



# SOUTH COAST REGION REGIONAL CONSERVATION PLAN



GOVERNMENT OF  
WESTERN AUSTRALIA

Department of **Biodiversity,**  
Conservation and Attractions





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**Version 1.0, December 2025**

This document may be updated periodically. Please note the version number and date on this page and/or visit the department's website to access the latest version [dbca.wa.gov.au](http://dbca.wa.gov.au).

The recommended reference for this publication is:

Department of Biodiversity, Conservation and Attractions, 2025, *Regional Conservation Plan – South Coast Region*, Department of Biodiversity, Conservation and Attractions, Perth.

Cover:

*Banksia brownii*, Stirling Range National Park. Photo – Sarah Barrett, DBCA

Western ground parrot, Kyloring (*Pezoporus flaviventris*), Fitzgerald River National Park. Photo – Brent Barrett, DBCA

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## 1 Introduction

Each of the nine Parks and Wildlife Service regions identified and prioritised conservation actions through structured decision-support processes undertaken between 2021 and 2023. Information about how the plans were developed is outlined in the *Regional conservation planning approach*, which should be read in conjunction with this plan.

## 2 Regional context

The South Coast Region covers an area of 17.4 million hectares stretching from the Hay River in the west to Eucla on the State border in the east. With the highest mountain peaks in southern Western Australia (to 1100m), a long stretch of coast and a rainfall gradient from 1400mm in the west to less than 250mm in the far east, the region encompasses a diversity of habitat and climatic conditions. Vegetation associations include tall wet forests, jarrah-marri-allocasuarina forests, open woodlands, mallee and mallee-heath, banksia-heath, coastal heaths and chenopod shrublands. The Southern Nullarbor in the eastern part of the region contains the most significant surface and subterranean karst of what is the largest semi-arid karst area in the southern hemisphere. There are three recognised centres of plant diversity—Stirling Range and Fitzgerald/Ravensthorpe Range in the western part of the region and Russell Range in the eastern part of the region. The South Coast Region covers all or part of 10 biogeographic sub-regions.

The western half of the South Coast Region falls within the ‘South West Division of Western Australia’, which is recognised as one of the world’s 36 biodiversity hotspots (Myers et al. 2000, Conservation International 2023). The region has several ‘macro-corridors’ (Wilkins et al. 2006) on regional scales varying in width from several hundred metres to several kilometres or tens of kilometres in length.

The Woodlands management zone falls within the area designated as the Great Western Woodlands (GWW) and is widely recognised as a part of the largest remaining temperate woodland on the planet. In 2010, the department released the *Biodiversity and Cultural Conservation Strategy for the Great Western Woodlands* (DEC 2010). While the 10-year planning timeframe for the strategy has elapsed, the document still provides an overarching framework for planning and management within the GWW.

There are approximately 140 islands off the South Coast, many of which are notable for their island endemics, threatened species and refugial populations of fauna no longer found on the nearby mainland. Vegetation associations differ from those on the adjoining mainland where more frequent fire is a factor in determining plant species composition and structure. Of particular note are refugial/island populations of vertebrates (for example Recherche rock wallaby (*Petrogale lateralis hacketii*), pygmy dugite (*Pseudonaja affinis tanneri*), quenda (*Isodon fusciventer*), quokka (*Setonix brachyurus*)). Islands have been important safe havens for translocation of Gilbert’s potoroo (*Potorous gilbertii*) and noisy scrub-bird (*Atrichornis clamosus*) to Bald Island and translocation to islands in the Recherche Archipelago of Gilbert’s potoroo and dibbler (*Parantechinus apicalis*) to Middle Island and Gunton Island respectively.

Biodiversity values in the South Coast Region are subject to several threatening processes including altered fire regimes, Phytophthora dieback, invasive predators and herbivores, habitat loss, degradation and associated fragmentation, salinisation due to land clearing, environmental weed species and climate change. These threats are managed through departmental programs and regional / district work planning but constrained by available resources and knowledge.

Through the South West Native Title Settlement, the department has entered into Co-operative Management Agreements (CMAs) with the six Noongar Native Title Agreement groups. The Settlement enables Noongar people to have a voice in how *Conservation and Land Management Act 1984* lands and waters in the south-west are managed. For the South Coast Region, CMAs are in place between the department and Wagyl Kaip Southern Noongar Aboriginal Corporations. As of 1 December 2025, the South Coast Region has no formal or informal joint management arrangements with Traditional Owners, but these arrangements are expected to be developed in the future. This will support integration of Traditional Owner participation and knowledge into reserve management.

Four marine parks were gazetted in November 2024 within the South Coast Region with three of these parks commencing joint management with Traditional Owners of the Wagyl Kaip, Mirning and Esperance Tjaltjraak Native Title Aboriginal Corporations.

The South Coast Region proactively engages with Traditional Owners where cooperative management arrangements are not currently in place.

The South Coast Region will continue to review and update strategic planning for threatened species and ecological communities, including the threat matrix, to support conservation management in priority landscapes (Gilfillan et al. 2009).

An overview of the South Coast Region is provided in [Table 1](#) and [Figure 1](#).

Table 1 Overview of the conservation assets of the South Coast Region (December 2025).

<b>Region</b>	South Coast		
<b>Interim Biogeographic Regionalisation of Australia (IBRA) regions</b>	Avon Wheatbelt sub-region (AVW02), Coolgardie sub-regions (COO01, COO02, COO03), Esperance Plains sub-regions (ESP01, ESP02) Hampton (HAM), Jarrah Forest sub-region (JAF02), Mallee sub-regions (MAL01, MAL02), Nullarbor sub-region (NUL02), Warren sub-region (WAR01).		
<b>Integrated Marine and Coastal Regionalisation of Australia (IMCRA) regions</b>	WA South Coast, Eucla		
<b>Landscape description</b>	The region extends from the Hay River (near Denmark) in the west along the coast to the South Australian border in the east and inland to include the Stirling Range, southern third of the Great Western Woodlands and the southern Nullarbor which contains significant surface and subterranean karst.		
<b>Department-managed land</b>	<b>Tenure classification</b>	<b>No.</b>	<b>Area (ha)</b>
	<b>Legislated lands and waters</b>		
	National park	16	856,096
	Conservation park	3	752
	Nature reserve	149	1,581,058
	Section 5(1)(h) reserve	14	4012
	State forest	2	4052
	Timber reserve	6	5157
	Marine park	2	292,396
	Section 131 freehold	1	91
	Crown freehold – department-managed	1	0.1
	<b>Total</b>	<b>194</b>	<b>2,743,615</b>
	<b>Department interest in lands and waters</b>		
	Crown freehold - department interest	16	4439
	Unallocated Crown land - department interest	10	16,885
	<b>Total</b>	<b>26</b>	<b>21,325</b>
	<b>Total area of all lands and waters encompassed by the region (and portion managed by the department)</b>		<b>18,030,418 (15%)</b>
<b>Remnant vegetation</b>	Approximately 84.3% of the total area of land encompassed by the region includes remnant vegetation, with approximately 17.6% of this remnant vegetation occurring on department-managed land.		
<b>Threatened<sup>1</sup> and Priority<sup>2</sup> fauna species</b>	Extinct (13), critically endangered (14), endangered (31), vulnerable (61), conservation dependent (4), migratory (53), other specially protected (2), Priority 1 (4), Priority 2 (8), Priority 3 (7), Priority 4 (19)		
<b>Threatened and Priority flora species</b>	Extinct (3), critically endangered (43), endangered (34), vulnerable (41), Priority 1 (145), Priority 2 (254), Priority 3 (217), Priority 4 (161)		
<b>Threatened and Priority ecological communities</b>	Collapsed (0), critically endangered (1), endangered (0), vulnerable (2), Priority 1 (28), Priority 2 (3), Priority 3 (9), Priority 4 (3)		
<b>Wetlands</b>	Wetlands of International Importance under the Ramsar Convention (2), Wetlands of National Importance (11)		

<sup>1</sup> Threatened species and ecological communities listed under the *Biodiversity Conservation Act 2016* (BC Act).

<sup>2</sup> Priority species and ecological community lists are maintained by the department; Priority is not a listing category under the BC Act.

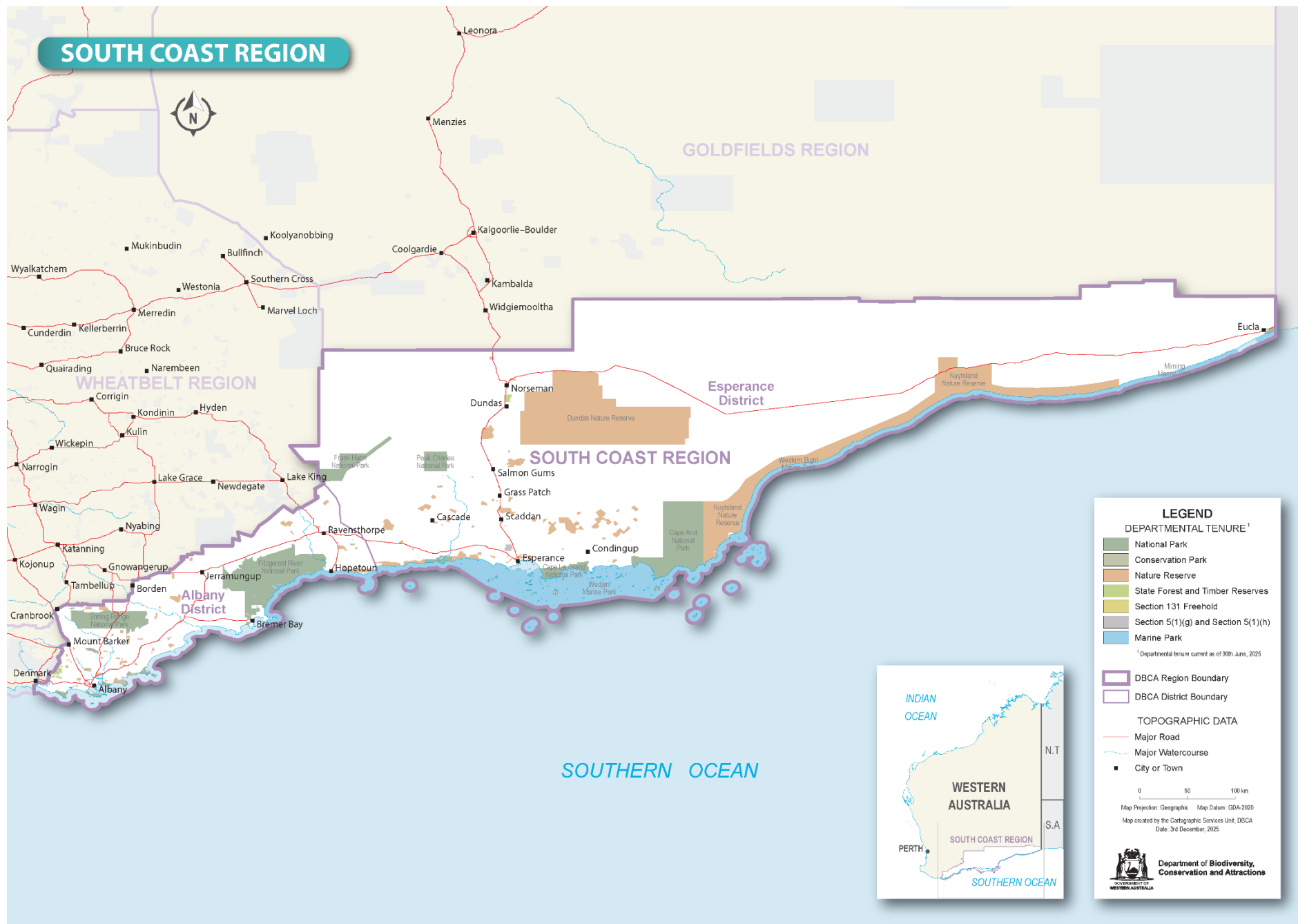


Figure 1 South Coast Region department-managed land and waters (December 2025).

### 3 Identification of priority reserves and landscapes

To determine priorities for landscape-scale threat mitigation, the South Coast Region applied the following approach to identifying priority reserves and landscapes when undertaking the Landscape action prioritisation process, in accordance with the *Regional conservation planning approach*.

#### 3.1.1 Identification of priority landscapes

South Coast Region staff conducted a workshop to determine priority landscapes for the purpose of the regional conservation planning process. The region covers all or part of 10 biogeographic sub-regions and these were used as a starting point for identification of priority landscapes. These regions were then intersected with other boundaries based on ecological, functionality and feasibility characteristics. Boundaries and characteristics used through this process included:

- bioregional boundaries such as Jarrah Forest 1
- reserve groupings such as Albany and Stokes Coastal Reserves, Two Peoples Bay, Mount Manypeaks and Waychinicup Management Zone
- unique and/or ecological features such as Porongurup Range, Manypeaks Cheynes Wetland Suite, Great Western Woodlands and Nullarbor Plain
- other established boundaries such as Fitzgerald Biosphere and agricultural clearing line.

#### 3.1.2 Categorisation of land into management units

Management units are comprised of department-managed land within each priority landscapes and other non-department-managed lands. The department generally is only conducting conservation actions outside department-managed lands or Crown lands where there are threatened species populations and resources are available to implement recovery actions.

#### 3.1.3 Identify priority management units

Management units have been prioritised using previous strategic conservation planning processes and relative reserve size. The *Threatened Species and Ecological Communities Regional Strategic Management Plan South Coast Region* (SCTSP) (Gilfillan et al. 2009) provides a strategic framework for conservation within the South Coast Region and includes a spatial analysis of threatened species distribution and density, as well as a threatened vulnerability matrix. Threatened species areas were defined and ranked according to the number of taxa per threatened species area (defined under SCTSP 7.3.2). These areas were ranked and multiplied with a reserve size classification to give a broad indication of relative priority. It must be noted that this only provides a guide and requires further assessment due to potential information gaps in some landscape and management units.

The following process was used to determine priority management units.

- Landscape units were allocated a priority ranking (L,M,H,VH) based on the number of species per area identified in SCTSP. These rankings were then allocated a score: L=1, M=2, H=3 and VH=4. This represented as 'X' in the formula below.
- Reserves were scored based on their size category: 0-1000ha=1, 1000-5000ha=2, 5000-10,000ha=3, 10,000-100,000ha=4, >100,000ha=5. This represented as 'Y' in the formula below.
- The above scores were multiplied to provide a Value Score, which was then multiplied by the sum of weighting factors. These factors were Western Shield baiting cell (0.1),



Flora translocation site (0.1) and Ramsar site (10) plus a base factor of '1'. Ramsar sites were given a high factor due to the smaller reserve scale at which they occurred.

- The Value Score formula therefore was  $X*Y*Weighting$ .

Value scores greater than 8 were then used to determine an indicative list of priority management units for landscape-scale threat mitigation actions. Note there are likely reserves that may still be considered as priority for landscape-scale threat mitigation and the list below should not be considered exclusive. For example, the Nullarbor Karst is a significant landscape unit with significant portions contained within the Nuytsland Nature Reserve or on other Crown lands. The Nullarbor has been a priority in the previous Regional Conservation Plan and should be considered for nomination as a World Heritage Site. The criteria applied in the above process does not adequately capture the features of the Nullarbor Karst.

The South Coast Region's priority management units are listed in [Appendix 1](#).

## 4 Regional conservation actions

The conservation actions identified and prioritised through the regional conservation planning process are organised into the following sections:

- 1) Highest priority actions assessed through the prioritisation processes (as described in the *Regional conservation planning approach*) are outlined in [section 5](#).

These actions will be implemented by regional staff as the highest priority, focused on those actions that are on, or benefit, department-managed land<sup>3,4</sup> and/or involve addressing key information requirements for the management of threatened and Priority species and ecological communities both on and off department-managed land<sup>5</sup>.

- 2) Actions identified through the regional conservation planning process that are not the highest priority are outlined in [section 6](#).

These actions will be considered in works programming as opportunities arise. They include:

- a) Actions to be led by the region that went through the benefit-cost analysis (for Landscape and Targeted actions) and the risk assessment and value of information analysis process (for Learn actions) and were assessed to not be in the highest priority category.
- b) Actions with a benefit-cost score of zero<sup>6</sup> or less were excluded from prioritisation category allocation, as they have been estimated to deliver no value or may be detrimental based on the information available during the regional conservation planning process. These actions are included for regions to consider should prioritisation process factors change over time (for example new information that improves feasibility or certainty).

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<sup>3</sup> **Department-managed land** includes lands and waters managed under the Parks and Wildlife Service's legislation (the *Conservation and Land Management Act 1984* and *Swan and Canning Rivers Management Act 2006*). It also applies to 1) those lands for which the department under a Memorandum of Understanding (MOU) with the Department of Planning, Lands and Heritage, manages pest animals, weeds and fire on unallocated Crown land (UCL) and unmanaged reserves (UMR) outside the metropolitan area, regional centres and townsites (2004), where resources are available and subject to native title considerations; and 2) Crown lands where the department has a management interest (for example UCL lands that were purchased or identified with the aim of adding them to the formal conservation estate but remain under the management of the *Land Administration Act 1997*).

<sup>4</sup> Actions off, but that will benefit, department-managed land were assessed through the Landscape and Targeted action prioritisation processes. These include actions that:

- are on lands adjacent to department-managed land (for example neighbouring properties, buffers)
- are undertaken in partnership with joint management partners (including potential joint management partners) off department-managed land (relationship building)
- incorporate multiple tenure types, including department-managed land.

<sup>5</sup> Learn actions undertaken by regions on non-department-managed land were included in the Learn action prioritisation process, even if they may not directly benefit department-managed land. This is because information about threatened and Priority species and communities is essential to inform their status, and subsequent management actions either on department-managed land or for the department to encourage actions on other lands.

<sup>6</sup> Zero was defined as 0.0000000001.

- c) \*Landscape and Targeted actions identified through the action development processes that are off, and do not directly benefit, department-managed land, and/or that rely on third parties for implementation where all costs are not incurred by the region.

These were not assessed through the prioritisation processes. This is because the primary focus of regions is to implement actions on, or that benefit the lands for which they have a management responsibility, and/or because the benefit-cost analysis could not be accurately applied due to cost and feasibility uncertainty (as these were outside the region's control). These actions include liaison and advocacy, land acquisition and transfer, and education and awareness.

- d) \*Proposed/new translocation and germplasm collection and storage actions.

These actions were considered through the Targeted action screening and action development processes but were not included in the regional conservation prioritisation processes, as these actions are dependent on approval processes and considerations at a state-wide level led by other areas of the department.

An asterisk (\*) denotes the action types that have not been through the regional conservation planning prioritisation processes.

- 3) Learn actions that were beyond the region's capacity and/or expertise to address are outlined in [section 7](#).

The region will pursue collaboration opportunities to address these information requirements as they arise with other business areas of the department and/or external parties.

Conservation actions to be led by the region have been assigned to the relevant overarching biodiversity conservation strategy as outlined in the department's [Biodiversity Conservation Framework](#). Multiple other business areas of the department contribute to achieving these overarching strategies. Therefore, the region may not deliver actions aligned to all the overarching strategies, and regional conservation plans do not reflect all the conservation activities implemented by other business areas of the department.

Many actions identified through the regional conservation planning process align with multiple overarching strategies, therefore they were assigned based on the nature of the action (what the action is focused on doing) rather than the objective (what the action is focused on achieving).

### Action numbers

The action number in square brackets is a unique code for specific actions that may be grouped in a summarised format in this plan. The action number can be used to reference the detailed information documented through the prioritisation process for that action within the supporting datasets. The letters of the action number denote the prioritisation process (LA = Landscape action, LE = Learn action and TA = Targeted action). For Learn and Targeted actions, letters also denote the threatened or Priority biodiversity asset type (EC = ecological community, FA = fauna and FL = flora). The numbers are random (they do not relate to their priority).



## 5 Highest priority actions assessed through prioritisation processes

Species and  
ecological  
communities



Maintain viable, intact and healthy ecological communities and populations of species, especially those that are threatened, significant or iconic, while allowing the sustainable use of natural resources and facilitating nature-based tourism.

### FAUNA

- Implement a monitoring program on Middle Island of the Recherche Archipelago Nature Reserve to investigate the population status of Gilbert's potoroo (*Potorous gilbertii*) [LE-FA-003].
- Implement a census survey to monitor status of noisy scrub-bird (*Atrichornis clamosus*) [LE-FA-001].
- Investigate noisy scrub-bird (*Atrichornis clamosus*) population trends in relation to fuel age, post-fire response and leaf litter invertebrates (food resources) [LE-FA-027].
- Monitor source populations of western ground parrot, kyloring (*Pezoporus flaviventris*) through the collection of data from solar autonomous recording unit (ARU) 5km landscape scale grid and nested high intensity monitoring grid in hotspot locations [LE-FA-002].
- Retrieve ARU data from the Fitzgerald River National Park solar ARU grid for western ground parrot, kyloring (*Pezoporus flaviventris*) surveillance monitoring and to inform of presence in remote, inaccessible areas [LE-FA-005].
- Undertake post-fire survey for *Pseudococcus markharveyi* at *Banksia montana* population in Stirling Range National Park. Survey for *Pseudococcus* spp. in Fitzgerald River National Park to determine presence of *Pseudococcus markharveyi* [LE-FA-004].

### FLORA

- Maintain fencing and reticulation of *Andersonia axilliflora* translocated populations in Remond State Forest and Porongurup National Park [TA-FL-309].
- Continue the reinforcement of translocation population 1D of *Daviesia ovata* with approximately 100 plants. Fence population and apply phosphite. Monitor survival and health of all populations in relation to phosphite and Phytophthora dieback [TA-FL-297]. *Refers to translocation action only. On-ground component addressed as a separate action.*
- Implement an experimental burn on the unallocated Crown land (UCL) blocks near the salt lakes on Scadden Road to regenerate *Eremophila glabra* subsp. Scaddan population 1 and 4 [TA-FL-333].
- Survey for *Eremophila glabra* subsp. Scaddan additional populations [LE-FL-003].

- Maintain fencing and monitoring of *Grevillea maxwellii* translocated population 11. Implement new translocation of 200 plants at this site including fencing and reticulation [TA-FL-342].
- Investigate the cause of poor *Persoonia micranthera* germination following 2018 and 2019 bushfires [LE-FL-002].
- Undertake a prescribed burn in habitat adjacent to *Scaevola macrophylla* population 1 to stimulate recruitment [TA-FL-361].
- Review flora species listed in the Threatened and Priority Flora Database (TPFL) and/or Western Australian Herbarium records without an assigned 'TPFL population number' at the time of the flora screening process, to determine survey, monitoring or other actions required.

## ECOLOGICAL COMMUNITIES

- Increase the area of Eastern Stirling Range montane heath and thicket community (at occurrence BLUFF01) protected in fenced enclosures from one hectare to two hectares [TA-EC-014].
- Monitor Mount Hassell occurrence of the Montane mallee thicket community of the Stirling Range inclusive of developing longer term monitoring quadrats [LE-EC-002].
- Obtain soil moisture data (in combination with climate data) for occurrence SW Gog of the Montane mallee thicket community of the Stirling Range to understand if plant death is primarily due to a drying climate or if other threats such as fungal disease are causing decline in vegetation across the occurrence [LE-EC-001].
- Establish climate monitoring stations across the region for the Montane mallee thicket community of the Stirling Range including at the SW Gog and Mondurup occurrences [LE-EC-004].
- Establish climate monitoring stations across the region for the Montane thicket of the eastern Stirling Range including at the BUFF01 occurrence [LE-EC-005].
- Establish a monitoring program at the Mount Success occurrence of the Montane mallee thicket community of the Stirling Range inclusive of developing long term floristic quadrats [LE-EC-003].
- Continue to monitor the Proteaceae dominated Kwongkan shrubland community [LE-EC-006].

Threatening  
processes



Reduce the impacts of key threatening processes, including altered hydrology, climate change and priority pest animals, weeds and diseases, on biodiversity, ecological processes and sustainable land uses.

## ALTERED HYDROLOGY

- Monitor sunlight exposure and the rate of drying at locations where Toolbrunup pygmy trapdoor spider (*Bertmainius pandus*) has been found in Toolbrunup gully. Where the

rate of drying is significant, investigate and implement mitigation action to reduce risk of habitat desiccation [TA-FA-025].

## **DISEASE**

- Implement a program to aerially spray *Banksia montana* with phosphite to retain critical habitat for *Pseudococcus markharveyi* [TA-FA-104].
- Implement a program to aerially spray *Banksia brownii* plants with phosphite to retain critical habitat for *Trioza barrettiae* [TA-FA-105].
- Apply phosphite via aerial spraying to all extant populations of *Persoonia micranthera* in the Stirling Range National Park (approximately two hectares) and fencing to population 1 [TA-FL-332].

## **ENVIRONMENTAL IMPACT ASSESSMENT AND ADVICE**

- Review exploration proposals and conservation management plans (CMPs) to ensure a high level of environmental management and undertake compliance monitoring and auditing of proposed management actions within CMPs. Ensure adequate review of mining proposals submitted for approval through the Environmental Protection Authority in Dundas Nature Reserve [LA-016].

## **FIRE REGIMES**

- Undertake early detection and bushfire suppression to prevent extensive bushfires in Dundas Nature Reserve to retain conservation values [LA-015].
- Implement prescribed burning to achieve a balanced mosaic of coastal heathland (low, mid-dense heathland) habitat that supports retention of biodiversity values and habitat availability in Nuytsland Nature Reserve [LA-033].
- Implement prescribed burning to achieve a balanced mosaic of lowland habitat that supports retention of biodiversity values in Stirling Range National Park [LA-040].

## **PEST ANIMALS**

- Implement Western Shield additional introduced predator control and monitor predator and fauna response in:
  - Cape Arid National Park and Nuytsland Nature Reserve [LA-006]
  - Cape Le Grand National Park [LA-007]
  - Fitzgerald River National Park [LA-026]
  - Stirling Range National Park [LA-041]
  - Two Peoples Bay, Manypeaks, Arpenteur, Cheyne Road Nature Reserves and Waychinicup National Park [LA-042].
- Fence approximately two hectares of the Stirling Range National Park containing *Acacia awestoniana* populations 1 and 2 where monitoring indicates pressure from kangaroo grazing [TA-FL-345].
- Fence *Andersonia axilliflora* populations in the Stirling Range National Park (populations 1, 2, 3, 4, 5, 6, 7, 8, 9A, 9B, 10 and 11) to exclude quokkas ((*Setonix brachyurus*) where monitoring has indicated that there is pressure from grazing [TA-FL-307].



- Fence *Banksia ananthera* population 2 and 3 to exclude quokkas (*Setonix brachyurus*) and rabbits where monitoring has detected grazing pressure (approximately 100m<sup>2</sup> fencing). Maintain the existing fencing at populations 2 and 4 and include fenced areas in phosphite spray [TA-FL-320].
- Fence all *Banksia montana* plants (populations 1, 4, 5, 6 and unassigned population) (approximately one to two hectares) to exclude quokkas (*Setonix brachyurus*) and rabbits and include fenced areas in phosphite spray. Include managing visitor impacts at Bluff Knoll by erecting signage and monitoring track braiding and trampling to inform further visitor access management. Service cameras to monitor quokka activity and to inform further management requirements [TA-FL-355].
- Implement a rabbit control program at Stirling Range National Park for populations 1, 2, 3, 4, 5, 6, and unassigned population of *Banksia montana* and include these areas in phosphite spray [TA-FL-323].
- Upgrade approximately one hectare of fencing around *Daviesia ovata* populations 1 and 2 to prevent quokka (*Setonix brachyurus*) grazing [TA-FL-343].
- Fence around individual plants at *Hibbertia barrettiae* populations 1 and 2 to exclude quokkas (*Setonix brachyurus*) and kangaroos [TA-FL-336].

## 6 Actions identified through the regional conservation planning process that are not the highest priority

### Conservation reserves



Expand and effectively manage a comprehensive, adequate and representative conservation reserve system to protect biodiversity, cultural and social values.

#### \*Land acquisition and transfer actions

- Investigate opportunities to transfer the unallocated Crown land that forms the basin of the Stromatolite-like microbialite community of a Coastal Hypersaline Lake (Pink Lk01) into the Pink Lake nature reserve and liaise with the local government authority (LGA) on the Pink Lake Hydrological trial to increase salinity level to support reformation of microbial activity [TA-EC-019].

### Species and ecological communities



Maintain viable, intact and healthy ecological communities and populations of species, especially those that are threatened, significant or iconic, while allowing the sustainable use of natural resources and facilitating nature-based tourism.

## FAUNA

- Undertake opportunistic long-nosed fur seal (*Arctocephalus forsteri*) pup counts within the Recherche Archipelago [LE-FA-014].

- Monitor Australian sea lion (*Neophoca cinerea*) pup numbers on known haul out sites across the Recherche Archipelago [LE-FA-010].
- Implement a monitoring program on the middle island of the Recherche Archipelago Nature Reserve to investigate the population status of tammar wallaby (*Notamacropus eguenii derbianus*) [LE-FA-019].
- Monitor black-flanked rock-wallaby (*Petrogale lateralis lateralis*) in Cape Le Grand National Park to determine movement patterns during dry conditions [LE-FA-024].
- Undertake targeted surveys and assessment of known and potential habitat (following climate change adjusted modelling) for heath mouse (*Pseudomys shortridgei*) at sites such as Lake Magenta, Dragon Rocks, Fitzgerald River National Park, Ravensthorpe Ranges and Peniup to advise future management, such as mosaic burning practices [LE-FA-012].
- Continue noisy scrub-bird (*Atrichornis clamosus*) translocation program for genetic rescue and to establish a population outside the Albany Management Zone. Includes leaf litter invertebrate surveys in Cape Arid National Park or Mount Manypeaks Nature Reserve [TA-FA-441].
- Survey for potential Australasian bittern (*Botaurus poiciloptilus*) habitat and continue monitoring birds with BirdLife Australia song meters [LE-FA-008].
- Undertake active adaptive management trial to determine an appropriate fire and introduced predator control regime within targeted areas in the Fitzgerald River National Park for western bristlebird (*Dasyornis longirostris*) [TA-FA-443].
- Survey for western bristlebird (*Dasyornis longirostris*) systematically in the Fitzgerald River National Park [LE-FA-009].
- Implement a census survey to monitor status of western bristlebird (*Dasyornis longirostris*) in the Albany Management Zone (Manypeaks and Two Peoples Bay nature reserves, Waychinicup national Park, Waychinicup Unmanaged Crown Reserve and Angove Water Reserve). [LE-FA-006].
- Research the response and persistence of western bristlebird (*Dasyornis longirostris*) to current and future fire regimes [LE-FA-026].
- Undertake nesting hollow repair at known breeding sites for Carnaby's black cockatoo (*Zanda latirostris*) and supplement hollow availability by installing and maintaining artificial nest hollows across the Midwest, South Coast, Swan, Warren and Wheatbelt regions [TA-FA-351].
- Survey Mount Ragged to assess potential habitat areas for *Atelomastix anancita* [LE-FA-018].
- Survey for *Bertmainius tumidus* burrows at the Manypeaks site and investigate why they are uninhabited [LE-FA-017].
- Obtain a male *Bertmainius tumidus* specimen from the Porongurup National Park for analysis to determine genetic divergence from other populations on Mount Gardiner and Manypeaks [LE-FA-021].

- Contract a bee specialist to undertake a targeted survey of *Neopasiphae simplicior* where historical occurrence records exist at Mount Ragged and in areas of potential habitat [LE-FA-023].
- Survey *Psophodes nigrogularis oregon* [LE-FA-020] and *Psophodes nigrogularis nigrogularis* [LE-FA-016] populations and investigate the impact of fire on habitat availability and occupancy. Use findings to determine how burn plans should be modified to suit species' needs in relation to fire.
- Survey the Vancouver, Waychincup, Cambellup and Snake Hill translocation sites to determine the status of *Trioza barrettae* populations [LE-FA-013].

#### \*Proposed/new translocations

- Implement the approved translocation plan of up to 10 Gilbert's potoroo (*Potorous gilbertii*) from the Waychincup and/or Bald Island populations to Two Peoples Bay to increase population and genetic diversity. Requires pre- and post-release monitoring to establish source and translocation site population estimates, translocation success and habitat selection, and additional fox and feral cat management at Two Peoples Bay Nature Reserve, over and above Western Shield, through camera monitoring and trapping to reduce impact of predation [TA-FA-421].
- Undertake monitoring of western ground parrot, kyloring (*Pezoporus flaviventris*) following the release of translocated birds in 2022 and 2023 to determine impacts on source population, success of released birds, and evidence of habitat use and breeding [TA-FA-407].
- Undertake site investigations at Mount Arid to determine suitability for trial translocation of black-flanked rock-wallaby (*Petrogale lateralis lateralis*) to Mount Arid and top up of Cape Le Grand subpopulation as per the population management strategy.

#### \*Liaison actions

- Develop guidance for pruning and tree removal not affiliated with land use planning and native vegetation clearing approvals to minimise disturbance to western ringtail possum (*Pseudocheirus occidentalis*) across the South Coast, South West, Swan and Warren regions. Disseminate to the public, contractors and local government authorities, including procedures for the requirement of *Biodiversity Conservation Act 2016* (BC Act) section 40 authorisation [TA-FA-122].
- Implement and publicise enforcement programs to counter illegal taking of Baudin's black cockatoo (*Zanda baudinii*) [TA-FA-332] and Carnaby's black cockatoo (*Zanda latirostris*) [TA-FA-350] through shooting throughout their range (South Coast, South West, Swan, Warren and Wheatbelt).

### **FLORA**

- Introduce fire to the *Adenanthos pungens* subsp. *pungens* population 1 at Hamilla Hills in the Stirling Range National Park to stimulate germination of the population. This will require targeted ignition and minimisation of fire spreading into long-unburnt vegetation [TA-FL-230].



- Implement a prescribed burn at *Andersonia pinaster* population 3 to stimulate recruitment and actively manage with weed control and phosphite spraying thereafter [TA-FL-368].
- Implement a prescribed burn into Lake Shaster Nature Reserve from Bedford Harbour Road with wind driven strips for population 13 and 14 of *Anigozanthos bicolor* subsp. *minor* [TA-FL-227].
- Install watertanks and maintain reticulation, fencing and monitoring of *Banksia montana* at translocation sites (populations 7 and 8 and new translocation sites) [TA-FL-326].
- Introduce an adaptive management fire trial to determine a suitable fire intensity and to stimulate germination in *Eremophila denticulata* subsp. *denticulata* populations 1B, 3, 5, 6 and 7 [TA-FL-359].
- Survey for additional *Eutaxia acanthoclada* populations [LE-FL-009].
- Monitor:
  - existing populations of *Eucalyptus x kalganensis* to determine status [LE-FL-008]
  - all known *Eutaxia acanthoclada* populations in the South Coast Region [LE-FL-010]
  - translocated *Gastrolobium luteifolium* population and supplement with additional established plants [LE-FL-004]
  - translocated *Gastrolobium vestitum* population 1 and supplement with additional established plants [LE-FL-005]
  - *Microtis globula* populations post-fire [LE-FL-007]
  - previously burnt *Tribonanthus purpurea* populations for regeneration post-fire [LE-FL-006].
- Maintain fencing, reticulation and monitoring of:
  - translocated *Banksia anatona* populations (Butcher, Luscombes, Benmore, Porongurup National Park and Redmond State Forest) [TA-FL-321].
  - *Banksia brownii* translocated populations 29, 30, 31 and 36 [TA-FL-341].
  - *Banksia ionthocarpa* subsp. *ionthocarpa* translocated population 7 and increase numbers through additional planting of approximately 100 plants [TA-FL-354].
  - *Darwinia collina* translocated population at Porongurup National Park [TA-FL-315].
  - *Daviesia glossosema* translocated populations at Syred Road, Porongurup National Park and Redmond Timber Reserve '221 25' [TA-FL-296].
  - (one hectare) of *Daviesia pseudaphylla* translocated populations (Porongurup National Park and Redmond populations) [TA-FL-299].
  - *Lambertia fairallii* translocated sites (Redmond Porongurup National Park and Benmore) [TA-FL-330].
  - *Latrobea colophon* translocated populations in Porongurup National Park and Redmond State Forest [TA-FL-340].
  - *Leucopogon gnaphalioides* translocated population at Redmond State Forest (three plants, approximately 100 more to be planted) [TA-FL-311].

### \*Proposed/new translocations

- Supplement translocation population 6 of *Lambertia orbifolia* subsp. *orbifolia* with approximately 100 plants with additional plants to be fenced individually [TA-FL-331]. Refers to translocation action only. On-ground component addressed as a separate action.

### **ECOLOGICAL COMMUNITIES**

- Conduct detailed vegetation mapping across the Bremer Range vegetation complexes community [LE-EC-007].
- Assess the status of the Green Range granite hill heath and woodland community and compare to other granite communities (such as Coyanup Upland Community) [LE-EC-027].
- Establish a heath monitoring program for the Coyanerup Wetland Suite community utilising soil moisture probes [LE-EC-020].
- Establish climate monitoring stations across the region for the Coyanarup Wetland Suite community [LE-EC-015].
- Investigate the extent of occurrence G226 of the Herblands and bunch grasslands on gypsum lunette dunes alongside saline playa lakes community to determine if it extends beyond its current mapped area in the Wheatbelt Region [LE-EC-019].
- Investigate the impact of phosphorus accumulation after fire on the Montane mallee thicket community of the Stirling Range [LE-EC-009].
- Investigate the impacts of the drying climate on the *Regelia velutina* / *Melaleuca lutea* shrubland community [LE-EC-013].
- Undertake a floristic assessment at occurrence YATE01 of the Stirling Range upland yate woodlands community and compare with data from other yate woodlands to better understand the listing of the community [LE-EC-022].
- Liaise with the South West Region to gain information on the Subtropical and temperate coastal saltmarsh community, expand search area for occurrences to Thomas River (Cape Arid) and continue to survey new potential sites [LE-EC-018].
- Monitor:
  - the *Banksia coccinea* Shrubland / *Melaleuca striata* / *Leucopogon flavescens* Heath (all/or portion in Kwongan community nationally listed as a Threatened Ecological Community (TEC) under the *Environment Protection and Biodiversity Conservation Act 1999*) [LE-EC-012]
  - occurrence Reserve931 of the *Banksia littoralis* woodland / *Melaleuca incana* shrubland community for declines in *Banksia littoralis* and other component species, and investigate causes for decline across the community [LE-EC-023]
  - the impact of quokka (*Setonix brachyurus*) grazing on the Coyanerup Wetland Suite community [LE-EC-021]
  - occurrence Epurp01 of the *Eucalyptus purpurata* woodlands of Bandalup Hill to investigate causes of decline and the impact of mining and clearing on the occurrence [LE-EC-026]

- all occurrences of *Melaleuca striata Banksia* spp Coastal Heath to determine the impacts of aerial canker including investigating the interactions between the canker and fire [LE-EC-008]
- the *Melaleuca* sp. Kundip (now *Melaleuca sophisma*) heath community to assess the interactions with and responses to fire, a drying climate, dewatering and fragmentation [LE-EC-017]
- the Wet ironstone heath community (Albany District) community to assess the condition of and determine if the TEC listing is still suitable [LE-EC-016].

### Threatening processes



Reduce the impacts of key threatening processes, including altered hydrology, climate change and priority pest animals, weeds and diseases, on biodiversity, ecological processes and sustainable land uses.

## ALTERED HYDROLOGY

- Continue surface water monitoring, re-establishment of hydrological connectivity between Lake Warden and Pink Lake, manipulation of water level through the management of the Lake Wheatfield siphon and undertake shorebird monitoring at Esperance lakes reserves [LA-022].
- Install signage at fire water points across the spotted galaxias (*Galaxias truttaceus*) distribution (South Coast and Warren regions) to provide advice to users on how to minimise the potential impacts to the species [TA-FA-097].
- Secure personnel to fill a role that involves groundwater and surface monitoring of Lake Wheatfields to inform the impacts that groundwater decline has on far eastern curlew (*Numenius madagascariensis*) [LE-FA-015].

### \*Liaison actions

- Assess potential impacts of water abstraction to minimise impacts on groundwater dependent ecosystems in Cheynes Wetlands Suite Reserves (Lake Pleasantview, North and South Sister Reserves, Cheyne Road, Mettler Lake) [LA-012].

## DISEASE

- Implement Cape Arid Dieback Management Protection Plan with a focus on improved disease hygiene management [LA-005].
- Manage Phytophthora Dieback risk across Esperance Coastal Reserves West (Lake Shaster, Stokes, Torridup, Warrenup, Mortitijup, Jerdacuttup) [LA-019].
- Review and update Fitzgerald River National Park Phytophthora Dieback Management Plan [LA-029].
- Apply phosphite via aerial spraying and monitor survival and health of flora populations in relation to phosphite and Phytophthora dieback:
  - to the existing Phytophthora dieback infestation on the Drummond Track and around *Adenanthos dobagii* populations 2, 4, 5 and 6 (approximately 50 hectares)

- to protect all populations (population 2, 3, 4, 5, 6, 7) within the Fitzgerald River National Park [TA-FL-352]
- across 44 hectares of the Stirling Range National Park containing all populations of *Andersonia axilliflora* [TA-FL-308]
- to *Banksia anaton*a populations 2, 3 and 4 (approximately 32 hectares) in the Stirling Range National Park [TA-FL-319]
- to *Banksia brownii* populations at Millbrook Nature Reserve (populations 1, 32 and 33), Stirling Range National Park (populations 12 and 16), Waychinicup Nature Reserve (population 22), Cheyne Road Nature Reserve (population 26) and Vancouver Peninsula reserve 2595 (population 8) [TA-FL-369]
- to all *Banksia montana* populations (1, 4, 5, 6 and unassigned population) (approximately five hectares) in the Stirling Range National Park [TA-FL-322]
- to *Banksia rufa* subsp. *pumila* population 3 & 4 (approximately one hectare) in the Stirling Range National Park [TA-FL-327]
- across 32 hectares of Stirling Range National Park containing all populations of *Darwinia collina* [TA-FL-314]
- to approximately six hectares of the Stirling Range National Park containing all *Darwinia nubigena* populations [TA-FL-316]
- to approximately 10 hectares of the Stirling Range National Park containing all *Darwinia oxylepis* populations [TA-FL-317]
- to the Stirling Range National Park containing all *Darwinia wittwerorum* populations [TA-FL-318]
- to approximately 20 hectares of the Stirling Range National Park containing *Daviesia glossosema* populations 1 and 2 [TA-FL-295]
- to populations 1 and 7 of *Daviesia obovata* in the Stirling Range National Park [TA-FL-448]
- to approximately 20 hectares of the Stirling Range National Park containing all *Daviesia pseudaphylla* populations [TA-FL-298]
- to *Gastrolobium luteifolium* populations 1C. Monitor population response to inform weed control [TA-FL-302]
- to all *Hibbertia wheelerae* populations endemic to the Stirling Range National Park [TA-FL-615]
- to the Cape Le Grand *Lambertia echinata* subsp. *echinata* populations 1, 2, 3, 4 and 9 [TA-FL-328]
- to three populations of *Lambertia fairallii* (approximately 26 hectares) in the Stirling Range National Park [TA-FL-329]
- to all *Latrobea colophon* populations in the Stirling Range National Park (approximately 40 hectares) [TA-FL-338]
- to all *Leucopogon gnaphalioides* populations in the Stirling Range National Park (approximately 50 hectares) [TA-FL-310].
- Apply a phosphite spray either from ground or aerially and monitor survival and health of flora populations in relation to phosphite and Phytophthora dieback:
  - to population 24 of *Banksia verticillata* in Torndirrup National Park [TA-FL-234]
  - to all populations of *Leucopogon* sp. Manypeaks (population 1 [TA-FL-312].



- Extend current phosphite targets for aerial spray to all populations of *Daviesia mesophylla* in South Coast Region including the Chesterpass population [TA-FL-221].
- Apply phosphite spray to population 10 of *Isopogon uncinatus* in Gull Rock National Park (3 hectares) to mitigate *Phytophthora* dieback [TA-FL-152].
- Expand phosphite targets across the *Banksia coccinea* shrubland / *Melaleuca striata* / *Leucopogon flavescens* heath at occurrences Manypeaks 1, 2, 3, 4, 5, 6, 10, 12, 13, 14, 15, 19, 20, 21, 28, 29, 30, 31 and nannarup 1 [TA-EC-009].
- Implement a phosphite spray program of 60 hectares over four occurrences (BLUFF01, ISONG01, COYAN01, SUCCESS01) for the Eastern Stirling Range montane heath and thicket community [TA-EC-015].
- Implement a phosphite spray program of 80 hectares for the Montane mallee thicket community of the Stirling Range for over 10 occurrences (Hostellers, Little Mondurup, SE Ellen Peak, Mt Hassel, Yungemere, Mt Trio, Stirling Range Montane 1, 2, 3, Wedge Hill, Baby Barnett, Mondurup, Barnett Peak, Henton Peak, SW Gog, Twin Hills W, Twin Hills E, The Abbey, Toolbrunup, Toll Peak, Mt Gog, Mt Magog, Gully Gog, Little Toolbrunnup 01, 02, Little Mt Trio 01, 02, Donnelly Peak southern sl, Ross peak and southern sl) [TA-EC-023].
- Monitor for indications of *Phytophthora* dieback spread in disease free areas of the Thumb Peak - Mid-Mount Barren - Woolburnup Hill (Central Barren Ranges) *Eucalyptus acies* mallee heath community [LE-EC-011].

## ENVIRONMENTAL IMPACT ASSESSMENT AND ADVICE

- Investigate the impacts of sand mining on the Woodline Hills Vegetation Complex and reassess the listing of the community [LE-EC-014].

### \*Liaison actions

- Liaise with industry to mark out and protect *Acacia rhamphophylla* population 1 from any mining disturbance. Monitor population response to inform further liaison [TA-FL-346].

## FIRE REGIMES

- Implement prescribed burning to create small to medium size patches that reduce the likelihood of reserve-scale bushfires at:
  - Albany coastal reserves (West Cape Howe, Torndirrup and Gull Rock national parks) [LA-003]
  - Cape Le Grand National Park [LA-008]
  - Cheynes wetlands suite reserves (Lake Pleasantview, North and South Sister reserves, Cheyne Road and Mettler Lake) [LA-011]
  - Esperance coastal reserves west (Lake Shaster, Warrenup, Mortitijup and Jerdacuttup nature reserves and Stokes and Torndirrup national parks) [LA-020]
  - Esperance inland nature reserves (within clearing line) [LA-021]
  - Esperance lakes reserves [LA-023]
  - Fitzgerald River National Park and Ravensthorpe Range [LA-027]
  - Porongurup National Park [LA-034]
  - Redmond / State forest reserves [LA-038]

- Two Peoples Bay, Manypeaks, Arpenteur, Cheyne Road and Waychinicup National Park [LA-043].
- Implement prescribed burning to achieve a balanced mosaic of coastal heathland (low, mid-dense heathland) habitat that supports retention of biodiversity values and habitat availability in Cape Arid National Park [LA-004].
- Implement prescribed burning and undertake post fire monitoring to determine recruitment success in Fitz Stirling Reserves (Corackerup Nature Reserve / Peniup Proposed Reserve) [LA-024].
- Undertake rapid response to bushfires within or near GWW reserves and establishment and maintenance of strategic breaks to reduce the scale of bushfire in suppression action (needs to ensure that vegetation modification does not degrade woodland and heritage values) [LA-030].
- Undertake rapid response to bushfire events at Mill Brook Nature Reserve [LA-031].
- In conjunction with local government, undertake prescribed burning to reduce areas of long unburnt coastal vegetation and create a mosaic of fire ages to protect biodiversity values in the Pallinup Coastal Macro Corridor within the Pallinup Siltstone Reserves (Tinkelelup, Basil Road and Mettler nature reserves and Hassel National Park) [LA-045].
- Undertake pre- and post-prescribed burn and post-bushfire monitoring of western ringtail possum (*Pseudocheirus occidentalis*) to inform fire management strategies [LE-FA-011].

## PEST ANIMALS

- Implement Western Shield additional introduced predator control and monitor predator and fauna response in:
  - Cheynes Wetlands Suite Reserves (Lake Pleasantview, North and South Sister Reserves, Cheyne Road and Mettler Lake) [LA-010]
  - Fitz Stirling Reserves (Corackerup / Peniup) [LA-025]
  - Gull Rock National Park [LA-002]
  - Ravensthorpe Range [LA-028]
  - Stokes National Park [LA-018].
- Implement fox and feral cat control at Peniup proposed nature reserve and collaborate with Bush Heritage Australia on the Lotterywest Fitz-Stirling Integrated Predator Management Program for the protection of the translocation population of dibbler (*Parantechinus apicalis*) in Peniup [TA-FA-131].
- Implement feral cat control within Cape Le Grand National Park to protect black-flanked rock-wallaby (*Petrogale lateralis lateralis*). Establish an introduced predator monitoring grid to monitor response of feral predators to the control program [TA-FA-409].
- Implement additional fox and feral cat management at Two Peoples Bay Nature Reserve, over and above Western Shield, to reduce impact of predation on Gilbert's potoroo (*Potorous gilbertii*) [TA-FA-422].
- Implement feral cat and fox control in Lake Pleasant View Nature Reserve, North Sister Nature Reserve, South Sister Nature Reserve, and Merivale Crown reserve to manage

introduced predators in Australasian bittern (*Botaurus poiciloptilus*) feeding and breeding habitat [TA-FA-404].

- Implement targeted introduced predator management for western ground parrot, kyloring (*Pezoporus flaviventris*) in Cape Arid National Park and Nuytsland Nature Reserve population [TA-FA-406]. In addition, after bushfires undertake additional introduced predator management in hotspots at Cape Arid National Park and Nuytsland Nature Reserve to protect source populations of western ground parrot [TA-FA-217].
- Implement targeted introduced predator management at western ground parrot, kyloring (*Pezoporus flaviventris*) mainland translocation site. Monitor and evaluate effectiveness of targeted introduced predator management program on predator occupancy and monitor the corresponding persistence of translocated parrots at the translocation site [TA-FA-405].
- Implement management of camels to reduce their impact on vegetation systems in Dundas Nature Reserve (as part of a statewide program) [LA-017].
- Fence *Calectasia cyanea* populations 1, 2, 3 and 7 to exclude kangaroos where monitoring has indicated there is pressure from grazing [TA-FL-365].
- Fence *Darwinia collina* populations 1, 3, 6 and 9 to exclude quokkas (*Setonix brachyurus*) and rabbits (approximately four 100m<sup>2</sup> areas) and include fenced areas in phosphite spray [TA-FL-313].
- Fence *Hibbertia wheeleri* unassigned populations at Mount Success, the saddle between Bluff Knoll and Coyanerup, and summit of Wedge Hill in Stirling Range National Park to exclude quokkas (*Setonix brachyurus*) and rabbits and include fenced areas in phosphite spray [TA-FL-616].
- Fence part of *Latrobea colophon* populations 1, 7 and 6 in the Stirling Range National Park to exclude quokkas (*Setonix brachyurus*) and rabbits. Implement a rabbit control program and include fenced areas in phosphite spray [TA-FL-339].
- Fence populations 3, 5, 6 and 7 of *Leucopogon gnaphalioides* populations in the Stirling Range National Park to exclude quokkas (*Setonix brachyurus*) and rabbits and include fenced areas in phosphite spray. Implement a rabbit control program [TA-FL-350].
- Establish a new exclosure targeting quokkas (*Setonix brachyurus*) at the Wedge Hill occurrence of the Montane mallee thicket community of the Stirling Range [TA-EC-029].
- Investigate the possibility of reducing the number of quokkas (*Setonix brachyurus*) on the Wedge Hill occurrence of the Montane mallee thicket community of the Stirling Range by translocating (dependent on results of genetics analysis to move to the South West Region) [LE-EC-010].

## WEEDS

- Implement weed control on a priority basis to reduce risk of environmental weeds within the conservation estate at:
  - Albany Coastal Reserves [LA-001]
  - Cape Le Grand National Park [LA-009]
  - Cheynes Wetlands Suite Reserves [LA-013]

- Porongurup National Park [LA-036, LA-035]
- Redmond/State Forest Reserves and Kalgan River upper catchment [LA-039]
- Two Peoples Bay, Manypeaks, Arpentur, Cheyne Road and Waychinicup National Park [LA-044].
- Implement weed control and feral animal management on selected islands, focusing on boxthorn, arum lily, cotyledon, rabbits and goats, within:
  - Recherche Archipelago Nature Reserve [LA-037]
  - Doubtful Islands Nature Reserve [LA-014].
- Implement a woody weed management program targeting *Acacia longifolia* and *Psoralea pinnata* at *Andersonia pinaster* population 3 at the Goodga River [TA-FL-367].
- Implement a weed management program targeting *Dipogon lignosus*, *Rubus* spp., *Myosotis sylvatica* and *Psoralea pinnata* across all populations of *Apium prostratum* subsp. *phillipii* [TA-FL-349].
- Implement a weed control program to target species including *Acacia longifolia* and *Zantedeschia aethiopica* across 10 hectares and encompassing *Calectasia cyanea* populations 1, 2, 3 and 7 [TA-FL-364].
- Implement a weed control program that targets species including *Lycium ferocissimum*, *Eragrostis curvula* and *Asparagus asparagoides* over 20km of Phillips River encompassing *Eremophila denticulata* subsp. *denticulata* populations 2 and 4 [TA-FL-360].
- Implement a weed management program targeting blackberry at *Ornduffia calthifolia* populations 2, 3 and 10 (approximately five hectares) [TA-FL-358].
- Manage weed competition from *Acacia longifolia*, annual grasses and clover species at population 1 in Gull Rock National Park of *Thelymitra porphyrosticta* [TA-FL-200].
- Trial grass selective herbicides for *Poa annua* and selective methods for *Arctotheca calendula* in the Montane mallee thicket community of the Stirling Range at Mount Trio to determine the effectiveness of control for these environmental weed species [TA-EC-026].
- Implement a weed control program targeting *Dipogon lignosus* and *Rubus ulmifolius* in the South coast Porongurup Range karri forest community [TA-EC-031].

Scientific  
research



Undertake scientific investigations that are effectively targeted to improve knowledge and integrate science knowledge into biodiversity conservation and management.

## FLORA

### \*Proposed germplasm collection and storage priorities

- Consider germplasm collection and storage priorities for threatened flora species including:



- *Acrotriche orbicularis*
- *Adenanthos dobagii*
- *Adenanthos ellipticus*
- *Allocasuarina globosa*
- *Andersonia axilliflora*
- *Banksia anatona*
- *Bossiaea arcuata*
- *Calectasia cyanea*
- *Darwinia collina*
- *Daviesia glossosema*
- *Daviesia mesophylla*
- *Daviesia ovata*
- *Daviesia pseudaphylla*
- *Diuris heberlei*
- *Eremophila ciliata*
- *Eremophila denticulata* subsp. *denticulata*
- *Eremophila glabra* subsp. Scaddan (C. Turley s.n. 10/11/2005)
- *Eremophila lactea*
- *Eremophila lucida*
- *Eremophila subteretifolia*
- *Eremophila succinea*
- *Eucalyptus platydisca*
- *Eucalyptus rhomboidea*
- *Eucalyptus websteriana* subsp. *norsemanica*
- *Gastrolobium hians*
- *Hibbertia priceana*
- *Hibbertia barrettiae*
- *Kunzea similis* subsp. *similis*
- *Lambertia echinata* subsp. *echinata*
- *Latrobea colophona*
- *Leucopogon gnaphalioides*
- *Leucopogon* sp. Many Peaks (A.S. George 6488)
- *Marianthus aquilonaris*
- *Melaleuca eximia*
- *Persoonia baeckeoides*
- *Persoonia micranthera*
- *Scaevola archeriana*
- *Scaevola macrophylla*
- *Stenanthera localis*
- *Thelymitra variegata*
- *Verticordia pityrhopis*
- *Styphelia disjuncta*
- *Xyris exilis*.

## Community engagement



Promote public and stakeholder awareness and understanding of biodiversity, the threats facing it and its conservation, including through involvement in conservation programs, to encourage stewardship and support for conservation initiatives.

## FAUNA

- Contribute to the continuation and maintenance of the Australasian bittern (*Botaurus poiciloptilus*) project under the guidance on the Australasian Bittern Recovery Team for work such as gaps, animal tracking and DNA collection to increase understanding about distribution, breeding and utilisation of non-breeding habitat [LE-FA-007].

### \*Education and awareness

- Establish a community education and awareness program in collaboration with the GeoCatch citizen science survey program (Ringtail Tally) for western ringtail possum (*Pseudocheirus occidentalis*), focusing on urban areas in the South Coast, South West and Swan regions. Main activities include workshops and newsletters, coordinated by Wirambi Landcare [TA-FA-118].
- Implement an education program targeting primary producers to promote awareness of the impacts of illegal shooting to Carnaby's black cockatoo (*Zanda latirostris*) across its range in the Midwest, South Coast, South West, Swan, Warren and Wheatbelt regions [TA-FA-325].

### \*Liaison actions

- Liaise with the Department of Fire and Emergency Services and local government authorities in the Wheatbelt and South Coast regions regarding fire management strategies in known or likely heath mouse (*Pseudomys shortridgei*) habitat [TA-FA-430].
- Continue to liaise with and advise personnel who are contracted to undertake road works regarding the preferred timing of pruning and the appropriate placement of chopped branches under vegetation to reduce impact to *Acizzia veski* [TA-FA-103].
- Install fencing on private properties through natural resource management networks around the catchment areas of the Goodga River and Kent River to mitigate the impacts of water degradation by riparian livestock on spotted galaxias (*Galaxias truttaceus*) [TA-FA-091].
- Liaise with Water Corporation and Department of Water and Environmental Regulation to minimise potential impacts to spotted galaxias (*Galaxias truttaceus*) associated with future developments in the Goodga River and Angove River [TA-FA-219].
- Develop and implement strategies to reduce the incidence of motor vehicle collisions with Baudin's black cockatoo (*Zanda baudinii*) across their range (South Coast, South West, Swan, Warren and Wheatbelt regions) including the identification of hotspots, signage, road and drainage design, and planting of food resources [TA-FA-331].

## FLORA

### \*Liaison actions

- Apply phosphite to *Andersonia pinaster* populations 1, 2, 3, 4, 5, 6 and 7 in the LGA reserves and unvested Boulder Hill reserve [TA-FL-366].
- Liaise with private property owners to fence *Androcalva perlaria* populations 3, 4, 5 and 6 (approximately three hectares in total) to exclude kangaroos and rabbits [TA-FL-351].
- Liaise with private property owners to fence populations of *Anigozanthos bicolor* subsp. *minor* that occur on their properties (Wittenoom Hills Station population 4, lot 229 population 8, lot 165 and 166 population 15, lot 16 population 20 (maintain the fenced area), lot 24 population 19) to exclude herbivores and ensure fences are maintained as required [TA-FL-228].
- Liaise with the LGA to manage weeds including *Asparagus asparagoides* and annual grasses at population 1 of *Banksia ionthocarpa* subsp. *ionthocarpa* where monitoring has detected a weed invasion [TA-FL-353].
- Liaise with the LGA regarding reducing unauthorised recreational impacts (for example trail bikes) associated with trails by erecting signage to educate and demarcate and increasing patrols at population 1 of *Calochilus pruinosus* in Hopetoun [TA-FL-305].
- Liaise with the LGA to implement an adaptive management program that introduces prescribed fire on an experimental basis to release dormancy and promote flowering of *Calochilus pruinosus* population 1 at Hopetoun [TA-FL-347].
- Liaise with the LGA to implement a weed control program targeting *Asparagus asparagoides*, *Freesia* sp and *Gazania* sp at *Calochilus pruinosus* population 1 in Hopetoun [TA-FL-348].
- Liaise with utility provider at population 4 of *Conospermum quadripetalum* to declare the site as an Environmentally Sensitive Area to mitigate contractors slashing the plant and limit the transmission of weeds and disease [TA-FL-237].
- Liaise with the LGA to close or delineate tracks, educate four-wheel drive community and provide interpretative signage to prevent four-wheel drive disturbance to population 3 (Nannarup Beach) of *Diuris heberlei* [TA-FL-383].
- Liaise with private property owners to construct fencing to exclude sheep from grazing the slopes of Mount Belches (Crown Reserve 14942) containing *Hibbertia argentea* population 1 [TA-FL-362].
- Liaise with the LGA to avoid *Hibbertia priceana* populations 1 and 2 during road grading [TA-FL-363].
- In response to a threat assessment of stock grazing and weed invasion conducted in liaison with private property owners and the LGA, implement required weed control and fencing (three hectares) to mitigate weed and grazing pressures across all *Hibbertia priceana* populations [TA-FL-335].
- Liaise with Main Roads and the LGA to manage watsonia, lovegrass, gladioli weeds on road verges of the two populations (no assigned number) of *Isopogon buxifolius* var.

*buxifolius* located on the Lower Denmark Road east of the Hay River. Liaise to arrange for department personnel to treat *Phytophthora* dieback with phosphite spray [TA-FL-245].

- Implement one to two hectares of woody weed management inclusive of *Acacia* spp. and *Watsonia* control within the road reserves for population 1 of *Lambertia orbifolia* subsp. *orbifolia*. Implement woody weed management inclusive of *Acacia longifolia* and *Acacia pycnanthea* control for population 2 of *Lambertia orbifolia* subsp. *orbifolia* (two hectares on department reserve) [TA-FL-356].
- Ensure that Declared Rare Flora markers are in place for population 1 of *Styphelia disjuncta*. Liaise with LGAs in the South Coast and Wheatbelt regions and implement education programs as necessary to ensure all known populations of *Styphelia disjuncta* (populations 1 and 2) are avoided during roadside maintenance [TA-FL-174].
- Liaise with LGAs to prevent disturbance from road maintenance or clearing in the vicinity of roadside populations of *Thelymitra psammophila* [TA-FL-199].
- Liaise with the LGA to prevent disturbance from road maintenance or clearing in the vicinity of roadside populations 3, 4, 5, 6B and 7 of *Thelymitra porphyrosticta* [TA-FL-201].

## ECOLOGICAL COMMUNITIES

### \*Liaison actions

- Liaise with the LGA to implement a weed control program targeting wattle species (*Psoralea pinnata* and *Senecio pterophorus*) in the *Astartea scoparia* Swamp thicket Collingwood suite occurrences Collingwood 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 37, GullRock34 and 36 [TA-EC-008].
- Implement a weed control program in liaison with the LGA where necessary across occurrences RushyPoint5, Reserve931, Torndirrup01 and Torndirrup02 of the *Banksia littoralis* woodland / *Melaleuca incana* shrubland community, with a focus on *Acacia longifolia* and *Zantedeschia aethiopica* [TA-EC-012].
- Liaise with the LGA to monitor the impacts of weeds, recreation and *Phytophthora* dieback across the *Banksia occidentalis* / *Kunzea clavata* shrubland community [LE-EC-024].
- Liaise with the LGA (for occurrences Youngs01, 04, 05, 06, 07, 08, 09, 10, 12, 13, 14, 15, 16, 17, 18, 19 and 20) [TA-EC-020] and private property owners (for occurrences Youngs02, 03, 21, Marshall01, Meanwood01 and 02) to implement a weed control program targeting *Acacia longifolia* along the road verges at occurrences of the *Melaleuca spathulate* / *Melaleuca viminea* swamp heath community [TA-EC-021].

## LANDSCAPES

- Establish and maintain signage at Nullarbor cave entrances and maintain communication with caving organisations to promote cave code of conduct and stewardship and reduce the impact of human visitation on sensitive cave systems [LA-032].



## 7 Learn action collaboration opportunities

### FAUNA

#### Mammals

- Implement a consistent monitoring program across the whole of the State to determine distribution and population trends of chuditch (*Dasyurus geoffroii*) at a species level.
- Establish a monitoring program with an effective methodology to survey for western ringtail possum (*Pseudocheirus occidentalis*) across its range to determine the trajectory of the species and the extent of its habitat to inform management.
- Implement a cross regional monitoring plan to assess quokka (*Setonix brachyurus*) populations post fire to inform fire exclusion areas and to understand interactions with invasive species post-burn to inform introduced predator baiting options.

#### Birds

- Collaborate with BirdLife to improve data flow regarding surveying and monitoring work on red knot (*Calidris canutus*) and hooded plover (*Thinornis cucullatus*).
- Consolidate information available on feeding, roosting and nesting habitat of forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*), Baudin's black cockatoo (*Zanda baudinii*) and Carnaby's black cockatoo (*Zanda latirostris*) to improve input into environmental impact assessment and land use planning processes and to develop a better understanding of distribution, habitat use, tenure distribution (including area/proportion of habitat in secure reserves) and movement patterns between regions. Work collaboratively to map critical breeding/feeding/roosting habitats to understand where conservation effort should be focused.
- Develop a cross regional monitoring protocol to track and monitor the movements of black cockatoos (*Calyptorhynchus banksii naso*, *Zanda baudinii* and *Zanda latirostris*) using the most appropriate technology.
- Establish a species-wide population estimate for Carnaby's black cockatoo (*Zanda latirostris*).
- Survey potential forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*), Baudin's black cockatoo (*Zanda baudinii*) and Carnaby's black cockatoo (*Zanda latirostris*) habitat occupied by feral bees and determine, through liaison with the apiary industry, where the use of fipronil to control feral bees is appropriate. Liaise with Biodiversity and Conservation Science and Australian Pesticides and Veterinary Medicines Authority to implement a fipronil trial with the view to adopting as an effective control method for feral bees utilising black cockatoo hollows.
- Undertake monitoring of forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*) at Cocanarup Timber Reserve to understand breeding effectiveness of this population and as an indicator of environmental health status.
- Monitor Recherche Cape Barren goose (*Cereopsis novaehollandiae grisea*) to address knowledge gaps surrounding distributions and priority habitat sites.

- Investigate the effectiveness of different feral predator control regimes on the persistence and recovery of malleefowl (*Leipoa ocellata*) populations.
- Engage with experts and BirdLife Australia to identify nesting sites of southern giant petrel (*Macronectes giganteus*) and the associated threats in these locations to advise management.
- Continue to monitor for far eastern curlew (*Numenius madagascariensis*) opportunistically.
- Map current nesting sites of eastern osprey (*Pandion cristatus*) and ensure data is added to the corporate dataset.
- Identify suitable night parrot (*Pezoporus occidentalis*) habitat across its range to support improved input into environmental impact assessment and land use planning and to guide survey requirements for proponents.
- Collect additional samples of western whipbird *Psophodes nigrogularis oberon* and *Psophodes nigrogularis nigrogularis* to clarify taxonomical differences between the two subspecies.
- Establish efficient and effective information sharing pathways across the regions for fairy tern (*Sternula nereis nereis*).
- Review the requirements for breeding birds and support the regular banding of fairy tern (*Sternula nereis nereis*) at each breeding site to monitor movement and dispersal of individuals between populations and sites.
- When monitoring fairy tern (*Sternula nereis nereis*) populations, expand capacity to include research surrounding the interactions between the terns and trophic cascades and how to respond adaptively to their impacts.
- Monitor interactions and movement patterns between the coastal and inland populations of hooded plover (*Thinornis cucullatus*) to determine population extents and habitat protection priorities.
- Survey Lake Gore to determine if hooded plover (*Thinornis cucullatus*) is present at the site.

## Fish

- Undertake modelling of available black-stripe minnow (*Galaxiella nigrostirata*) habitat in response to climate change.
- Work with researchers to develop genetic techniques (such as eDNA) to survey habitat across the range of freshwater fish spotted galaxias (*Galaxias truttaceus*), western mud minnow (*Galaxiella munda*) and black-stripe minnow (*Galaxias nigrostriata*).
- Undertake studies to determine current threatening processes to black-stripe minnow (*Galaxiella nigrostirata*).
- Develop a freshwater fish research and monitoring program to coordinate stakeholders and encourage information sharing to determine genetic differences between populations, breeding grounds, movement patterns, and the impacts of water quality, sedimentation issues and increasing nutrients for South Coast, South West, Swan and

Warren region threatened fish species including western mud minnow (*Galaxiella munda*), black-stripe minnow (*Galaxiella nigrostriata*), spotted galaxias (*Galaxias truttaceus*), salamanderfish (*Lepidogalaxias salamandroides*), Balston's pygmy perch (*Nannatherina balstoni*) and little pygmy perch (*Nannoperca pygmaea*).

- Investigate the impact of *Gambusia* species on salamanderfish (*Lepidogalaxias salamandroides*), Balston's pygmy perch (*Nannatherina balstoni*) and little pygmy perch (*Nannoperca pygmaea*) and implement feral fish control if species are adversely affected.

### Invertebrates

- Include *Acacia veronica* in vegetation surveys and simultaneously survey for *Acizzia veski* populations to inform how fire impacts on the host plant and subsequently on *Acizzia veski*. Incorporate new populations of *Acizzia veski* into existing management strategies and reassess overall population status to inform future management decisions.
- Monitor *Atelomastix anancita* and *Atelomastix culleni* two years after fire and then at five-yearly intervals to understand their response to fire events.
- Resurvey the Diamond Hills for *Atelomastix anancita* two years post-fire during the winter to understand their response to fire events.
- Investigate the impact of fire retardant on invertebrates. If the impact is negligible, use retardant to lessen the impact of bushfire in the gully where *Bertmainius monachus* is located.
- Continue the taxonomic work being undertaken on *Rhytid* sp. (WAM 2295-69) and apply outcomes to current management and survey efforts.
- Investigate the rate at which Dingo Cave is drying out and the impact this has on *Troglodiplura lowryi*.
- Continue to monitor Carter's freshwater mussel (*Westralunio carteri*) at Two People's Bay Nature Reserve and apply outcomes of the phylogeographic study to inform management decisions.
- Develop a routine monitoring program for Carter's freshwater mussel (*Westralunio carteri*) across the South Coast, South West, Swan and Warren regions in conjunction with the external groups.
- Undertake targeted surveys at the site of the original record of Carter's freshwater mussel (*Westralunio carteri*) at Bandie Creek to inform management response to disturbance.
- Undertake studies and apply learnings regarding Carter's freshwater mussel (*Westralunio carteri*) biology, life history and interactions with other species to inform management actions.
- Conduct a post-fire survey of *Zephyrarchaea barrettae*, *Zephyrarchaea mainae*, *Zephyrarchaea marki*, *Zephyrarchaea melindae* and *Zephyrarchaea robinsi* habitat biennially to assess whether assassin spiders return after fire.

- Survey the summit of intervening peaks to understand distribution of *Zephyrarchaea robinsi*, especially in unburnt vegetation.

### Marine<sup>7</sup>

- Develop and implement a triage system to direct where and when management actions need to occur based on a centralised database for reporting adverse incidents for marine turtles and mammals (for example marine debris, vessel strikes, deaths, strandings).
- Utilise the stranding database to capture information on subantarctic fur seal (*Arctocephalus tropicalis*).
- Establish monitoring systems to investigate habitat use and the impacts from vessel strike, seismic activity and marine debris on blue whale (*Balaenoptera musculus*).
- Undertake population trend analysis for all whale species including blue whale (*Balaenoptera musculus*), southern right whale (*Eubalaena australis*) and humpback whale (*Megaptera novaeangliae*) to determine a trajectory of recovery.
- Develop a standardised monitoring program to identify breeding habitat and range extensions of southern right whale (*Eubalaena australis*).
- Monitor humpback whale (*Megaptera novaeangliae*) abundance, distribution and patterns of habitat use to quantify the impact of nature-based tourism.
- Expand the monitoring program for Australian sea lion (*Neophoca cinerea*) to determine abundance, breeding sites, breeding cycle timing and investigate the impact of increased tourism and marine interaction activities on breeding and haul out locations/populations.

### **FLORA**

- Using information from previous records, survey for the *Anigozanthos bicolor* subsp. *minor* population in Lake Shaster Nature Reserve.
- Continue to develop *Banksia montana* tissue culture techniques.
- Improve the mapping of *Bossiaea arcuata* distribution.
- Collaborate with the Ngadju rangers to:
  - implement disturbance trials at *Daviesia microcarpa* translocated population 1C
  - assist with monitoring all *Daviesia microcarpa* populations north-east of Norseman.
- Determine pollinator species for *Drakaea micrantha*.
- Map all known *Melaleuca eximia* populations.
- Determine threats to *Gonocarpus pycnostachyus* populations.
- Collect data on the status of the natural *Grevillea maxwellii* population for comparison with translocated population.

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<sup>7</sup> The 'marine' grouping includes marine mammals, marine reptiles and marine fish, including sharks and rays.

- Improve *Lambertia fairallii* propagation techniques.
- Assess the impact of Phytophthora dieback on *Leucopogon bracteolaris* in the Stirling Range National Park.
- Develop *Persoonia micranthera* tissue culture, germination and propagation techniques.
- Determine longevity of *Scaevola macrophylla* and *Scaevola xanthina* to inform management requirements.
- Map all known *Scaevola tortuosa* sites and monitor population status.
- Assess post-fire recruitment of all *Sphenotoma drummondii* populations.
- Assess the genetic variation between *Sphenotoma drummondii* populations in the Stirling Range National Park and outlier populations at Manypeaks, the Porongurups, Mount Frankland and Scott River.
- Research the impact of fire on *Stenanthera localis* and potentially conduct prescribed burns in similar habitat where no plants currently exist.
- Complete genetic and taxonomic review of west and south coast *Thelymitra variegata* populations.
- Investigate:
  - the efficacy of fungicide on canker and any off-target damage to *Adenanthos ellipticus*
  - the taxonomy of *Adenanthos eyrei*
  - taxonomy of *Apium prostratum* subsp. *phillipii* to determine whether it is a valid subspecies
  - the genetics of *Asplenium decurrens* to determine the differences between Western Australian and Eastern States populations
  - the impacts and treatment of aerial canker on *Banksia brownii* in addition to impacts of the drying climate
  - genetics of *Banksia sphaerocarpa* var. *dolichostyla* populations to confirm morphological differences in light of recent taxonomic changes
  - the taxonomic relationship between *Caladenia bryceana* subsp. *bryceana* population 2 in the South West Region and other populations in the South Coast Region
  - reasons for poor post-fire recruitment of *Calectasia cyanea*
  - the taxonomy of *Corybas limpidus* to determine whether the unassigned population at Ledge Beach is this species
  - the taxonomy of *Darwinia* sp. Mount Ragged populations at Speddingup
  - an adaptive management program that trials fungicide application for aerial canker by ground spraying populations 1, 2, 4 and 6 of *Lambertia orbifolia* subsp. *orbifolia*
  - the taxonomy of *Latrobea colophona* to determine if western populations in the Stirling Range are different to populations located on mountain tops in eastern Stirling Range National Park
  - the taxonomy of *Microcorys* sp. Stirling Range (S. Barrett 1392)
  - the genetics of disjunct *Mirbelia ferricola* populations



- ecology of *Tribonanthes purpurea* (time of flowering) and determine a suitable monitoring method (potentially similar to orchids and other geophytes that respond to seasonal rainfall).
- Liaise with mining proponent regarding monitoring of:
  - *Acrotriche orbicularis* populations adjacent to mine
  - *Beyeria cockertonii* population 1 and *Eucalyptus purpurata* population 1 as part of their flora and vegetation management plan
  - *Hibbertia abyssus* populations 2 and 3 as part of their flora and vegetation management plan to determine whether populations have been successfully established in rehabilitation areas.
- Monitor:
  - *Allocasuarina globosa* populations post-fire
  - *Amanita grandis* populations to determine threatening processes
  - *Baeckea* sp. Hatter Hill populations post-fire
  - road verge *Banksia goodii* populations (1E, 1F, 4A, 5, 7, 8A, 8B, 11, 12, 13, 14, 15, 27, 28) for weeds and liaise as required to implement weed management
  - survival and recruitment in single known population of *Banksia ionthocarpa* subsp. *ionthocarpa*
  - *Banksia parva* populations and assess the impact of *Phytophthora* dieback including liaison with Bush Heritage Australia as necessary
  - *Boronia revoluta* population 1B to confirm if the population has regenerated after fire
  - fire recovery of *Bossiaea arcuata* population 1 and develop a better understanding of the juvenile period
  - *Caladenia bryceana* subsp. *bryceana* populations in the South Coast Region to assess the impact of weeds
  - *Commersonia apella* population 2
  - *Darwinia meeboldii* populations 4 and 5 to determine status and assess for potential phosphite application
  - all existing *Darwinia* sp. Peak Charles populations to determine status
  - all known *Daviesia newbeyi* populations to determine status
  - all known *Daviesia pauciflora* populations to determine status
  - *Eremophila denticulata* subsp. *trisulcata* populations following firebreak maintenance burns and populations 4 and 5 on the Balladonia track after bushfire
  - *Eremophila lucida* populations post-fire including mapping of populations at each site
  - existing *Eucalyptus calcicola* subsp. *unita* populations to determine status
  - *Eucalyptus rhomboidea* germination post-fire
  - existing populations of *Eucalyptus* x *chrysantha* to determine status
  - all known *Eutaxia actinophylla* populations in the South Coast Region
  - *Frankenia brachyphylla* populations and assess threatening processes
  - *Frankenia drummondii* populations and assess threatening processes
  - *Frankenia glomerata* populations and assess threatening processes
  - all known *Gastrolobium acrocaroli* populations post-fire
  - *Gastrolobium humile* populations to determine the current impact of grazing and drought

- all known *Gonocarpus hispidus* populations to determine status
- all known *Gonocarpus pycnostachyus* populations to determine status
- *Goodenia* sp. South Coast (A.R. Annels ARA 1846) populations to determine current threatening processes
- *Grevillea phillipsiana* populations to determine threatening processes
- *Haegiela tatei* populations to determine threatening processes
- *Hakea pendens* populations to determine threatening processes
- the survival and inter-fire recruitment of all known *Hibbertia barrettiae* populations
- *Hibbertia helianthemoides* populations to determine threatening processes
- *Hydrocotyle asterocarpa* populations to determine threatening processes
- *Hypocalymma* sp. Cascade populations post-fire
- all known *Microcorys* sp. Stirling Range (S. Barrett 1392) populations to determine status
- *Microtis pulchella* populations to determine threatening processes
- *Olearia laciniifolia* populations to determine threatening processes
- *Ornduffia calthifolia* population trends every three years to investigate inter-fire recruitment and herbivory
- *Persoonia baeckeoides* populations and utilise findings to nominate species
- *Persoonia cymbifolia* populations to determine threatening processes
- *Pimelea pelinos* populations to determine threatening processes
- *Scaevola xanthina* populations to determine threatening processes
- *Schizaea rupestris* populations to determine threatening processes
- small or declining *Sphenotoma drummondii* populations including populations at Manypeaks and the Porongurups
- *Thelymitra psammophila* populations to determine threatening processes
- *Verticordia carinata* quadrats post-fire
- existing *Xyris exilis* populations to determine status.
- Survey:
  - *Acacia kerryana* records to obtain basic population data and to develop a better understanding of distribution and threats
  - for additional *Amanita grandis* populations to better understand distribution
  - known *Anigozanthos bicolor* subsp. *minor* populations post-burn in Albany
  - for additional *Asplenium decurrens* populations
  - for additional *Conostylis lepidospermoides* populations to the north of the known sites in very inaccessible areas
  - for additional *Darwinia* sp. Peak Charles populations
  - for additional *Daviesia newbeyi* populations in suitable habitat
  - for additional *Daviesia pauciflora* populations
  - for additional *Drummondita longifolia* populations on surrounding granite outcrops
  - for additional *Eremophila lucida* populations in suitable habitat
  - similar habitat for additional *Eremophila succinea* populations
  - for additional *Eucalyptus platydisca* populations
  - for additional *Eutaxia actinophylla* populations
  - for additional *Gahnia sclerioides* populations along creeklines opportunistically
  - for additional *Gastrolobium acrocaroli* populations post-fire
  - for additional *Gastrolobium hians* populations

- for additional *Hibbertia barrettiae* populations
- potential habitat for additional *Scaevola tortuosa* populations
- for additional *Stenanthemum bremerense* populations in ranges adjacent to existing populations
- for additional *Styphelia disjuncta* populations
- for additional *Tetratheca applanata* populations
- for additional *Thelymitra psammophila* populations
- for additional *Tribonanthes purpurea* populations where occurrences have previously been recorded.

## ECOLOGICAL COMMUNITIES

- Research the response and recovery of *Allocasuarina globosa* assemblages on greenstone rock after fire events.
- Conduct detailed mapping across the Ironcap Hills vegetation assemblages (Mt Holland, Middle, North and South Ironcap Hills, Digger Rock and Hatter Hill) (greenstone ranges) to inform management inclusive of identifying the potential vegetation community that occurs nearby.
- Monitor occurrence ISONG01 of the Montane thicket of the eastern Stirling Range and investigate the hybridisation between *Banksia montana* and *Banksia biterax*.
- Study the interactions between fire and Phytophthora dieback to inform management of the Montane mallee thicket community of the Stirling Range.
- In collaboration with Aboriginal rangers, develop and implement a biodiversity imagery project across the Russell Range community. Ensure that accessing the area for surveys does not inadvertently encourage public access.
- Undertake a biodiversity survey across the Plant assemblages of the Southern Hills vegetation complex to assess the status of residual fauna, such as the night parrot (*Pezoporus occidentalis*).
- Continue the wetland monitoring program for the Stromatolite-like microbialite community of a coastal hypersaline lake (Pink Lake) as part of the greater Lake Warden Recovery Management Plan. Focus studies to assess if any microbialites are remaining at the Pink Lake community.

## 8 References

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## Appendix 1: Priority management units identified through the prioritisation process for landscape-scale threat mitigation actions for priority reserves and landscapes

Table 2 South Coast Region priority management units.

Reserve name	Landscape unit	Value category	Size (ha)	District	Tenure type	Ecosystems / habitats
Aerodrome Road Nature Reserve	A09	8	2,936	Albany District	Nature Reserve	Quartzite Range, Kwongkan Shrublands, Eocene Marine plain, mallee heath, river riparian, yate wetlands
Beaumont Nature Reserve	E04	8	11,755	Esperance District	Nature Reserve	Mallee Heath, Mallee, Woodland, Sandplain Heath, wetlands
Camel Lake Nature Reserve	A07	8	3,217	Albany District	Nature Reserve	Montane communities on Quartzite / Sandstone Range, Kwongkan shrublands, deeply incised south facing gullies, Wandoo woodland, salt lakes.
Cape Arid National Park	E03	11	277,462	Esperance District	National Park	Coastal sandplain heath, wetlands, Kwongkan Shrubland, Granite communities.
Cape Le Grand National Park	E05	9	31,189	Esperance District	National Park	Coastal sandplain heath, wetlands, habitat for threatened species and communities.
Fitzgerald River National Park	A09	22	295,823	Albany District	National Park	Quartzite Range, Kwongkan Shrublands, Eocene Marine plain, mallee heath, river riparian, yate wetlands
Gull Rock National Park	A03	8	2,107	Albany District	National Park	Coastal Heath, Granite, Karri, Kwongkan TEC, Wetlands.



Reserve name	Landscape unit	Value category	Size (ha)	District	Tenure type	Ecosystems / habitats
Hayes Nature Reserve	A09	8	1,310	Albany District	Nature reserve	Quartzite Range, Kwongkan Shrublands, Eocene Marine plain, mallee heath, river riparian, yate wetlands
Jebarjup Nature Reserve	A07	8	1,023	Albany District	Nature reserve	Montane communities on Quartzite / Sandstone Range, Kwongkan shrublands, deeply incised south facing gullies, Wandoo woodland, salt lakes.
Jerdacuttup Lakes Nature Reserve	A09	12	7,586	Albany District	Nature reserve	Quartzite Range, Kwongkan Shrublands, Eocene Marine plain, mallee heath, river riparian, yate wetlands
Kau Rock Nature Reserve	E04	8	15,813	Esperance District	Nature reserve	Mallee Heath, Mallee, Woodland, Sandplain Heath, wetlands
Kundip Nature Reserve	A09	9	2,172	Albany District	Nature reserve	Quartzite Range, Kwongkan Shrublands, Eocene Marine plain, mallee heath, river riparian, yate wetlands
Lake Warden Nature Reserve	E02	11	710	Esperance District	Nature reserve	Coastal sandplain heath, wetlands, Kwongkan Shrubland
Mount Manypeaks Nature Reserve	A06	10	1,288	Albany District	Nature reserve	Granite communities, Heath, wet gullies, hakea thickets, wetlands. Habitat for threatened species and communities
Mullet Lake Nature Reserve	E02	22	1,878	Esperance District	Nature reserve	Coastal sandplain heath, wetlands, Kwongkan Shrubland
Nuytsland Nature Reserve	E03	11	607,571	Esperance District	Nature reserve	Coastal sandplain heath, wetlands, Kwongkan Shrubland, Granite communities.

Reserve name	Landscape unit	Value category	Size (ha)	District	Tenure type	Ecosystems / habitats
R 26885	E01	33	5,605	Esperance District	Nature reserve	Coastal sandplain heath, wetlands, Kwongkan Shrubland
R 42943	E04	8	11,627	Esperance District	Nature reserve	Mallee Heath, Mallee, Woodland, Sandplain Heath, wetlands
South Stirling Nature Reserve	A07	9	1,702	Albany District	Nature reserve	Montane communities on Quartzite / Sandstone Range, Kwongkan shrublands, deeply incised south facing gullies, Wandoo woodland, salt lakes.
Stirling Range National Park	A07	24	113,541	Albany District	National park	Montane communities on Quartzite / Sandstone Range, Kwongkan shrublands, deeply incised south facing gullies, Wandoo woodland, salt lakes.
Torndirrup National Park	A03	9	4,022	Albany District	National park	Coastal Heath, Granite, Karri, Kwongkan TEC, Wetlands.
Two Peoples Bay Nature Reserve	A06	9	4,675	Albany District	Nature reserve	Granite communities, Heath, wet gullies, hakea thickets, wetlands. Habitat for threatened species and communities
Waychinicup National Park	A06	9	3,974	Albany District	National park	Granite communities, Heath, wet gullies, hakea thickets, wetlands. Habitat for threatened species and communities
West Cape Howe National Park	A03	8	3,669	Albany District	National park	Coastal Heath, Granite, Karri, Kwongkan TEC, Wetlands.
Woody Lake Nature Reserve	E02	11	945	Esperance District	Nature reserve	Coastal sandplain heath, wetlands, Kwongkan Shrubland



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