an increased fire risk.

While degraded, 57% of Zone 6 is classed as excellent to good quality bushland (Onshore Environmental 2013). The Weed Action Plan Meelup Regional Park – Zone 6 (Tranen Revegetation Services, 2025) provides a detailed framework and management document for rehabilitation.

### Mountain Bike Trails

The former landfill waste disposal site within Zone 6 has been rehabilitated in accordance with the Contaminated Sites Act 2003 and now hosts an extensive mountain bikes trails network. Cape Mountain Biker Club have developed the area in collaboration with the Western Trails Alliance. The trails connect to the Dunsborough and Districts Country Club. The trails are well utilised by the surrounding community and provide an excellent way for people to enjoy the Park.



**Photo 11: Revegetation of former gravel extraction area.**

Mountain bike riders developing unauthorised trails in pristine areas of the Park continue to be a concern. Dieback management and weed spread in and out of the mountain bike trails are issues but increasing awareness and providing clean-down facilities will assist in mitigating this risk. Engaging mountain bike riders, particularly children, with these issues provides an avenue to promote the conservation and preservation of the Park within the wider community.

| Section 29 - Rehabilitation                                                                 |                                                                                                                                                       |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objective 14: To rehabilitate and restore natural vegetation in degraded areas of the Park. |                                                                                                                                                       |
| Action No                                                                                   | Management Action                                                                                                                                     |
| 14.1                                                                                        | Develop and implement an annual programme for rehabilitation of vegetation throughout the Park.                                                       |
| 14.2                                                                                        | Use only local native species of plants that occur in the Park for brushing, planting and seeding.                                                    |
| 14.3                                                                                        | Use disease and weed free mulch in vegetation rehabilitation activities, within areas of high quality bushland.                                       |
| 14.4                                                                                        | Ensure that seed collection in the Park is authorised by the City and licensed by DBCA, and that collectors use appropriate dieback hygiene measures. |
| 14.5                                                                                        | Maintain a positive working relationship with the mountain bike riders to engage them in conservation and preservation of the Park.                   |

## **PART D. MANAGING CULTURAL HERITAGE**

### **30. GUIDING PRINCIPLES FOR MANAGING CULTURAL HERITAGE**

#### **1. Conservation and protection of cultural heritage**

Management actions to maintain cultural heritage, attributes and traditions. Heritage sites are to be preserved and maintained for their inherent cultural and social values. Impacts from human use and management practices will be minimised to maintain heritage values.

#### **2. Consistency of management policies**

Management actions within the Park should be consistent with appropriate legislation as well as State, Federal and international heritage conventions.

#### **3. Community involvement**

Community involvement and consultation prioritised in heritage management.

#### **4. Research and interpretation**

Where appropriate, interpretative information is to be provided to enhance the community's understanding of, and appreciation for, heritage sites. The managing agencies should provide opportunities for, and support, further research into the Park's cultural heritage value.

#### **5. Restoration of cultural heritage**

Heritage sites are priorities for management and restoration. Consultation with appropriate stakeholders must be undertaken.

### **31. ABORIGINAL CULTURAL HERITAGE**

Meelup Regional Park is Wadandi Boodja and the Wadandi people continue to be the custodians of the land. A Healthy Country Plan was developed in 2022 that aims to guide the Wadandi community, the City and the Committee in developing and promoting Wadandi engagement and involvement in Park management (See Appendix 1).

The Wadandi community, the City and the Committee are working collaboratively in practical management of the Park, building upon Wadandi involvement and collaboration as a core principle.

The amended ACH Act 1972 protects all Aboriginal cultural heritage within Western Australia. The Act applies to various places and objects which are or could be culturally, spiritually or ceremonially significant to traditional custodians. A register of sites and objects is maintained by the Department of Lands, Planning and Heritage under the Act. The Act also protects sites that are not on the register.

Within the Park, the Castle Bay heritage place is registered under the Act as an artefacts scatter site. As the State register is not a comprehensive listing of all existing Aboriginal heritage sites, assessments and appropriate approvals may be necessary before any operations where there is potential to inadvertently damage sites.

The Meelup Healthy Country Plan (HCP) identified the whole Park as a culturally significant landscape and identified several specific Culturally Sensitive Sites (CSA). The HCP proposes these sites be treated as minimal use areas and their management is an ongoing process between the Wadandi community, the City and the Committee. For further information on the Cultural Heritage Management Actions, see Appendix 1.

| Section 31 - Aboriginal Cultural Heritage                                                                   |                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objective 15: To work with Wadandi custodians to appropriately manage the cultural heritage within the Park |                                                                                                                                                                                     |
| Action No                                                                                                   | Management Action                                                                                                                                                                   |
| 15.1                                                                                                        | Actively seek to increase Wadandi involvement and collaboration on all issues of Park management, with specific focus on sites identified in the HCP and by traditional custodians. |
| 15.2                                                                                                        | Develop a management framework that gives the Wadandi community agency and voice to lead on issues of cultural heritage.                                                            |
| 15.3                                                                                                        | In consultation with the Wadandi people, incorporate information on history and culture into visitor interpretation facilities.                                                     |

## 32. NON-ABORIGINAL CULTURAL HERITAGE

The Park's non-Aboriginal heritage involves coastal exploration, whaling, fish processing and recreational activities. There are seven heritage places in the Park that are listed on the State Heritage List (Appendix 3). Meelup Beach and nearby bays have been popular picnic and day-trip destinations for both local and regional residents. A small fish processing factory was operated in Eagle Bay during the 1950s, and camping was permitted at Meelup Beach until the 1970s.

### Captain Nicolas Baudin scientific expedition

Captain Nicolas Baudin led a French expedition in 1801 to Geographe Bay in the corvettes *Geographe* and *Naturaliste*. Two boats investigated the western shore with the aim of taking soil samples and examining the country. Sub-Lieutenant Picquet attempted to examine Cape Naturaliste but failed due to rough seas.

Henri de Freycinet successfully landed at what is thought to be Eagle Bay (Marchant 1998). The Freycinet landing was the only landing the Baudin expedition made in the Park. A commemorative lookout in the form of a ship's bow is on the Eagle Bay-Meelup Road and overlooks the assumed landing site. The adjacent carpark has been named "Baudin".

Several local sites also bear names from this expedition, including Point Picquet, Cape Naturaliste, Riedle Park and Geographe Bay.

### Castle Bay Whaling Company

From the early 19th century, American whalers from Massachusetts made yearly voyages to catch whales in Castle Bay. In 1845, John Bateman formed the Castle Bay Whaling Company with three other Fremantle businessmen. A cairn marks the site of their shore station. The hill above Castle Rock was used to sight whales swimming past, and quandong trees were seeded there at the time. In 1872, the Castle Bay Whaling Company closed down because the price of whale oil declined with the commercial development of petroleum.

The Western Australian Heritage Council advises "Nothing obvious remains from the historic use of the place for whaling activities". However, several archaeological features were visible until the 1970s. The carpark covers an area that contains remnants of building foundations and at least one of the structures (the kitchen cookhouse) was floored with whalebone (J. Lord pers. comm 1989). Some artefacts, including pieces of brick, worked stone and mortar are associated with the raised islands of

soil surrounding the trees and vegetation standing within the carpark (Gibbs, 1994). A piece of whale-bone from the floor paving is on display at the Busselton Museum.

| Section 32 - Non- Aboriginal Cultural Heritage                                                                        |                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Objective 16: To identify, protect and appropriately manage the Park's non-Aboriginal cultural heritage sites.</b> |                                                                                                                                                                     |
| Action No                                                                                                             | Management Action                                                                                                                                                   |
| 16.1                                                                                                                  | Manage visitor activities to ensure the Park's cultural heritage is not adversely impacted.                                                                         |
| 16.2                                                                                                                  | Consult with historical records and historians to develop and collate existing information and data on historic sites located in, and general history of, the Park. |
| 16.3                                                                                                                  | Include historical information about the Park as appropriate on interpretative signage within the Park and promote historical information on the Park website.      |

## **PART E. MANAGING RECREATION AND VISITOR USE**

### **33. GUIDING PRINCIPLES FOR MANAGING VISITOR USE**

1. Preservation of cultural and natural values  
The intensity and distribution of recreational activities is managed to maintain the cultural heritage and natural values of the Park.
2. Consistency of recreation with reserve purpose  
Recreational activities must be compatible with the Park's assigned purpose under the Land Administration Act.
3. Equity  
Visitor events and activities that impair or jeopardise the safety of other visitors will be specifically managed, directed to more appropriate places or not permitted. Priority will be given to low impact activities and those that promote awareness, appreciation and understanding of the Park's natural environment and cultural heritage
4. Management  
Visitor access and use of the Park is effectively managed for the benefit of the community and natural environmental values and cultural heritage.
5. Recreation opportunities  
A range of recreation opportunities should be provided for in a local and regional context. Facilities within the Park should complement not compete with those available outside the Park.

The objectives of managing visitor and associated commercial activities in the Park are to:

- Encourage visitor use whilst ensuring the level and type of visitor use is sustainable and minimises conflict with Park values and other visitors/user groups.
- Provide opportunities to improve and increase community awareness and appreciation of the Park's values.
- Maintain and enhance the natural, cultural and visual landscape qualities of the Park.

### **34. VISITOR MANAGEMENT**

#### **Visitor Profile**

Meelup Regional Park is a popular tourist and recreational asset in the South West, due to the Park's outstanding natural beauty, sheltered beaches, relatively pristine environment, and its proximity to Dunsborough.

Visitor surveys were carried out in the Park in 2010 and 2016. The majority of visitors spent their time resting and relaxing, spending time with family and friends and enjoying nature and the outdoors. Both surveys found that the largest proportion of visitors were from the Perth, older than 40yrs in age and the most visited site was Meelup Beach followed by Eagle Bay, Bunker Bay and Castle Rock. Most visitors visited for two hours in groups of less than five people. The majority of visitors were very satisfied with their visit.

Ongoing monitoring will assist determination of visitor use pressures, guides sustainable tourism and ensure that Park values are protected. Information obtained from visitor monitoring will help;

- quantitatively demonstrate the Park's values according to visitor perceptions,
- guide the provision and location of facilities and infrastructure,
- assess the importance of Meelup Regional Park to the local economy, and
- provide information to guide the Park's management activities.

## **Visitor Access**

Appropriate visitor access, including access to beaches, walking tracks and mountain bike trails, is important to enable visitors to recreate and enjoy the Park. Visitor access planning also includes improving access to events, buildings, facilities and information, for the benefit of people with disability, the elderly, young parents and people from culturally and linguistically diverse backgrounds. Access is restricted to formalised accesses to maintain and conserve the Park's values.

The main types of access are sealed roads, management access tracks, and trails for pedestrians and mountain bikes. Visitor access to the Park is predominately by vehicles on public roads, followed by walking or cycling from surrounding areas. Vehicle access onto beaches and trails in the Park is controlled and restricted to authorised vehicles. A small proportion of visitors visit the Park via boat. Boats can only be launched from a sand boat ramp at the Eagle Bay Community Hall carpark.

In 2023, an all access path from the Meelup Beach carpark to the beach, incorporating a design by Wadandi artist, Sandra Hill, was completed by the City of Busselton.

## **Public Roads**

The public roads that dissect the Park are Meelup Beach, Castle Rock, Sheen and Eagle Bay-Meelup Roads. Eagle Bay-Meelup Road is a coastal road between Meelup Beach and Eagle Bay and is one of the few locations in the South West where a road runs alongside the ocean, providing outstanding scenic values. The Coastal Nodes Master Plan recommended that Eagle Bay-Meelup Road should be regarded as a scenic and recreation road rather than a transport route, with an emphasis on the road's natural values and environs (WJLA 2013). Traffic counters have been installed on Meelup Beach Rd and Eagle Bay – Meelup Beach Rd to inform management.

Vehicle management in the Park involves maintaining low vehicle speed limits and implementation of traffic calming measures to;

- improve safety for pedestrians and cyclists,
- reduce impacts to wildlife (roadkill),
- minimise the risk of vehicle collisions.



**Photo 12: Annual school leaver's event at Meelup Beach**

| Section 34 – Visitor Management                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Objective 17:</b>                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                 |
| <p>a) To provide opportunities for visitor appreciation of the Park while also preventing adverse impacts from uncontrolled access.</p> <p>b) To encourage visitor use whilst ensuring that the level and type of visitor use is sustainable and minimises conflict with other Park visitors and values.</p> |                                                                                                                                                                                                 |
| Action No                                                                                                                                                                                                                                                                                                    | Management Action                                                                                                                                                                               |
| 17.1                                                                                                                                                                                                                                                                                                         | Maintain existing public vehicle access, parking facilities and management access tracks in trafficable condition.                                                                              |
| 17.2                                                                                                                                                                                                                                                                                                         | Promote 'stay on trail and tread lightly' messaging on signage and other interpretative material to encourage all users to stay on trails designated for their use.                             |
| 17.3                                                                                                                                                                                                                                                                                                         | Implement controls on visitor access, including closure, rehabilitation and physical barriers where necessary, to prevent negative impacts on the Park's cultural and conservation values.      |
| 17.4                                                                                                                                                                                                                                                                                                         | Prevent unauthorised vehicle entry on management tracks by maintaining locked gates and monitoring and closing other potential access points.                                                   |
| 17.5                                                                                                                                                                                                                                                                                                         | In consultation with Wadandi custodians implement Meelup Regional Park Trails Master Plan and Meelup Beach Master Plan recommendations relevant to management of visitor access and activities. |
| 17.6                                                                                                                                                                                                                                                                                                         | Provide appropriate management for peak visitor periods.                                                                                                                                        |
| 17.7                                                                                                                                                                                                                                                                                                         | Monitor recreation sites for impacts and undertake remedial measures to mitigate the impact as necessary.                                                                                       |
| 17.8                                                                                                                                                                                                                                                                                                         | Regularly conduct a visitor survey and vehicle monitoring programme to guide the future management of the Park.                                                                                 |

### 35. VISITOR ACTIVITIES

The Park provides for a range of water-based and land-based recreational activities. Water-based activities include swimming, snorkeling, surfing, diving, kayaking, stand-up paddle boarding and fishing. Land-based activities include bushwalking and picnicking. Since 2020 there has been a noticeable increase in trail-based activities such as trail running and mountain biking.

Some activities are highly seasonal and attract different types of visitors at different times of the year. For example, wildflower viewing in spring, fishing and surfing in autumn/winter, and whale watching in winter/spring (Polley 2012). The Park's unique east facing orientation allows visitors watch the full moon rise over Geographe Bay. This is unique in South West of Western Australia.



Photo 13: Whale Viewing Platform Point Picquet

Management Zones establish a framework for protection of conservation values, provision of appropriate recreation. Table 10 provides a management guide for recreational opportunities within the Park, based upon conservation values, potential environmental impacts and the minimisation of visitor risk and conflict:

- **Encouraged:** enabled with provision of facilities and interpretive material.
- **Permitted:** allowed for but not actively encouraged.
- **Discouraged:** permitted but undesirable, with disincentives (such as the lack of provision of facilities) and signage requesting specified activities not occur.
- **Not permitted:** in accordance with this management plan, local laws or overarching legislation.

TABLE 10: RECREATIONAL ACTIVITIES MANAGEMENT GUIDE

| USE TYPE                        | MANAGEMENT ZONE CATEGORY <sup>1</sup> |                            |                            |                             |
|---------------------------------|---------------------------------------|----------------------------|----------------------------|-----------------------------|
|                                 | Roads                                 | Recreation                 | Natural Environment        | Conservation and Protection |
| <b>Land Based Activities</b>    |                                       |                            |                            |                             |
| Camping                         | Not permitted                         | Not permitted              | Not permitted              | Not permitted               |
| Collecting natural products     | Not permitted <sup>2</sup>            | Not permitted <sup>2</sup> | Not permitted <sup>2</sup> | Not permitted <sup>2</sup>  |
| Competitive sports              | Permitted                             | Discouraged                | Not permitted              | Not permitted               |
| Four wheel and off-road driving | Not permitted                         | Not permitted              | Not permitted              | Not permitted               |
| Hang gliding                    | Not permitted                         | Not permitted              | Not permitted              | Not permitted               |
| Horse riding                    | Not suitable                          | Not permitted              | Not permitted              | Not permitted               |

|                                  |               |                                                  |                                                                     |                                           |
|----------------------------------|---------------|--------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------|
| Bike riding                      | Permitted     | Permitted on specified trails/Mountain bike zone | Not permitted                                                       | Not permitted                             |
| Nature study                     | NA            | Encouraged                                       | Encouraged                                                          | Encouraged                                |
| Orienteering                     | NA            | Not permitted                                    | Not permitted                                                       | Not permitted                             |
| Picnics                          | NA            | Encouraged                                       | Permitted                                                           | Discouraged                               |
| Rock climbing                    | Not permitted | Permitted                                        | Permitted                                                           | Not permitted                             |
| Sightseeing                      | Encouraged    | Encouraged                                       | Encouraged                                                          | Permitted                                 |
| Walking/Running                  |               | Encouraged                                       | Encouraged                                                          | Permitted on trails only                  |
| <b>Marine Based - Activities</b> |               |                                                  |                                                                     |                                           |
| Fishing                          | NA            | Refer to NCMP <sup>3</sup>                       | Refer to NCMP <sup>3</sup>                                          | Refer to NCMP <sup>3</sup>                |
| Motor boats                      | NA            | Refer to NCMP <sup>3</sup>                       | Refer to NCMP <sup>3</sup>                                          | Refer to NCMP <sup>3</sup>                |
| Paddle craft                     | NA            | Encouraged<br>Refer to NCMP <sup>3</sup>         | Encouraged<br>Refer to NCMP <sup>3</sup>                            | Refer to NCMP <sup>3</sup>                |
| Sailing                          | NA            | Refer to NCMP <sup>3</sup>                       | Refer to NCMP <sup>3</sup>                                          | Refer to NCMP <sup>3</sup>                |
| Snorkelling                      | NA            | Encouraged<br>Refer to NCMP <sup>3</sup>         | Encouraged<br>Refer to NCMP <sup>3</sup>                            | Refer to NCMP <sup>3</sup>                |
| Spear fishing                    | NA            | Discouraged<br>Refer to NCMP <sup>3</sup>        | Discouraged<br>Refer to NCMP <sup>3</sup>                           | Refer to NCMP <sup>3</sup>                |
| Surfing                          | NA            | Refer to NCMP <sup>3</sup>                       | Encouraged at Pt Picquet and Rocky Pt<br>Refer to NCMP <sup>3</sup> | Refer to NCMP <sup>3</sup>                |
| Swimming                         | NA            | Encouraged<br>Refer to NCMP <sup>3</sup>         | Encouraged<br>Refer to NCMP <sup>3</sup>                            | Encouraged<br>Refer to NCMP <sup>3</sup>  |
| Wake boarding / water skiing     | NA            | Not permitted<br>Refer to NCMP <sup>3</sup>      | Not permitted<br>Refer to NCMP <sup>3</sup>                         | Refer to NCMP <sup>3</sup>                |
| Whale watching                   | NA            | Encouraged<br>Refer to NCMP <sup>3</sup>         | Encouraged<br>Refer to NCMP <sup>3</sup>                            | Permitted<br>Refer to NCMP <sup>3</sup>   |
| Wind/kite surfing                | NA            | Discouraged<br>Refer to NCMP <sup>3</sup>        | Discouraged<br>Refer to NCMP <sup>3</sup>                           | Discouraged<br>Refer to NCMP <sup>3</sup> |

<sup>1</sup>To be read in conjunction with Table 1 – Management Zone Category Evaluation

<sup>2</sup> Except under the Biodiversity Conservation Act 2016 Part 10 Division 3- Aboriginal Customary Purposes

<sup>3</sup> NCMP – Ngari Capes Marine Park (Sanctuary zone and Special Purpose Zone restrictions apply)

NA – Not Applicable within management zone category

## Meelup Regional Park Trails

The Meelup Regional Park Trails Master Plan (Tredwell 2014) was the guiding document for the development and management of trails in the Park. The TMP was developed to address concerns regarding increased visitor numbers and potential environmental and social impacts of unmanaged trail use. The aim was to provide a quality recreation experience for trail users whilst preventing environmental impacts associated with inappropriate trail use. The Meelup Healthy Country Plan (HCP) contains recommendations on trail management and two trails were closed in 2023 and 2024 based on this advice. Collaboration with Wadandi custodians will continue to inform trail management.

## **Bushwalking and Trail Running**

Management of bushwalking focuses on the provision and maintenance of safe and accessible trails, managing user conflict and providing an appropriate level of interpretation that balances the need for the provision of information with protection of the Park's amenity.



**Photo 14: Meelup Coastal Trail**

The Park contains short walks, loop trails and the longer Meelup Coastal Trail from Dunsborough to Eagle Bay (Figure 13). The Meelup Coastal Trail continues to Bunker Bay and crosses between Meelup Regional Park and adjacent private property on multiple occasions. Management of this section of trail is limited due to constrained access and requires communication and agreement with private property owners, especially for trail-based events and coastal rehabilitation.

The Meelup Coastal Trail connects the Park to the Cape to Cape Track through Cape Naturaliste. In connection with the dual use pathway between Busselton and Dunsborough, this provides a long-distance trail connection from Busselton to Augusta, along the coastline of Geographe Bay and the Leeuwin-Naturaliste Ridge.

The Meelup Regional Park Committee is a stakeholder in the Unbeaten Tracks initiative to “Connect the Capes” in a loop from Busselton to Augusta, and back (Tredwell 2021). This commits the Committee to “Formalise, upgrade and maintain the Meelup Reserve Coastal Walk as a high quality walking experience through significantly biodiverse environments, and as a key connection for walkers.”

## **Bike riding on trails**

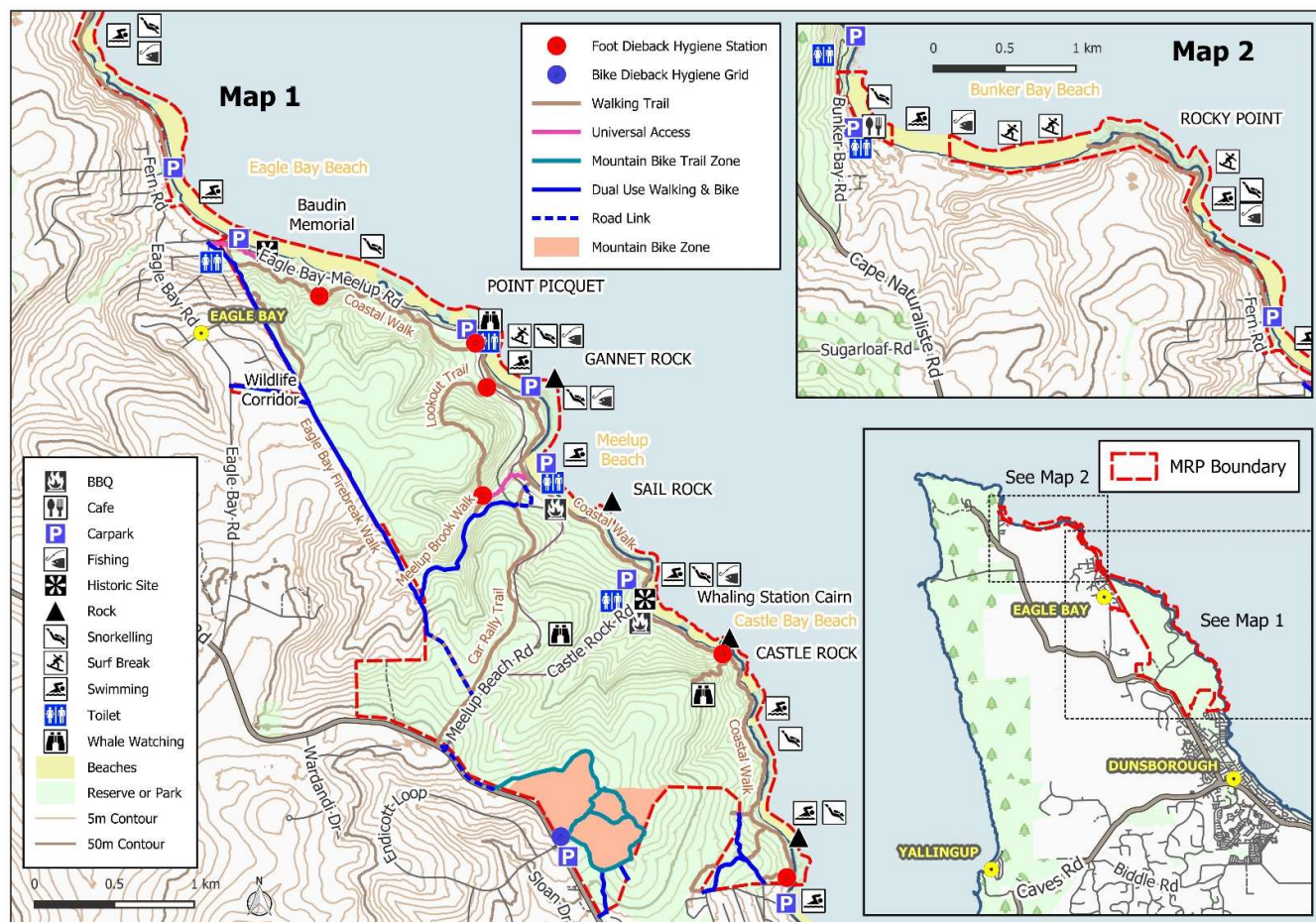
Outside of the Management Zone 6, bike riding is limited to the dual use trails established along the western firebreak from Sheen Road to the Eagle Bay townsite, and the Meelup Brook Firebreak. The unauthorised use of walking trails by bike riders is a common and ongoing issue.

## **Rock climbing**

Castle Rock and ‘copper rocks’ on the northern side of Castle Bay are utilised for rock climbing and bouldering. Both sites are accessible from existing trails and climbing is permitted. However, no climbing infrastructure has been provided at these locations and climbers use these sites at their own risk.

## **Picnicking**

Picnics are popular activity in the Park and picnic tables and gas barbeques are provided at Meelup Beach and Castle Bay. Tables are provided at Gannet Rock. Waste disposal bins are provided at nearly all coastal nodes within the Park.



**Figure 11: Bushwalking and Bike Riding Trails**

### Recreational fishing

Fishing is a popular shore-based activity in the Park due to its sheltered nature and accessible rocky outcrops. In autumn, the annual salmon run attracts large numbers of recreational fishers to beaches and rocky headlands in the Park. In recognition of the significant use of the Meelup coastline for fishing, the Eagle Bay Special Purpose Zone (shore-based activities) is provided for within the Eagle Bay Sanctuary Zone in the Ngari Capes Marine Park Management Plan 2013. Meelup Beach is a prohibited fishing area.

Management issues associated with fishing include vegetation loss from trampling, soil compaction and erosion, and the introduction of weeds. Similarly, lighting fires and litter, in the form of discarded fishing line, packaging and bait bags, can negatively impact flora, fauna and amenity of the area (see Section 40).

### Water-based activities

Water-based activities occur in the adjacent Ngari Capes Marine Park, with swimming ranked as most popular in the 2010 and 2016 visitor surveys (Figure 11). Clear waters with a mixture of sand and reef bottom, protected from prevailing south-westerly winds, provide ideal swimming conditions for visitors of all ages and abilities.

Surfing is mostly undertaken in the autumn and winter months, in periods of high swell and offshore south-westerly winds. Northerly winds push swells into bays which develop point breaks. Popular surfing spots include Bunker Bay and Rocky Point, as well as other small points to the east.

| Section 35 - Visitor Activities and Use                                                                                                                                  |                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objective 18: To encourage visitor use whilst ensuring that the level and type of visitor use is sustainable and minimises conflict with other Park visitors and values. |                                                                                                                                                        |
| Action No                                                                                                                                                                | Management Action                                                                                                                                      |
| 18.1                                                                                                                                                                     | Implement Meelup Beach Master Plan recommendations relevant to management of visitor access and activities in consultation with the Wadandi community. |
| 18.2                                                                                                                                                                     | Provide appropriate management for peak visitor periods.                                                                                               |
| 18.3                                                                                                                                                                     | Monitor recreation sites and mitigate impacts as necessary.                                                                                            |
| 18.4                                                                                                                                                                     | Implement visitor surveys and a vehicle monitoring programme, to guide future Park management.                                                         |
| 18.5                                                                                                                                                                     | Develop and implement a tree safety inspection programme for vegetation alongside approved access tracks and trails and in coastal nodes.              |
| 18.6                                                                                                                                                                     | Develop and implement a visitor safety plan for the Park.                                                                                              |
| 18.7                                                                                                                                                                     | Provide appropriate safety information and emergency contact information at key locations within the Park.                                             |

### 36. VISUAL LANDSCAPE

Central to the character of the Park are its scenic beauty with ocean views, the spectacular coastline, natural landscape, and unspoilt character. The Park's visual qualities include its;

- contiguity of bushland and coastline,
- location on the Leeuwin-Naturaliste Ridge, with panoramic views of Geographe Bay,
- calm and turquoise waters, due to its north-east facing coastline,
- contrasting coastline of granite headlands interspersed with sandy coves,
- tree shaded bays such as Meelup Beach,
- sense of isolation and solitude, despite its proximity to urban areas, and
- near natural state and lack of development.

Ongoing maintenance and upgrading of Park facilities and infrastructure is essential to maintain the visual landscape of the Park, as well as ensuring its environment remains valued by visitors.

#### Threats

Threats to the Park's visual landscape may result from;

- inappropriate signs, monuments and erected structures,
- recreational infrastructure such as trails, barbeques and picnic tables,
- built and utility infrastructure such as ablution blocks, gas compounds, tanks and pipelines,
- roads and carparks,
- access control measures such as fencing and bollards,
- boat moorings and ramps,
- past use such as gravel pit extraction and landfill,
- visitor behaviours such as litter, informal trail creation of and vehicle incursion into bushland, and
- vegetation clearing and degradation associated with all of the above.

Rehabilitation of degraded areas and appropriate access control measures help to improve the visual landscape.

| <b>Section 36 - Visual Landscape</b>                                      |                                                                                                                                        |
|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Objective 19: To conserve and enhance the Park's visual landscape.</b> |                                                                                                                                        |
| <b>Action No</b>                                                          | <b>Management Action</b>                                                                                                               |
| 19.1                                                                      | Review the Meelup Beach Master Plan to ensure appropriate balance of visitor amenity and environmental protection at key visitor areas |
| 19.2                                                                      | Develop and implement a regular maintenance programme for the Park's infrastructure including roads, carparks and visitor facilities.  |

### **37.COMMERCIAL ACTIVITIES IN THE PARK**

The City of Busselton holds the current management order for the Park under the LA Act 1997, which includes the power to grant a lease or license over any part of the Park for activities ancillary or beneficial to the Park.

A commercial concession is a right granted by way of a lease or license over any part of the Park, which needs to be carefully designed and managed, to ensure any commercial activity remains ancillary or beneficial to the conservation, cultural and landscape values of the Park.

In the assessment of applications for a lease or license, the overarching principle is to ensure that commercial concessions do not conflict with the management purpose "conservation and recreation" and the Park's conservation values. Commercial applications are to be assessed on a case by case basis against the criteria provided in this Plan, and in accordance with City Local Laws and relevant guiding policies.

No leases have been approved for uses within the Park. A small number of licenses have been granted under City Local Laws, which permit visitor-service businesses such as beverages and food, and a water sports equipment hire vendor to operate within the Park. Conditions apply to these licenses.

| <b>Section 37 - Commercial Activities in the Park</b>                                                                                                                               |                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Objective 20: To ensure that commercial activities within the Park are complementary to the protection and conservation of the Park's key environmental and cultural values.</b> |                                                                                                                                                                      |
| <b>Action No</b>                                                                                                                                                                    | <b>Management Action</b>                                                                                                                                             |
| 20.1                                                                                                                                                                                | Regularly review the Park's commercial activity policy to ensure the protection of sensitive coastal areas and the Park's values.                                    |
| 20.2                                                                                                                                                                                | Identify suitable locations where commercial activities can operate in areas without adverse impacts to the natural environment.                                     |
| 20.3                                                                                                                                                                                | Ensure proponents of commercial activities develop and implement a performance based environmental management plan that ensures the protection of the Park's values. |
| 20.4                                                                                                                                                                                | Encourage proponents of approved commercial activities to promote the Park's values.                                                                                 |

### **38.EVENTS**

Applications for events within the Park are assessed in accordance with legislative requirements and under the Events Policy (City of Busselton). In the assessment of event applications, the overarching

principle is to ensure that events do not conflict with Park values and are consistent with the Park's purpose. The following objectives provide guidance for the management of events in the Park:

- natural systems should be able to sustain the recreational use that is occurring or proposed.
- the intensity, frequency, type, duration, timing and distribution of recreational activities are managed to maintain the amenity of the Park.
- events should foster appreciation of the Park's natural values.

Events held in Meelup Regional Park are generally categorised into the following areas:

#### **Trail Based Events:**

Trail Based Events generally involve participants walking, running or cycling on designated trails or roads within the Park.

#### **Site Based Events:**

Site based events generally involve use of a beach and/or adjacent picnic and car park areas and range from relatively small social gatherings to larger scale events. Wedding ceremonies, school excursions, functions or informal gatherings are not classified as events, however these activities are required to be adequately managed in accordance with the City's Local Laws.

#### **Road Based Events:**

Whilst road reserves within the Park are technically not part of the Park, an integrated approach to management of events utilising road reserves is essential to protect Park values.

| Section 38 - Events                                                                                                                                                  |                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Objective 21: To ensure that events within the Park are complementary to the protection and conservation of the Park's key environmental and cultural values.</b> |                                                                                                                                                       |
| Action No                                                                                                                                                            | Management Action                                                                                                                                     |
| 21.1                                                                                                                                                                 | Work with City of Busselton staff to ensure the City of Busselton Events Policy protects the Park's values.                                           |
| 21.2                                                                                                                                                                 | Ensure proponents of events develop and implement a performance based environmental management plan that ensures the protection of the Park's values. |
| 21.3                                                                                                                                                                 | Encourage proponents of approved events to promote the Park's unique natural characteristics and values.                                              |

## **39. INFORMATION AND INTERPRETATION**

### **Information**

An effective communication strategy is essential to promote awareness, understanding and enjoyment of the Park's natural environment and cultural heritage. Due to the conservation and cultural significance of the Park, it is important that these values are appropriately communicated to visitors and the broader community. Interpretive signage will be developed in consultation with the Wadandi community and Wadandi artists where appropriate.

An effective strategy to promote the Park's values and ensure consistency of messages should include:

- A signage system and style guide to ensure adequate and appropriate interpretative signage, trailheads and trail markers across the Park.
- Publications related to the Park, including general information (wildflower and trails brochures), to expand the visitor interpretation experience.

- Media statements to promote key issues or projects of note for public interest.
- The use of social media platforms to provide ongoing information updates to the community.
- Well maintained website that is updated regularly with information on the Park.
- Promotion of educational opportunities and community awareness activities and events.

## Interpretation

Interpretation provides visitors with the opportunity to make a connection with a place and provides information in a memorable and positive way. Interpretation leads visitors from understanding to appreciation and conservation (DEC 2010).

The Meelup Regional Park Interpretation Report (DEC 2010) details themes and key messages to deliver to Park visitors and is used to guide signage in the Park. Visitors most appreciate the Park's pristine, undeveloped nature and aesthetic values (Polley 2012). To preserve the Park's aesthetic values, signage should be minimised, carefully designed and well sited.

| Section 39 - Information and Interpretation                                                                      |                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Objective 22: To increase the community's awareness, appreciation and understanding of the Park's values.</b> |                                                                                                                                                                                |
| Action No                                                                                                        | Management Action                                                                                                                                                              |
| 22.1                                                                                                             | Develop and implement a communications strategy in consultation with the Wadandi community to promote the conservation and cultural values of the Park to the wider community. |
| 22.2                                                                                                             | Investigate and develop educational opportunities with external organisations, including schools.                                                                              |
| 22.3                                                                                                             | Develop publications and interpretative materials on the Park's flora, fauna and geology.                                                                                      |
| 22.4                                                                                                             | Ensure signage complies with the Signage Policy, sign system and sign prescription, and is guided by the Meelup Regional Park Interpretation Report.                           |
| 22.5                                                                                                             | Ensure adequate signage to promote visitor awareness of regulated activities within the Park.                                                                                  |

## 40.DOMESTIC ANIMALS

Under the Dog Regulations Act 2013, dogs, except for service animals, are prohibited in the Park except for dog exercise areas. These areas are currently:

- a section of Eagle Bay beach, from the Eagle Bay beach access ramp to 450 metres north of Jingarmup Brook, and
- the northern end of Bunker Bay adjoining the Leeuwin-Naturaliste National Park.

Hooded plovers (*Thinornis cucullatus*) have been recorded in Eagle Bay and Bunker Bay. Dogs off lead can significantly impact these birds by causing them to:

- abandon their nests for lengthy durations, which can result in non-hatching of eggs;
- go into hiding, which can result in eventual starvation due to insufficient feeding time at the water's edge; and
- abandon their chicks, leaving them vulnerable to predation by bigger birds.

The Cat Act 2011 was introduced by the State Government to encourage responsible pet ownership, reduce the number of unwanted cats and reduce cat-related wildlife deaths. Domestic cats that come into the Park from adjacent properties pose a significant threat to native fauna. Management of these

cats is limited to trapping where appropriate and engaging with adjacent residents. Feral cat monitoring and control are ongoing operational management programmes for the Park.

| Section 40 - Domestic Animals                                     |                                                                                                  |
|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Objective 23: To manage and control domestic animals in the Park. |                                                                                                  |
| Action No                                                         | Management Action                                                                                |
| 23.1                                                              | Where required, implement dog exclusion and control within the Park                              |
| 23.2                                                              | Monitor hooded plovers in known breeding areas and implement measures to protect breeding sites. |
| 23.3                                                              | Manage feral and domestic cats within the Park and engage with adjacent residents as appropriate |

#### 40.WASTE

##### Litter

Litter is an ongoing concern for Park management and remains a threat to conservation, cultural and amenity values. Litter often includes discarded beverage container and packaging, toilet waste, and the occasional dumping of garden and other domestic waste. Ongoing litter management, including enforcement and litter collection, are essential. The Park has a regular waste collection service across key visitor sites and the collection frequency is increased during peak visitor periods (November to the end of April), and reduced in non-peak periods (May to October).



**Photo 15: Beach litter Meelup Beach**

##### Public amenities

Public amenities within the Park are located at Meelup Beach, Castle Bay, Point Picquet and within the Eagle Bay town site at Riedle Park and Eagle Bay Community Hall.

| Section 41 - Waste                                                                            |                                                                  |
|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Objective 24: To minimise the environmental and social impacts of waste on the Park's values. |                                                                  |
| Action No                                                                                     | Management Action                                                |
| 24.1                                                                                          | Maintain and improve the litter management.                      |
| 24.2                                                                                          | Develop and implement a litter awareness programme for the Park. |

## PART F. MANAGING RESOURCE USE

### 42. GUIDING PRINCIPLES

1. Preservation of the Park's values  
Land use should not compromise the natural and cultural values of the Park. Any future development would be required to assess the environmental impacts and ensure that proposals do not detract from the Park's natural settings and landscape amenity.
2. Activities must be compatible with the assigned purpose of the Park.
3. Equity  
Uses that impair other forms of acceptable use or jeopardise safety of other visitors should be specifically managed, directed to more appropriate places or not permitted.
4. Open and competitive assignment process  
Western Australian Government Procurement Practice Guide will be followed to ensure that opportunities for commercial concessions in the Park are assigned based on an open and competitive process.
5. Financial viability  
Development proposals within the Park will be required to demonstrate financial viability where the proposal invokes a commercial interest. Revenue from commercial concessions within the Park should be used for Park management purposes.
6. Management compliance  
Commercial activities and facilities within the Park should be subject to regular compliance monitoring.

### 43. COMMERCIAL AND RECREATIONAL FISHING

The Ngari Capes Marine Park includes all marine waters off the Park and is divided into a General Use Zone, Eagle Bay Sanctuary Zone and Eagle Bay Special Purpose (Shore Based Activities) Zone. The Special Purpose Zone, where shore-based fishing is allowed, extends from Gannet Rock westwards towards Eagle Bay, encompassing Point Picquet and a proportion of the Eagle Bay coastline. The Sanctuary Zone, where fishing is prohibited, encompasses Meelup Beach and the rest of the waters off the Park.

Commercial fishing except for demersal species is allowed within the General Use Zone. No commercial fishing is allowed in Sanctuary Zones, while commercial abalone, aquarium and specimen shell collecting are allowed in the Special Purpose Zone. Commercial charter boats for non-extractive diving on the Swan Wreck operate from Meelup Beach and commercial diving groups to the Eagle Bay bommie operate from the shore between Point Picquet and Baudin memorial.

#### Section 43 - Commercial and Recreational Fishing

**Objective 25: To ensure fishing that occurs along the coastline of the Park does not conflict with Park values.**

| Action No | Management Action                                                                  |
|-----------|------------------------------------------------------------------------------------|
| 25.1      | Minimise impact of coastal fishing on vegetation and natural features of the Park. |

#### 44.DEVELOPMENT

Development is a defined term within the *Planning and Development Act 2005*, and includes demolition, erection, construction, alteration of or addition to any building or structure on the land, and the carrying out on the land of any excavation or other works. At present, rural land use dominates most of the Park's boundary, with limited development within the Park. However, the close proximity of the Dunsborough townsite to the Park's southern/eastern boundary requires ongoing operational management programmes to minimise the risk of direct or indirect impact on the Park's values.

Lot 272, vested with the Water Corporation for the purpose of water supply, intersects a section of Zone 6. There is currently no development on Lot 272, but future development may occur to provide additional water infrastructure for Dunsborough. The Water Corporation have developed a water tank immediately adjacent to the Park boundary on Lot 341, which also hosts a National Broadband network mobile tower.

| Section 44 - Development                                          |                                                                                                                                                                         |
|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objective 26: To minimise the impact of developments on the Park. |                                                                                                                                                                         |
| Action No                                                         | Management Action                                                                                                                                                       |
| 26.1                                                              | Commercial development within the Park is generally not supported and development would need to be consistent with the Park's purpose of 'Conservation and Recreation'. |
| 26.2                                                              | City planning and development policies and procedures need to consider potential impacts on Park values when assessing development proposals on adjacent land           |
| 26.3                                                              | Development proposals within the Park should include a public consultation process                                                                                      |

#### 45.UTILITIES AND SERVICES

Utility infrastructure and service providers may seek access to the Park for public works (water, sewerage, telecommunications, electricity and gas services) to service communities in the vicinity of the Park. Construction, maintenance and operation of public infrastructure and services within the Park can lead to management considerations including;

- disturbance of cultural heritage, landforms, flora and fauna,
- habitat fragmentation,
- increased susceptibility to soil erosion, spread of weeds and diseases, particularly dieback,
- visual impacts, and
- restrictions on recreational usage and activities.

To mitigate the above problems, utility infrastructure not primarily servicing the Park itself should be located outside Park boundaries. In accordance with the Leeuwin-Naturaliste Ridge Statement of Planning Policy, a landscape management plan must be prepared by the proponent where new services and utilities are proposed and the clearing of native vegetation is required. Infrastructure should also be sensitive to the character of the area.

Zone 10 contains two water tanks, sewerage pipelines and telecommunications cabled in order to service Bunker Bay, Meelup Beach public amenities and fire hydrants within the Park. These areas have not been excised and are within Park boundaries. A section of the Park adjacent to Eagle Bay contains drainage infrastructure to service Eagle Bay.

| Section 45 - Utilities and Services                                                               |                                                                                                                          |
|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Objective 27: To ensure that utilities and services in the Park do not conflict with Park values. |                                                                                                                          |
| Action No                                                                                         | Management Action                                                                                                        |
| 27.1                                                                                              | New public infrastructure works must provide a benefit to the ecology, cultural and visual landscape values of the Park. |

## 46. FORESTRY PRODUCTS

There are no forest products industries present in the Park except for seed collection. Under the provisions of the BC Act 2016, a licence for scientific or other prescribed purposes is required for non-commercial harvesting of flora on Crown lands, including seed collection.



Photo 16: Seed collection in the Park

### Section 46 – Forest Products

**Objective 28: To protect the Park's values from exploitation of forest products in the Park.**

| Action No | Management Action                                                                                                                                                                                     |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 28.1      | The taking of forest products from the Park is not supported, except where it is taken for therapeutic, scientific or horticultural purposes and under a licence granted pursuant to the BC Act 2016. |

## 47. WATER RESOURCES

All groundwater and surface water catchments in Meelup Regional Park are proclaimed under the Rights in Water and Irrigation Act 1914 and no licences exist for the taking of water in the Park.

Ecological Water Requirements (EWRs) are the water regimes needed to maintain, at a low level of risk, the ecological values of water dependent ecosystems. These are the primary consideration in the determination of Environmental Water Provisions. Environmental Water Provisions (EWPs) are water regimes which endeavour to take ecological, social and economic impacts into account. They may meet in part or in full the ecological water requirements (DWER 2026).

Gauging stations have not been installed on waterways within the Park, therefore EWRs and EWPs cannot be determined. Flows are estimated through correlating rainfall, catchment size, topography and other physiographic information with nearby gauged systems. There are currently two on-stream dams on Meelup Brook within the Park's boundaries. An assessment of the Park's EWRs should be undertaken to better understand the potential impacts on local hydrology and the Park's ecological water requirements.

### Section 47 - Water Resources

**Objective 29: To protect and conserve existing surface and groundwater resources of the Park.**

| Action No | Management Action                                                                                                                                                                                  |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 29.1      | Liaise with DWER on the management of the Park's groundwater and surface water catchment for the benefit to the environmental, ecological, and visual landscape values of the Park.                |
| 29.2      | Ensure proposals for water extraction of ground or surface water within the Park's water catchment do not adversely affect the environmental, ecological, and visual landscape values of the Park. |
| 29.3      | Investigate the potential to install gauge stations on Meelup, Dolugup and/or Jingarmup Brooks to determine ecological water requirements.                                                         |

## **PART G. INVOLVING THE COMMUNITY**

### **48. GUIDING PRINCIPLES FOR COMMUNITY INVOLVEMENT**

1. **Community participation**  
The community will be encouraged to have input into the management of the Park. Public participation processes will have a clearly identified purpose and scope. Participation is to be based on a shared understanding (with stakeholders) of objectives, responsibilities, behaviour and expected outcomes. The participatory process is to be objective, open, fair and carried out in a responsible and accountable manner. Participation will provide opportunities for input, representation and joint learning from all relevant stakeholders.
2. **Information exchange**  
Information regarding the planning and management of the Park will be exchanged between land managers and the community in an open and transparent manner. Data and information used in the decision-making process will be available to stakeholders. Public participation processes will emphasise the sharing of information, joint learning and understanding.
3. **Outcomes and decision-making**  
The outcomes of public participation will form part of the decision-making process. Participants should be informed as to how their involvement may have influenced the decision-making process.
4. **Management activities**  
The community will be encouraged to contribute to nature conservation and land management activities. This will help to build community awareness, understanding and commitment to the Park's management objectives.
5. **Education and interpretation**  
Education and interpretation will be aimed at giving visitors a 'take home' message that will create an awareness of issues affecting the Park and positively influence visitor behaviour. It will also provide information on the reasons behind management decisions and will convey the objectives of this plan. Education and interpretation will encourage community involvement in and ownership of the Park.

### **COMMUNITY INVOLVEMENT AND LIAISON**

Ongoing community support is essential for the successful implementation of this plan. Community involvement with the Park is evident on a number of levels:

- The Park is managed by the City-appointed, community-based Meelup Regional Park Management Committee, which provides ongoing community linkage to Park management.
- Regular voluntary activities take place to assist the management, maintenance and enhancement of the Park, including trail maintenance, vegetation pruning, litter collection, visitor surveys, revegetation and weed control. Volunteers have free access educational events and wildflower walks and are kept informed of management decisions.
- Community consultation is undertaken as part of the development of important management and planning documentation.
- Local schools regularly participate in activities within the Park, such as revegetation and weed removal.

## Friends of Meelup Regional Park

In December 2018, the community, with the support of the City of Busselton, established the Friends of Meelup Regional Park (FOM). The objective of FOM is to:

*To facilitate the conservation and promotion of Meelup Regional Park whilst encouraging community participation and education that ensures the long-term sustainability of the Park's unique plants, animals and landscape*

As an incorporated association, FOM can attract funding to support the long term protection and conservation of Park values. Activities undertaken by FOM include onground management such as pruning and revegetation, research and community engagement, particularly with adjoining landholders.

### Section 48 - Community Involvement and Liaison

**Objective 30: To provide key stakeholders and the wider community with opportunities to be effectively involved in Park management.**

| Action No | Management Action                                                                                                                                                                                   |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 30.1      | Ensure that community engagement initiatives align with the key objectives of the Plan.                                                                                                             |
| 30.2      | Provide resources to support community engagement initiatives.                                                                                                                                      |
| 30.3      | Develop the knowledge and skills of the Park's volunteers and volunteer leaders.                                                                                                                    |
| 30.4      | Develop and implement a volunteer recruitment programme and actively market the benefits of becoming a Park volunteer.                                                                              |
| 30.5      | Recognise volunteer contributions to the management of the Park.                                                                                                                                    |
| 30.6      | Identify opportunities to engage the wider community, including schools and community groups, in Park activities, partnership projects and programmes.                                              |
| 30.7      | Promote community awareness of regulated activities within the Park, as appropriate, in published documents and on the Park website ( <a href="http://www.meeluppark.com">www.meeluppark.com</a> ). |

## PART H. RESEARCH

### 49.RESEARCH

Research is required to understand the Park's natural, cultural and social values, and the processes that threaten these values. The Park has a unique geology, high biodiversity and rare and endangered flora and fauna of scientific significance. As Park visitation and usage increases, research is required to inform appropriate managed.

Any research undertaken in the Park must be properly managed to ensure it does not adversely impact the Park's values, and proposals will be assessed for their suitability.

| Section 49 - Research                                                                                                                                                                                                         |                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>Objective 31: To foster research that increases understanding of the Park, its values and visitor use, to ensure appropriate management of the Park; whilst ensuring that research does not conflict with Park values.</b> |                                                                                                                 |
| Action No                                                                                                                                                                                                                     | Management Action                                                                                               |
| 31.1                                                                                                                                                                                                                          | Actively seek resources for the implementation of research projects to guide the future management of the Park. |
| 31.2                                                                                                                                                                                                                          | Regularly review the research programme for the Park to prioritise projects and to seek funding.                |

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## APPENDICES

### APPENDIX 1: MEELUP HEALTHY COUNTRY PLAN ACTIONS

| Cultural Heritage Management Action (CHMA)                                      | Action                                                                                                                                                                                                                                                     | Status (April 2026)                                         |
|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| CHMA 1 – culturally sensitive area on granite outcrops behind Meelup Beach      | Action 1A) Embed a minimal-use strategy for this area to protect cultural values and the associated ecological values of this specific landform                                                                                                            | Discussions on-going                                        |
|                                                                                 | Action 1B) The Wadandi Cultural Conservation Corp (WCCC) undertake regular cultural patrols to manage the area from any disturbances, human or natural and document the site visits as condition assessments with the Undalup heritage management database | Discussions on-going                                        |
| CHMA 2 – traditional quarry site on quartz outcrop                              | Action 2A) Embed a minimal-use strategy for this area to protect cultural values and the associated ecological values of this specific landform                                                                                                            |                                                             |
|                                                                                 | Action 2B) Undertake regular cultural patrols by the WCCC to manage the area from any disturbances, human or natural.                                                                                                                                      |                                                             |
| CHMA 3 – traditional use zone related to rocky outcrops alongside coastal flats | Action 3A) Embed a minimal-use strategy for this area to protect cultural values and the associated ecological values of this specific landform                                                                                                            |                                                             |
|                                                                                 | Action 3B) Undertake regular cultural patrols by the WCCC to manage the area from any disturbances, human or natural.                                                                                                                                      |                                                             |
| CHMA 4 – dieback management zone between Meelup Beach and Eagle Bay             | Action 4A) Embed a minimal-use strategy for this area to protect cultural values and the associated ecological values                                                                                                                                      |                                                             |
|                                                                                 | Action 4B) Carry out dieback prevention actions and monitoring, including the use of phosphite on perimeter vegetation communities                                                                                                                         |                                                             |
| CHMA 5: Meelup Lookout Trail Realignment                                        | Action 5A) With support from the COB and the Committee, the WCCC undertakes work to block off the current track through brushing and revegetation works and re-survey a re-alignment around the CSAs.                                                      | Agreement to increase trail signage instead of re-alignment |
|                                                                                 | Action 5B) In collaboration with the COB and the Committee, the WCCC constructs a trail along the re-alignment with appropriate signage and erosion control measures.                                                                                      | See above                                                   |
| CHMA 6: Meelup Brook Restoration.                                               | Action 6) With support from the COB, the WCCC to work with local landowners and business operators to develop a streambank restoration plan to develop a conservation buffer from the headwaters of Meelup Brook into the Park.                            |                                                             |
| CHMA 7: Waterways Health Management. On-                                        | Action 7A) The WCCC to develop a long term water quality monitoring program of Meelup Brook and other waterways/springs, carrying out 'cultural health' assessments.                                                                                       |                                                             |

|                                                     |                                                                                                                                                                                                                                                                                                             |                                                                   |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| going monitoring and active management of waterways | Action 7B) The WCCC to carry out streambank restoration, wildlife studies, ethno botanical studies, cultural mapping, and active management projects such as fire mitigation and erosion control.                                                                                                           | Ongoing discussions to develop long term fauna monitoring program |
| CHMA 8: Interpretation and Education                | Action 8A) Engage with Wadandi artists and Knowledge Holders to develop public interpretive panels on Wadandi connections as an educational sign near a public area.                                                                                                                                        |                                                                   |
|                                                     | Action B) Develop a program for cultural heritage management workshops for COB staff and other organisations that regularly use Meelup; including local schools and environmental organisations.                                                                                                            |                                                                   |
| CHMA 9: Meelup Sea Country Studies                  | Action 9A) Develop a long-term monitoring program with DBCA, COB, and the WCCC to assess the condition and health of this section off Sea Country –including the use of Baited Remote Underwater Video Systems (BRUVS), water quality monitoring, and wildlife monitoring, and coastal management projects. |                                                                   |
|                                                     | Action 9B) Support the WCCC to carry out patrols, marine debris collections, and coastal management projects.                                                                                                                                                                                               |                                                                   |
| CHMA 10: Cultural Conservationist Patrols           | Action 10) Develop a long-term Cultural Conservation monitoring and management works program with COB, Undalup, DBCA, and partners, and source funding to support part-time or full-time positions. Action 10a ensures CHMAs 1-9 are implemented effectively and efficiently.                               |                                                                   |

## APPENDIX 2: THREATENED SPECIES RANKING AND PRIORITY CODES

### Conservation Codes for Western Australian Fauna

T: Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice; Threatened Fauna (Fauna that is rare or is likely to become extinct). Species that have been adequately searched for and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such.

X: Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice; Fauna that is presumed to be extinct. Species which have been adequately searched for and there is no reasonable doubt that the last individual has died, and have been gazetted as such.

IA: Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice; Migratory birds protected under an international agreement. Birds that are subject to an agreement between governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction.

S: Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice; Other specially protected fauna. Species that are in need of special protection, otherwise than for the reasons mentioned in the above schedules.

### State Rank

Threatened Fauna are further recognised by the Department according to their level of threat using IUCN Red List criteria. For example: *Potorous gilbertii* is specially protected as Fauna that is rare or is likely to become extinct (Schedule 1) in the Wildlife Conservation (Specially Protected Fauna) Notice and is a threatened species with a ranking of critically endangered.

CR: Critically Endangered - considered to be facing an extremely high risk of extinction in the wild.

EN: Endangered –considered to be facing a very high risk of extinction in the wild.

VU: Vulnerable - considered to be facing a high risk of extinction in the wild.

EX: Extinct – there is no reasonable doubt that the last individual has died.

Please note that a listing at species level, means that the assigned conservation status applies to all recognised sub-species within the state.

### Priority Codes

P1: Priority One: Poorly-known species (on threatened lands)

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

P2: Priority Two: Poorly-known species (on conservation lands)

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national Parks, conservation Parks, nature reserves

and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

**P3: Priority Three: Poorly-known species (some on conservation lands)**

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

**P4: Priority Four: Rare, Near Threatened and other species in need of monitoring**

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands. (b) Near Threatened. Species that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable. (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

**P5: Priority Five: Conservation Dependent species**

Species that are not threatened but are subject to a specific conservation programme, the cessation of which would result in the species becoming threatened within five years.

### APPENDIX 3: HERITAGE PLACES

| Name                    | Place # | Place type              | Statement of significance                                                                                                                                                                                                          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | History                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------|---------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Meelup Reserve Precinct | 05346   | Precinct or Streetscape | Meelup Reserve, a largely natural and cultural modified site, has cultural heritage value for its associations with the historic whaling industry and for its picturesque natural features and amenity.                            | The Meelup Reserve Precinct is a natural bush-land and coastline that is home to a rich array of endemic species of flora and fauna. Nothing obvious remains from the historic use of the place for whaling activities. There are developed Parking areas and amenities, but the place remains largely a natural site, with spectacular ocean views, beaches and rock features.                                                                                                      | Prior to settlement, the place was one of the locations used by American whalers. William Seymour settled at Dunsborough in 1845-1846 to work for Lionel Sampson and Co.'s "Castle Rock Whaling Company", which was later taken over by J. W. Bateman. This enterprise had fluctuating success as it was affected by difficulties with drunkenness, absconding workers and bad language. In 1849, all boats and sheds were destroyed by fire. Castle Rock used to function as a lookout spot for whales. However, nothing remains of the original fabric in the present day. The place is now a popular venue for recreation. |
| Meelup Brook            | 05345   | Landscape               | Meelup Creek, a natural feature, has cultural heritage significance as a popular place for recreation over a considerable period of time that is of social value to the local community and to Western Australians more generally. | The Meelup Regional Park is a large "A" Class Reserve (number 21629) of approximately 550 hectares adjacent to the towns of Dunsborough and Eagle Bay. The Park is vested with the City of Busselton and managed by the Meelup Regional Park Management Committee under a Management Plan, which was approved by the Minister for Lands in 1993; and with an annual operating budget provided by the Busselton City Council. The creek is a natural declivity with surrounding bush. | Meelup became a popular place for recreation in the local community and for Western Australian visiting the State's south-west. Prior to becoming a single "A" Class Reserve, the Park was a collection of a number of smaller "C" Class Reserves. The amalgamation process commenced in 1993 and was concluded in 1994.                                                                                                                                                                                                                                                                                                      |

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| Curtis Bay                    | 02948 | Landscape        | Curtis Bay, a natural environment with no built features, has cultural heritage significance for its historic associations with the American whaling ships, a landing place for stock, and for its aesthetic value as a picturesque setting.                                              | Small stretch of coastline on Geographe Bay. A picturesque beach and bay with a sandy shoreline contained by rocky edges, with a bushland backdrop and beautiful views out to sea.                                                                                                                                                                                                                                              | Curtis Bay is named after Anthony Curtis. Curtis was a master of a coastal trading vessel and later owner of the Vasse-Wonnerup Estate. He bought Inlet Park from the Chapman brothers. The place was an anchorage for early whalers. It was also a landing place for stock and in recent history has become a place associated with leisure and holidaymaking.                                                                                                                                                                             |
| Anse Depuch (Baudin memorial) | 03820 | Historic Site    | Anse Depuch: Sandy bay adjacent to the north of Point Picquet. 'Anse' is French for 'Cove'.<br><br>Anse Depuch was named in honor of Louis Depuch, mineralogist on the 'Geographe' who was excited by finding granite in the creek running into the bay. Now formally known as Eagle Bay. | Location of a memorial to the expedition of Captain Nicolas Baudin in the form of a ship's bow overlooking the landing site of the Baudin scientific expedition. The Baudin Memorial was opened at Anse Depuch in June, 2001.<br><br>This site is also the location of cement foundations of three buildings built by The Eagle Bay Syndicate in 1949.<br><br>Signage at the site explains the significance of the foundations. | The Eagle Bay Syndicate was formed in 1949 to catch and process salmon for canning by Hunt's Canning in Albany and Gardiners/Tropical Traders/West Ocean Canning in Busselton. These buildings were in use until the mid-1960's. The western structure, complete with drainage channels and loading dock, was where the salmon were cleaned. The 12m x 4m shed next door stored fishing equipment, a generator and sleeping quarters. A third smaller timber stud and flywire lined hut known as "The Bakery" was used for preparing meals. |
| Point Picquet                 | 13488 | Urban Open Space | Point Piquet has a constructed whale viewing platform with informative signage, and seating                                                                                                                                                                                               | Point Picquet: Small northern most point of a number of points in Meelup Reserve between Eagle Bay and Dunsborough.                                                                                                                                                                                                                                                                                                             | One of several landingplaces for French Explorer Nicholas Baudin in 1801.. Point Picquet is named after a Lieutenant on the Geographe, Furcy Picquet..                                                                                                                                                                                                                                                                                                                                                                                      |

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| Castle Bay Whaling Station and Look-out Site | 05336 | Landscape | Castle Rock, largely natural location with a monument, has cultural heritage significance as the historic location of the Castle Bay Whaling Station and lookout site is derived from its close associations with whaling as an early industry in the area. The site's natural splendour contributes to its aesthetic significance as it enhances the beauty of the Cape Naturaliste area at a macro level. | A largely natural site with historic associations. The place is largely a natural location used for recreation. There is a rock monument commemorating whaling activities. | Castle Bay was an historic location for whalers in the region. William Seymour settled at Dunsborough in 1845-1846 to work for Lionel Sampson and Co.'s "Castle Rock Whaling Company", which was later taken over by J. W. Bateman. This enterprise had fluctuating success as it was affected by difficulties with drunkenness, absconding workers and bad language. In 1849, all boats and sheds were destroyed by fire. Castle Rock used to function as a lookout spot for whales. There are now no visible remnants of the whaling station. However, several remains, such as a whalebone floor, are located under the asphalt carpark. |
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More information can be found on the WA State Heritage Register <https://www.wa.gov.au/government/document-collections/the-state-register-and-other-heritage-listings>



