Upper Eyre Hills and Mallee Parks

Draft Management Plan 2024

Caralue Bluff Conservation Park
Carappee Hill Conservation Park
Darke Range Conservation Park
Middlecamp Hills Conservation Park
Rudall Conservation Park
Yeldulknie Conservation Park

SOUTH AUSTRALIA
Government of South Australia
Department for Environment and Water

Contents

Your views are important 1

Developing this draft plan..... 2

Directions for management..... 3

Park Significance and Purpose..... 6

Challenges and opportunities..... 9

Theme 1: Conserving biodiversity in a fragmented landscape 10

Theme 2: Connecting community and parks..... 14

Invitation to contribute 16

References 17

Acknowledgement of Country

The Department for Environment and Water (DEW) acknowledges Aboriginal people as the First Peoples and Nations of the lands and waters we live and work upon and we pay our respects to their Elders past, present and emerging. We acknowledge and respect the deep spiritual connection and the relationship that Aboriginal and Torres Strait Islander people have to Country. The department works in partnership with the First Peoples of South Australia and supports their Nations to take a leading role in caring for their Country.

Your views are important

The Upper Eyre Hills and Mallee Parks Draft Management Plan outlines the objectives and strategies that will set the strategic direction for the long-term management of 6 parks.

It is released for public comment to provide members of the community an opportunity to express their views on the future management of the parks.

Feedback received will be considered before the development of a final plan. Once developed, the final plan will be submitted to the Minister for Climate, Environment and Water for adoption under Section 38 of the *National Parks and Wildlife Act 1972*.

I encourage all interested people to assist in shaping the long-term management of these parks by making a submission on this draft plan. Guidance for the preparation of a submission can be found on page 16.

Michael Williams

Director of National Parks and Wildlife

Developing this draft plan

This draft management plan incorporates Caralue Bluff Conservation Park, Carappee Hill Conservation Park, Darke Range Conservation Park, Middlecamp Hills Conservation Park, Rudall Conservation Park and Yeldulknie Conservation Park. These parks are in proximity and have similar ecological and geographical features. They are subject to the same range of issues. Establishing one management plan supports a consistent approach to biodiversity conservation and public visitation across these parks.

This draft plan has been developed by the Department for Environment and Water with input from key stakeholders, park managers and technical experts. The strategic management, objectives, and strategies outlined in this plan are designed to enable adaptive management of the parks.

Once complete, this plan will be the first adopted management plan for each of the parks.

Directions for management

The upper Eyre hills and mallee parks (refer to Figure 1) are situated on the Eyre Peninsula between the townships of Cowell, Kimba and Lock. They preserve diverse mallee vegetation communities and landform features including granite outcrops, stony hills and gullies, sand dunes, creeks and waterways, spread across a predominantly agricultural landscape. These parks contain many areas of outstanding natural beauty and are an important component of Country for the Barngarla People, the Native Title holders of the eastern Eyre Peninsula. This plan will be adopted subject to the native title rights and interests that continue to exist in relation to the land, and will be implemented in accordance with the relevant provisions of the *Native Title Act 1993* and the *Aboriginal Heritage Act 1998*.

Caralue Bluff, Carappee Hill, Darke Range, Middlecamp Hills, Rudall and Yeldulknie conservation parks are proclaimed under the *National Parks and Wildlife Act 1972* (NPW Act). The objectives of the NPW Act ensures that parks are managed primarily for conservation, while supporting public use, enjoyment and education about the parks' purpose and significance.

The parks in this plan have been proclaimed primarily to preserve relatively untouched mallee vegetation and unique geological features. Due to the relatively low visitation and high conservation values of the parks, there are minimal visitor facilities provided. Yeldulknie Conservation Park contains Eyre Peninsula Blue Gum (*Eucalyptus petiolaris*) Woodland, which is listed as endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), and the EPBC listed malleefowl (*Leipoa ocellata*) has been recorded in Caralue Bluff, Carappee Hill and Yeldulknie conservation parks. A large number of national and state threatened flora and fauna are also protected in these parks, some of which are endemic to central Eyre Peninsula.

Strategic management of these parks will focus on maintaining and enhancing ecosystem health and protecting threatened species by focusing on the management of threats including total grazing pressure, inappropriate fire regimes, altered hydrology, weeds, pest animals and the impacts of climate change.

A visitor use zone has been designated in Carappee Hill Conservation Park (Figure 2) to provide for management of basic camping facilities and potential for complementary low-impact development. Outside this zone, all areas are managed primarily for conservation and visitor facilities are restricted to low impact uses such as picnic areas, walking trails, and ancillary features such as trail heads and trail signage. Upgrades to existing facilities, or the development of new basic facilities may be considered in the future if the level of demand shows a need and where ecological impacts can be managed sustainably. Any future development, tourism and recreation opportunities must ensure conservation values are preserved.

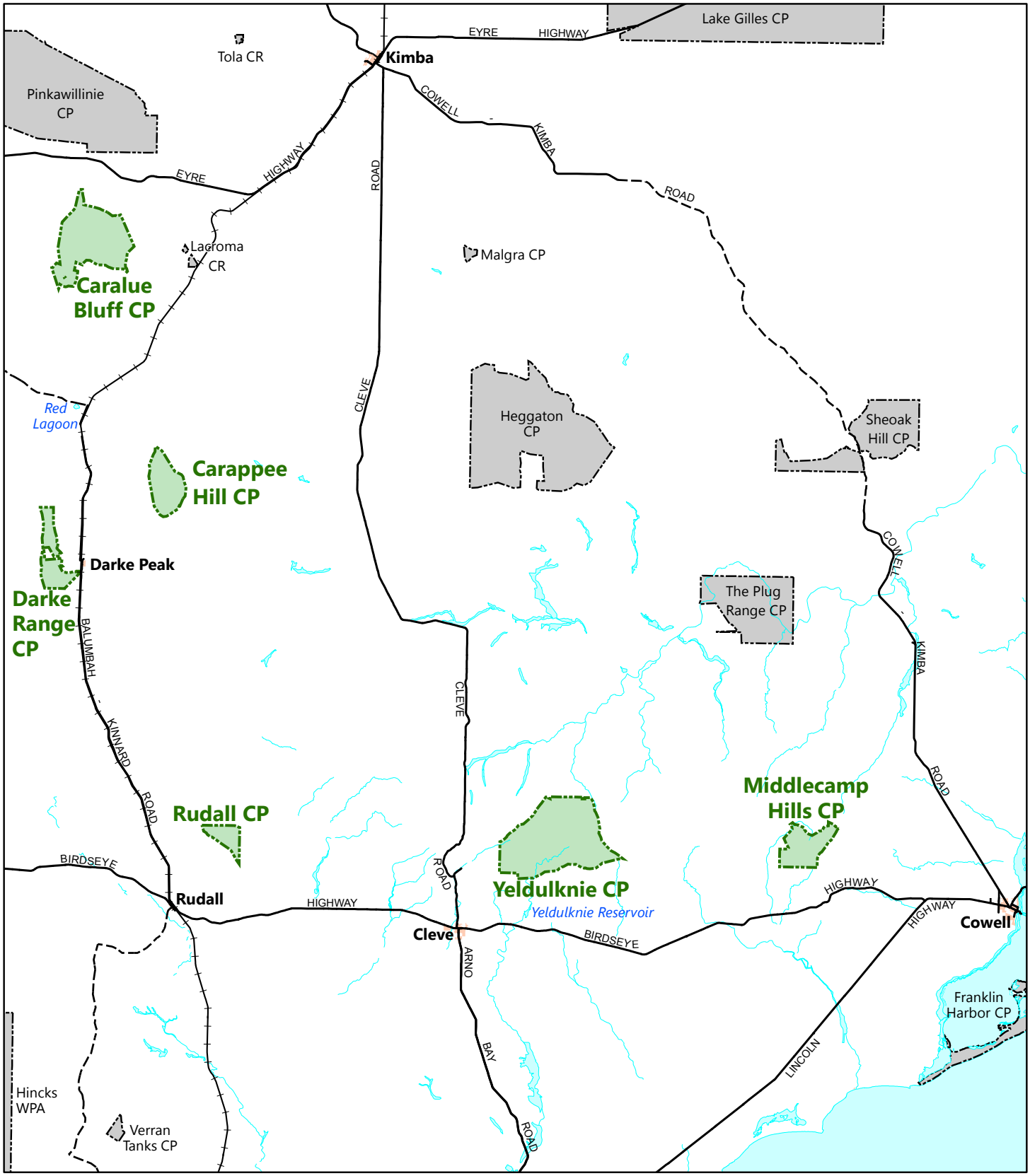
Designated cycling trails do not exist within these parks, however cycling is permitted on existing vehicle tracks and roads. Opportunities to develop designated cycling trails will be considered on a case-by-case basis according to relevant cycling trail standards and guidelines and take into account the environmental values of the area. Existing management tracks and trails provide access in some of these parks and will be managed as per operational requirements. Tracks managed primarily for fire management access are managed in accordance with relevant fire management plans.

The strategic management, objectives and strategies outlined in this plan are designed to enable adaptive management of the parks. The specific actions required to manage these parks in accordance with the plan will be developed and monitored at a park operations level and in accordance with relevant threatened species recovery plans, conservation advice and fire management plans. This approach provides the flexibility necessary to address future management challenges and opportunities.

Upper Eyre Hills and Mallee Parks

The parks covered by this plan are (refer to Figure 1):

- Caralue Bluff Conservation Park (2157 ha)
- Carappee Hill Conservation Park (850 ha)
- Darke Range Conservation Park (693 ha)
- Middlecamp Hills Conservation Park (835 ha)
- Rudall Conservation Park (357 ha)
- Yeldulknie Conservation Park (3283 ha)



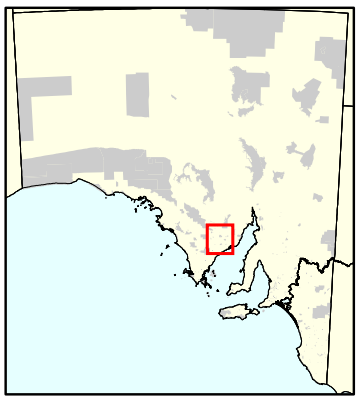


Figure 1

Upper Eyre Hills and Mallee Parks

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LEGEND

- Sealed road
- Unsealed road
- Railway
- Watercourse
- Waterbody
- Parks of focus
- Other parks
- Built up area

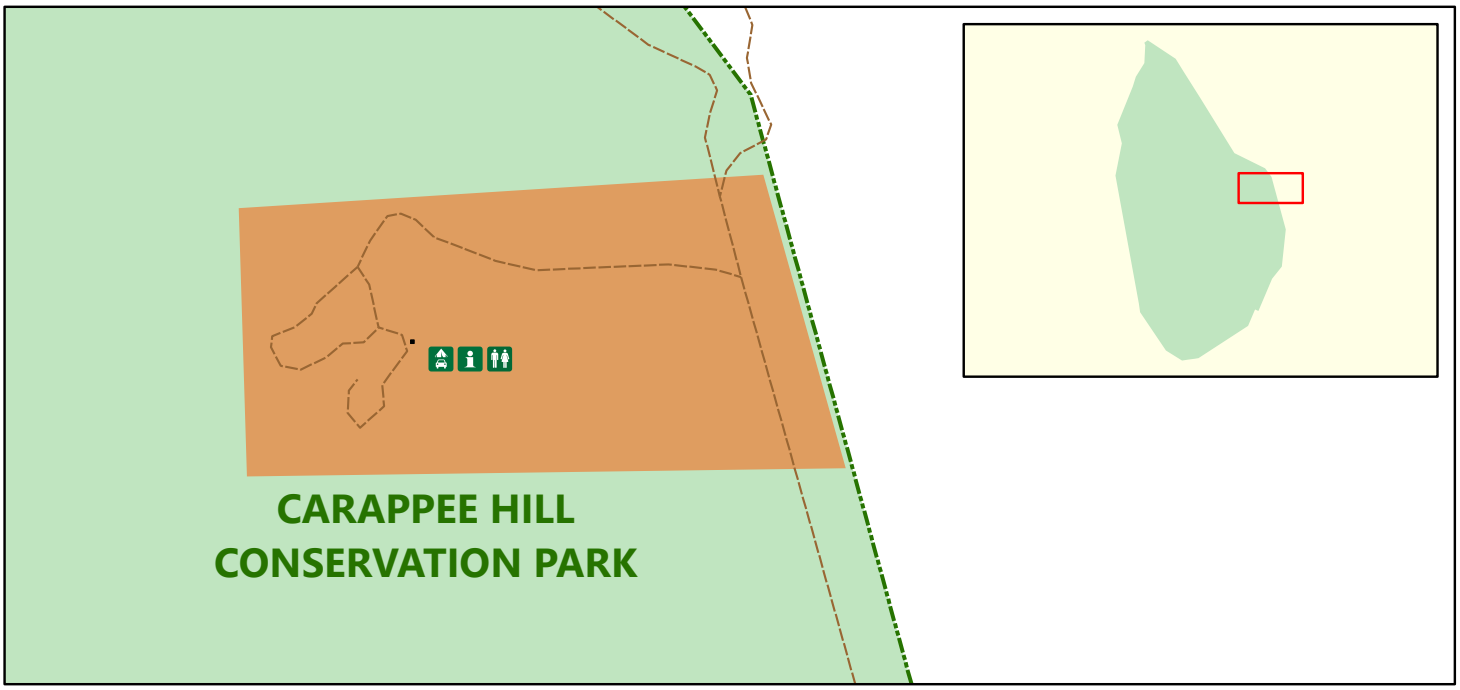
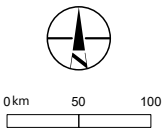


Figure 2

Carappee Hill Conservation Park
Visitor Use Zone



LEGEND

- Building
- Vehicle track
- Visitor Use Zone
- Carappee Hill Conservation Park
- Toilets
- Information
- Campground

Significance and Purpose

The parks in this plan are part of the traditional lands of the Barngarla People for whom the land, water, plants and animals are central to their spirituality and identity. The Barngarla Nation have Native Title rights and maintain a strong connection to the area bound by heritage, birth rites, dreaming and creation stories. Sites and features across the Eyre Peninsula landscape have cultural importance and are connected to stories that have been passed down over generations.

These parks are significant for containing outstanding ecological and geological values and the diverse habitats and range of threatened species they protect, some of which are poorly represented in the state's protected area system. In particular, the nationally endangered Eyre Peninsula Blue Gum Woodland vegetation community and threatened species including the nationally vulnerable senna wattle (*Acacia praemorsa*) and state rare Darke Peak mallee (*Eucalyptus cretata*), both endemic to central Eyre Peninsula. Melaleuca shrubland and low woodland vegetation communities provide critical habitat protecting native wildlife including the nationally threatened malleefowl and diamond firetail (*Stagonopleura guttata*), and other state listed threatened fauna such as the rare bardick snake (*Echiopsis curta*). As extensive flora and fauna surveys have not been conducted in the relatively intact, and largely inaccessible habitat, it is likely that other significant species occur in these parks, which must be considered in management programs, proposed development, and recreation opportunities.

Remnant vegetation is fragmented across the central Eyre Peninsula, much of which has been cleared for broad-acre cropping. While significant areas of vegetation are protected within these parks, evidence of previous land uses including water conservation reserve, grazing land, and railway reserve remain. Some of the associated cleared areas are regenerating with native species while other areas provide opportunities for restoration to increase habitat availability.

The quartzite ranges and granite outcrops of Caralue Bluff, Carappee Hill and Darke Range conservation parks are part of the southern end of Gawler Craton, the oldest and largest geological province in South Australia. The striking geological features stand out in the otherwise flat agricultural landscape and are covered with a distinct range of vegetation communities, providing a haven for reptiles and birds. The state vulnerable nodding grass-lily (*Stypandra glauca*) is recorded in Carappee Hill and Darke Range conservation parks. This species is endemic to the Eyre Peninsula and is one of several flora species recorded in these parks which show a preference for areas of granite outcropping.

While visitors can enjoy these parks, visitor numbers are low compared to other Eyre Peninsula parks and minimal facilities are provided. Trails and management tracks in several of the parks provide opportunities for low-impact recreation such as bushwalking, birdwatching, stargazing and spending time in nature.

Caralue Bluff Conservation Park

Caralue Bluff Conservation Park was proclaimed to protect remnant mallee vegetation, including the state threatened mallee wattle (*Acacia montana*) and Darke Peak mallee which provide habitat for malleefowl, and the state threatened black falcon (*Falco subniger*), shy heathwren (EP, YP, FR, MM, upper SE) (*Hylacola cauta cauta*) and painted buttonquail (*Turnix varius varius*). The park has a high plant diversity for the central Eyre Peninsula, with over 150 native species recorded, including the annual fern (*Anogramma leptophylla*), west-wind spider orchid (*Caladenia zephyra*), plains beard orchid (*Calochilus pruinosus*) and a number of other state threated species. Striking geological features occur in the park with a large granite outcrop dominating the landscape at 486 metres high.

An access track through the park leads to the peak of the granite outcrop, where a GRN and telecommunications tower are located. This small area of land is excised from the park, and the infrastructure is owned and managed by a third party, who also manage the access track.

The park is proclaimed jointly under Section 43 of the NPW Act which enables appropriate resource and exploration and development under the *Mining Act 1971*.

Carappee Hill Conservation Park

Carappee Hill means 'place of water'. Prior to becoming a protected reserve, the land was primarily used for grazing and a dam constructed during this time remains. The area was first proclaimed as a water reserve, then in 1973 was declared a conservation park to protect a large inselburg, the only free-standing granite rock represented within the state's reserve system, and associated mallee habitat. Carappee Hill is the dominating feature of the park and the highest point on the Eyre Peninsula, rising to 495 metres above sea level, with sand dunes running across the park in a north westerly to south westerly direction.

Vegetation communities vary from open woodland at the northern end of the park where sand dunes meet the hill, where a significant population of Darke Peak mallee, with an understory of broombush (*Melaleuca uncinata*), sticky sword-sedge (*Leptospermum viscidum*), slender cherry (*Exocarpus sparteus*) and smaller shrubs can be found. Vegetation is diverse across the hill, ranging from aquatic species, mosses, and ferns to drooping sheoak (*Allocasuarina verticillata*), Eyre Peninsula blue gum trees and small, dense patches of mallee. The nationally threatened granite mudwort (*Limosella granitica*) and winter spider-orchid (*Caladenia brumalis*) have been recorded in the park, along with another 15 state threatened flora species. Over 60 native bird species have been recorded including malleefowl, shy heathwren and Gilbert's whistler (*Pachycephala inornata)*. The rare bardick snake is among the 19 reptile species recorded, which favour the rocky granite areas.

The yellow-footed rock wallaby (*Petrogale xanthopus*) was last observed in the park in 1966 (Jericho 1969) although no droppings, bone fragments or other signs of occupation have been found in subsequent surveys and they are now assumed to be extinct in the area.

A basic car park provides access to the Carappee Hill Hiking Trail, a challenging incline hike up to the top of Carappee Hill with spectacular views over the park and mostly flat surrounding landscape. Under a licence agreement, the District Council of Cleve manages the walking trail, along with a basic campground and access track.

Darke Range Conservation Park

Darke Range Conservation Park was proclaimed to protect the natural features of the Darke Peak ranges, which rise steeply from the surrounding plains comprising steep hills and gullies and are covered in mallee forest and woodlands, including peppermint box (*Eucalyptus ordata*) and Eyre Peninsula blue gum stands. The park has a high plant diversity, with 14 state threatened flora species known to occur, including the erect sundew (*Drosera stricticaulis*), west wind spider-orchid and Darke Peak mallee. The EPBC listed diamond firetail has been recorded in the park, along with 4 state threatened fauna species.

There are no formal walking trails in the park.

Part of the park is proclaimed jointly under section 43 of the NPW Act which enables appropriate resource and exploration and development under the *Mining Act 1971* and the *Petroleum and Geothermal (Energy Resources) Act 2023*.

Middlecamp Hills Conservation Park

Middlecamp Hills Conservation Park was proclaimed to protect significant patches of remnant vegetation including drooping sheoak (*Allocasuarina verticillata*) low woodland, peppermint box and mallee box (*Eucalyptus porosa*) open scrub with a heathy understory. The park's rugged low stony hills support a variety of other vegetation types including tall open shrubland consisting predominantly of wallowa (*Acacia calamifolia*) with a heathy understory, and mallee broombush low shrubland with porcupine grass. While extensive flora surveys have not been conducted in the park, the EPBC listed nodding rufous-hood (*Pterostylis mirabilis)* is likely to occur on the rocky broombush-covered slopes. Large nesting hollows found in older trees are important habitat for native birds and small mammals.

Rudall Conservation Park

Rudall Conservation Park was proclaimed to conserve mallee vegetation. A former railway reserve used to supply water to steam locomotives comprises a section of the park, and a dam from this activity remains. The remnant eucalyptus mallee forest consists predominantly of white mallee, red mallee (*Eucalyptus oleosa)* and ridge-fruited mallee (*Eucalyptus incrassata*) over broombush, leading into cypress pine (*Callitris gracilis* and *Callitris verrucosa*) stands on the sandy ridges. Vegetation in the railway reserve section is regenerating well and along with the dam, provides habitat for birdlife.

The mallee bitterpea (*Daviesia benthamii ssp. humilis)* and Rohrlach's bluebush (*Maireana rohrlachii*), rated as rare in South Australia have been recorded in the park, along with the Gilbert's whistler.

Yeldulknie Conservation Park

Yeldulknie Conservation Park was proclaimed to protect remnant mallee vegetation, in particular the endemic and nationally rated senna wattle, and contains a significant patch of Eyre Peninsula Blue Gum Woodland. The park protects an important water catchment area with major landform features including steep-sided gullies, rises and hills and a system of creeks and waterways. Mallee shrubland is dominated by white mallee (*Eucalyptus dumosa*), beaked red mallee (*Eucalyptus socialis*), broombush and dryland tea-tree (*Melaleuca lanceolata*). The nationally threatened diamond firetail has been recorded in the park, along with the common sandpiper (*Actitis hypoleucos*), shy heathwren, purple-gaped honeyeater (mainland SA) (*Lichenostomus cratitius occidentalis*) and Gilbert's whistler, all rated as rare under schedule 9 of the NPW Act. The EPBC listed nodding rufous-hood has been observed in the park, along with a further 6 flora species listed as threatened at the state level.

A car park provides access to the Yeldulknie Hiking Trail which is also known as the Waterfall Walk. The trail, carpark and interpretive signage is managed under a licence with the District Council of Cleve in partnership with local volunteers and the National Parks and Wildlife Service Eyre and Far West region.

What are we looking after?

- High diversity of native flora and fauna, particularly threatened and endemic species.
- Significant areas of mallee habitat that are critical for the survival of malleefowl populations, and potential habitat range for black falcon and other birds of prey.
- Remnant vegetation within a predominantly agricultural landscape, including nationally endangered Eyre Peninsula Blue Gum (*Eucalyptus petiolaris*) Woodlands.
- Diverse habitats and geological features including sand dunes, prominent granite outcrops and inselbergs connected to the Gawler Craton, which provide natural wildlife refuges that enhance species resilience to climate change.
- 36 plant species that are listed as threatened under the *National Parks and Wildlife Act 1972*. This includes 5 species that are also listed under the *Environment Protection and Biodiversity Conservation Act 1999*.
- 11 animal species that are listed as threatened under the *National Parks and Wildlife Act 1972*, including malleefowl and diamond firetail which are also listed under the *Environment Protection and Biodiversity Conservation Act 1999*.
- Landscape features and sites that are of cultural and spiritual significance to Barngarla People and important for their culture.
- Scenic landscapes with a diversity of wildlife and opportunities for people to connect with nature and enjoy the unique features of the local landscape.

Challenges and opportunities

Key challenges and opportunities in the protection and management of this park are:

- Managing small conservation reserves for biodiversity and conservation purposes within a highly modified and fragmented landscape, to ensure that they continue to provide habitat for native species.
- Managing the impacts of pest plant and animals and total grazing pressure to protect threatened species and ecosystem health.
- Continuing to improve understanding of fire ecology and threats following fires (both bushfire and prescribed fire), to better enable fire regimes to be managed for ecological outcomes.
- Managing the increasing risk of bushfires to ensure community safety and ecological health.
- Understanding the impacts of climate change and the strategies required to support ecosystem resilience to decreasing rainfall, increased temperatures, and increased risk of extreme fires.
- Providing opportunities for people to undertake low-impact recreation such as bushwalking, bird watching and stargazing, while minimising impacts to park values.
- Developing a better understanding of threatened species populations and ensuring priority actions for their protection are implemented as per relevant species recovery plans.
- Ensuring that management decisions are based on an understanding of ecosystem health, as well as the best available knowledge and information.
- Supporting volunteers and the community to engage in biodiversity monitoring and the protection of ecological values within parks which are remote and may be difficult to access.
- Partnering with Barngarla people to protect cultural and heritage sites, increase cultural awareness and promote employment and training for Barngarla people.
- Working with mining, renewable energy and other resource sectors, to minimise biodiversity impacts and promote investment into conservation efforts.
- Providing scope for commercial ventures to develop new nature-based tourism experiences consistent with natural characteristics and ecological values of the parks.

THEME 1:
Conserving biodiversity in a fragmented landscape

These parks protect important pockets of remnant native vegetation scattered across central Eyre Peninsula. The majority of remnant native vegetation across the Eyre Peninsula is protected under the South Australian protected areas system or under Heritage Agreements. In a region where much of the landscape has been cleared for agricultural purposes, these reserves provide critical refuge for native wildlife and may be some of the only remaining viable habitat for threatened and endemic species. Management of threats including total grazing pressure, landscape-scale fires, pest plant and animals and the environmental risks posed by industry and agricultural practices are priorities.

Working in collaboration with Barngarla people, and organisations including Friends of Parks volunteers, Eyre Peninsula Landscape Board, research organisations, non-government organisations and local government will be important for successful conservation activities and supporting community participation in park management. Management programs will focus on activities that achieve conservation outcomes across the landscape.

Native plants and wildlife

The mallee woodlands and associated broombush habitat in Carappee Hill, Caralue Bluff and Yeldulknie conservation parks is recognised as habitat critical for the survival of malleefowl populations on the Eyre Peninsula. While the extent of malleefowl populations in these areas is not well known, they are not a highly mobile species, and the protection and management of existing suitable habitat is a priority. Other threatened bird species such as the diamond firetail, shy heathwren, Gilbert's whister and painted buttonquail rely on the diverse understory of native grasses and shrubs present in these parks for food, nest building and protection from predators. This habitat type is particularly vulnerable to grassy weed invasion and grazing pressure impacts. The striking granite outcrops in some of the parks support diverse vegetation communities and habitat that is likely to be important for the state-rare bardick snake. Carappee Hill Conservation Park is well known for orchids and high reptile diversity, and Caralue Bluff Conservation Park has more than 150 recorded plant species, which is considered a high species representation for the central Eyre Peninsula and includes the rare Darke Peak mallee. The nationally vulnerable granite mudwort is dependent on the rock holes which collect water across the granite dome of Carappee Hill.

The Eyre Peninsula Blue Gum (*Eucalyptus petiolaris*) Woodland in Yeldulknie Conservation Park is particularly valuable, as this ecological community can support a high number of fauna species compared to other Eyre Peninsula vegetation types. The community includes some of the most important nectar producing plants for birds in temperate South Australia. Bird species including the inland thornbill (*Acanthiza apicalis*) and New Holland honeyeater (*Phylidonyris novaehollandiae*) appear to prefer this vegetation community over others in the area. With particular rainfall and soil requirements, this community is vulnerable to land clearance and climate change, which can result in water flow disruption, increased salinity and generally drier conditions.

Recovery plans and conservation advice statements for species listed under the *Environment Protection and Biodiversity Conservation Act 1999* will be used to inform actions where necessary to stop their decline and support their recovery. Monitoring populations of threatened species will enable appropriate control measures to be implemented for their conservation. Further surveys of threatened species will enable a better understanding of their distribution and will support more effective management.

Protecting good quality habitat patches and encouraging natural regeneration is a priority for managing Eyre Peninsula Blue Gum Woodland. Revegetation using seed of local providence is suitable where the associated soil disturbance is unlikely to affect intact sites, such as between existing patches and in highly degraded or cleared areas. Areas recovering from previous land uses, particularly cleared areas adjoining remnant vegetation and roadsides are suited to strategic revegetation. Revegetation sites will be chosen primarily to support efforts to increase habitat for threatened flora and fauna, with a focus on malleefowl habitat and habitat with access to water to support species such as the diamond firetail and Gilbert's whistler. Integrated management programs will incorporate pest plant control and managing grazing pressure impacts where suitable.

Introduced animals, bees and phytophthora

Introduced pests including rabbits (*Oryctolagus cuniculus*), goats (*Capra hircus*), cats (*Felis catus*), foxes (*Vulpes vulpes*) and introduced bird species such as the common starling (*Sturnus vulgaris vulgaris*) and pigeon species are present across the Eyre Peninsula and are known to occur in the parks. Impacts from introduced deer species is not currently an issue in the parks but they are becoming an increasing issue across the region. Even in low numbers introduced species can have significant impacts on biodiversity and will require management to limit their effects on biodiversity such as predation of native fauna, grazing and trampling of native vegetation and damaging water systems. Control measures for pests that are a significant contributor to the decline of native species and where programs are likely to be effective in supporting the recovery of threatened species will be a priority. Priority pests will be addressed in partnership at a landscape-scale with other land owners and managers. The Eyre Peninsula Landscape Board Pest Plant and Animal Policy provides guidance on prioritising pest plant and animal management in the parks, consistent with priorities across the Eyre Peninsula region.

There are no apiary licences in these parks, however, feral honeybees (*Apis mellifera*) that are present often occupy tree hollows and rock crevices that would otherwise provide habitat for nesting birds, small mammals and reptiles. Given the ongoing issue with feral beehives, the risks to conservation outcomes such as pollination competition with native species and the pollination of weeds, and the lack of any historic apiary use in these parks, no apiary licences will be permitted.

Phytophthora (*Phytophthora cinnamomi*) is an introduced soil-borne pathogen that attacks and destroys plant root systems resulting in the destruction of habitat through vegetation dieback. It can be easily spread by humans on the treads of shoes, on vehicle tyres, and with the movement of soil. While the vegetation in these parks is at a low risk of phytophthora infection, applying hygiene practices that can minimise its spread from an infected area will assist in protecting uninfected areas, and contribute to reducing the risk of spreading pest plant species.

Managing total grazing pressure

Total grazing pressure in the reserves including by western grey kangaroo (*Macropus fuliginosus*), euro (*Macropus robustus*) populations and introduced herbivores is having a negative impact on habitat quality and food availability for important and threatened species. Grazing pressure impacts on understory vegetation quality is having a direct effect on the ability of many ground-dwelling bird species to source food and material for shelter. Grazing by herbivores after bushfires and prescribed burning can have a detrimental impact on regenerating vegetation post-fire. Where left unmanaged this is leading to changes in vegetation composition and structure and inhibiting restoration efforts in bushfire-affected areas. The success of ecological burns designed to improve habitat values for threatened species is reduced when grazing pressure is unmanaged.

Evidence of total grazing pressure will be used where required to determine impacts to habitat quality by native and introduced herbivores. While managing the impacts of herbivores will primarily focus on the control of introduced herbivores, where evidence indicates that western grey kangaroos and euros are a large contributing factor to total grazing pressure resulting in unsustainable impacts to the conservation values of the parks, strategic management will be considered. Where non-lethal methods are considered ineffective

or not feasible, culling will be implemented as it remains the only practicable method of management. Kangaroo control may include commercial harvest options. Any culling will follow strict procedures for the humane destruction of animals.

Pest plants

Pest plants threaten habitat integrity by competing with native plants and impeding their growth. They can also alter vegetation structures. This is a significantly detrimental process for threatened species such as the diamond firetail and Gilbert's whistler who rely on native grasses for food. Historic clearance and disturbance of land surrounding these parks has led to the spread of African boxthorn (*Lycium ferocissimum*), boneseed (*Osteospermum moniliferum*) and prickly pear (*Opuntioid cacti*). While buffel grass (*Cenchrus ciliaris*) is not known to occur in these reserves, infestations exist across the northern Eyre Peninsula region. Control will be implemented to protect areas of high conservation value and where pest plants threaten the survival of threatened flora populations. Control methods will be applied in a manner which minimises impacts to the native species they are intended to benefit. Support for partnering with the Eyre Peninsula Landscape Board, neighbouring landowners and other government agencies on strategic pest plant control and monitoring programs will continue.

Fire management

Fire has been part of the Australian landscape for thousands of years. As an ecological process fire has shaped the flora and fauna and continues to contribute to a healthy ecosystem. Mallee habitat and other vegetation types in these parks are particularly fire-prone, and the type and frequency of fire is important for their health. Landscape modification, active fire suppression, and climate change have resulted in changes in fire regimes across the landscape. The subsequent impacts in these parks can be severe for at-risk native species, due to the fragmented nature of their remaining habitat. For example, malleefowl are poor fliers and are likely to either be killed in fire events or unable to relocate to unburnt suitable habitat, which is already limited across the Eyre Peninsula. In addition, fire reduces nest-building leaf litter, and can increase exposure to predators. Malleefowl abundance and nesting locations are not well known in these parks and a reduction of habitat quality and availability from inappropriate fire regimes may prevent these species from persisting, potentially causing localised extinctions. Inappropriate fire regimes have implications for other threatened mallee bird populations, with evidence demonstrating that a mosaic of habitat age classes at a landscape-scale meets the needs of a diverse range of species, however some species require areas of long-unburnt vegetation. This supports the need for targeted ecological burning in balance with the reduction of fuel loads to reduce the risk of large, uncontrolled bushfires burning entire habitats.

Fire management plans have been developed for all parks except for Caralue Bluff, which will be incorporated when the plans are reviewed. These plans guide management activities aimed at reducing bushfire risk and managing conservation values. Fire management activities, including prescribed burning is implemented across strategic areas of the parks to reduce the risk, intensity and spread of bushfires, and make suppression more achievable and safer. Prescribed burning is also used as an ecological tool to maintain and improve the health of habitats, with pest plant control and grazing pressure management included into integrated management programs. Fire management planning will use the best available science, data and knowledge to support decision making as part of an adaptive management process and provide opportunities for community education and consultation on fire management in parks.

Climate change

Climate change projections for the region indicate decreasing rainfall, increasing temperatures, and more heightened fire danger days. It is likely to exacerbate threatening processes such as impacts from pest plants and animals, changes in water flows and more frequent and higher intensity bushfires. Climate change could cause changes to vegetation communities' distribution across the Eyre Peninsula region, and result in changes to the type of habitat available for native fauna. Understanding the impacts of a changing climate and how to support ecosystems to be resilient, will be crucial in successful long-term park management. Research and monitoring will be vital in developing an understanding and implementing subsequent programs to mitigate the impacts.

Objective

Manage ecosystem health by gaining a better understanding of species distribution and ecology to guide biodiversity protection programs and effective threat management.

Strategies

- Monitor populations of threatened species and support further surveys to better understand the health and extent of populations, and to inform operational requirements for their protection. Use relevant threatened species recovery plans to guide management activities.
- Encourage research that improves understanding of biodiversity within and adjacent to the parks and underpins the refinement of management strategies for the development of ecosystem resilience.
- Implement strategies identified in fire management plans for these parks to reduce the risk, intensity and spread of bushfires, reduce the risk of fires burning large areas in these parks and make fire suppression safer and more achievable.
- Identify suitable sites for revegetation to increase the area of available habitat for threatened wildlife and threatened plant communities, support plant diversity and improve ecological function.
- Control pest animals to limit their impact on biodiversity and where their control can support the recovery of threatened species. Work in partnership with Eyre Peninsula Landscape Board and neighbouring land managers on landscape-scale control programs for effective outcomes.
- Implement western grey kangaroo (*Macropus fulinosus*) and euro (*Macropus robustus*) management programs where total grazing pressure indicates adverse impacts to ecological values. Consider commercial management options in consultation with the kangaroo industry.
- Implement pest plant control programs to improve habitat and reduce impacts in areas of high conservation value where impacts are significant. Focus on new and emerging weeds that are likely to spread and impact native habitats, weeds that are impacting threatened species, and weeds that are having a significant impact on habitat structure and function.
- Support partnerships with new industry and stakeholders to encourage investment in conservation efforts. Work with partners to mitigate development and industry impacts on wildlife.
- Work with adjoining land managers to limit the impact of neighbouring land uses on wildlife and ecosystems. Support efforts by the Eyre Peninsula Landscape Board to assist land managers and farming groups with sustainable agricultural practices.

THEME 2:
Connecting community and parks

The upper Eyre hills and mallee parks are predominantly intact natural places with diverse mallee and woodland plant communities and prominent geological features, providing stunning views of the Eyre Peninsula. While relatively few people visit these parks, they are an important community asset providing an opportunity for people to experience and appreciate nature through low-impact activities. These natural areas can help the community, park visitors, and industry to understand why biodiversity is important and how they can take a proactive role in conservation.

The Barngarla people have a relationship with Country spanning tens of thousands of years, crossing much of the land and waters of the Eyre Peninsula. The features across the landscape and sky are linked and profoundly important to their cultural and spiritual connection to their traditional lands. No large-scale cultural heritage surveys have been undertaken in these parks, however it is highly likely that they contain Aboriginal archaeological sites, objects or burials. All Aboriginal sites, objects and remains are protected from damage, disturbance or interference by the *Aboriginal Heritage Act 1988*, regardless of whether they are known in the Register of Aboriginal Sites and Objects.

Ensuring sites are protected from impacts associated with public visitation, conservation programs, development, or park maintenance activities will be achieved in consultation with Barngarla people.

Recreation opportunities

Formal trails and car parking in Yeldulknie and Carappee Hill conservation parks are managed under licence by the District Council of Cleve. There are four trail options to the main waterfall in Yeldulknie Conservation Park, with the longer trails reaching a second waterfall and lookout with views over the waterfall and creek bed, which flow freely following winter rains. The Carappee Hill Hiking Trail allows visitors to climb the highest peak on the Eyre Peninsula, at 495 metres above sea level. There are no formal trails in the remaining reserves. New walking trails may be considered in the future to expand bushwalking opportunities, or to redirect people for ecological reasons. Opportunities to allow designated cycling trails in the parks will undergo an assessment process that considers the tourism benefits along with issues associated with biodiversity conservation, trail maintenance, use of shared trails and phytophthora spread.

The system of creeks and waterways flowing through Yeldulknie Conservation Park provide important habitat connectivity to the Yeldulknie Weir and Reservoir, which is under the care and control of the District Council of Cleve. This area is popular for bird watching and low-impact recreation activities, and provides opportunities for nature appreciation and education for the community and visitors.

A Visitor Use Zone (refer to Figure 2) has been designated in Carappee Hill Conservation Park at the eastern side of the park encompassing basic camping and toilet facilities. This area is managed under licence by the District Council of Cleve. Recreational activities and development proposals within this zone will be considered on a case-by-case basis. Use of this zone will be subject to licence conditions and formal assessment and approval processes where relevant under the provision of the *Planning, Development and Infrastructure Act 2016*, and must not cause detrimental impacts to ecological values.

The vegetation associations and threatened and endemic plant species found in these reserves are of high conservation significance. Many threatened species are particularly susceptible to pest plant invasion and habitat disturbance, such as the granite mudwort which lives exclusively in rock pools across granite outcrops. Inappropriate recreational activities can increase erosion, spread pest plants and diseases and permanently damage Aboriginal cultural sites. Any future development in the parks of trails or other visitor facilities such as toilets and shelters would be subject to detailed planning and assessment of the environmental and visitor risks, impacts to cultural sites and restoration programs, and site suitability with regard to topography and access requirements.

Volunteering opportunities

Parks close to the Cleve and Kimba townships provide opportunities for the community to connect to nature through conservation activities including monitoring and revegetation, and education initiatives such as street scaping and threatened species awareness programs. Volunteer rates in the community are high, particularly in the Kimba Council area, with one in two people volunteering. Partnering with existing volunteer groups, local schools, local councils, the Eyre Peninsula Landscape Board, neighbouring landholders and local industry will help to support conservation programs in remote areas.

Industry and tourism connections

The Eyre Peninsula is recognised for highly productive agriculture, commercial fishing and aquaculture industries. With emerging industries including mining, renewable energy, hydrogen and tourism expected to increase in the region, the associated population growth and demand for new development and infrastructure will increase pressure on natural values. Potential private sector development on land adjacent to the reserves is an opportunity to support tourism and generate interest in protecting park conservation values. Low-impact and accessible tourism ventures provide opportunities for people to connect with nature while encouraging learning about our natural environment. With sustainable tourism in demand, experiences such as stargazing (dark sky tourism and astro-tourism), cultural storytelling and engagement, and nature education will be supported. Working with industry and tourism operators will assist in ensuring park-adjacent development is ecologically sensitive, and impacts to the natural, cultural and recreational values of the park are minimised.

Objective

Support low-impact opportunities for recreation, experiences in nature and community engagement where risks to ecological values can be minimised and cultural sites and values are protected.

Strategies

- Maintain existing infrastructure including car parks, signage and tracks to support bushwalking and nature appreciation. Work with relevant licence holders to ensure maintenance works align with DEW guidelines.
- Monitor community sentiment and visitation to the parks to assess the demand for further facilities. Consider upgrades to car parking facilities and day visitor areas, including facilities such as shelters and toilets, if the level of demand shows a need and where ecological impacts can be managed sustainably.
- Consider development of the Carappee Hill Conservation Park Visitor Use Zone to mitigate ecological impacts and support a positive visitor experience.
- Maintain natural areas within the Visitor Use Zone to preserve their ecological integrity and value to licence holders and visitors, while achieving fuel load reduction and fire management objectives as per fire management plans.
- Work with Barngarla to support their access and connection to Country, and to ensure any cultural sites are protected from impacts associated with activities that occur in the parks.
- Support opportunities for ecologically sustainable tourism in a way that adapts to visitor demand and encourages a greater understanding of the reserves. Encourage engagement with the community and opportunities for local providers.
- Encourage early engagement from public and private service providers interested in tourism and development opportunities in parks and the neighbouring landscape.
- Facilitate opportunities for community participation in park management activities for long term stewardship of the parks. Target community engagement strategies to promote threatened species recovery efforts.
- Support and encourage partnerships with schools, universities, community groups and local government, for the use of parks for education, and to undertake research and monitoring.
- Support school education programs to undertake approved recreational activities.
- Encourage and contribute to the development of partnership arrangements to integrate biodiversity and recreation management in the region with organisations that have an interest in contributing to the sustainable management of the reserves.

Invitation to contribute

The Upper Eyre Hills and Mallee Parks Draft Management Plan has been released for public consultation to facilitate community input into the management of these parks.

You are invited to contribute by making a written submission. Please consider the points below when drafting your submission to help ensure that it is effective:

- Make your submission concise and clear
- Reference any specific comments to a page or section within the draft plan
- Identify aspects of the draft plan that you support, or do not support. Explain your reasons for disagreeing with the content of the draft plan and suggest alternatives
- Highlight any information that may be inaccurate and provide a reference to assist with further editing.

Please note that your submission will become part of the public record and will be available to anyone who requests a copy unless you specifically request otherwise.

After all submissions received have been carefully considered, a final park management plan will be prepared and forwarded to the Minister for Climate, Environment and Water for consideration together with a detailed analysis of submissions received.

You can submit your comments via post, email or online using the details provided.

Submissions close at 5pm on 14 January 2025.

Written submissions:
National Parks and Protected Area Program Unit
Department for Environment and Water
GPO Box 1047
ADELAIDE SA 5001

E-mail submissions:
DEWProtectedAreaManagement@sa.gov.au

Please use email subject heading:
Upper Eyre Parks Plan

Online submissions:
YourSAy.sa.gov.au

References

Benshemesh, J. (2007). *National Recovery Plan for Malleefowl*. Department for Environment and Heritage, South Australia.

Davies, R. J.P. (2019). *Management Plan for the Eyre Peninsula Blue Gum (*Eucalyptus petiolaris) *Woodland ecological community 2019*. Report prepared for the Eyre Peninsula Natural Resources Management Board, Department for Environment and Water, South Australia.

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For further information please contact:

Department for Environment and Water.
Phone Information Line (08) 8204 1910, or see SA White Pages for your local Department for Environment and Water office.

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