Munga-Thirri–Simpson Desert National Park

Management Plan 2022

'Ularaka-purru, thamuna-purru, wadlhu ngurku arla. malyka madla-marna. Walyparara yukarnda'.
Full of our history and sacred traditions, it is a most beautiful Country. Do not spoil it, and travel carefully.

SOUTH AUSTRALIA

Government of South Australia
Department for Environment and Water

Contents

Developing this plan 2

Directions for management 3

Significance and purpose 4

What are we looking after? 6

Challenges and opportunities 7

Theme 1: Keeping Wangkangurru Yarluyandi culture alive 8

Theme 2: Maintaining the natural desert landscape 12

Theme 3: Providing a unique cultural and nature-based experience for visitors 16

References 20

Appendicies 21

Cultural Sensitivity Warning

Aboriginal people are warned that this publication may contain culturally sensitive material.

Minister's Foreword

The Simpson Desert is one of Australia's most iconic landscapes. It is a place of profound cultural significance for the Wangkangurru Yarluyandi traditional owners, and a unique tourism destination which draws visitors from all over the world.

The Wangkangurru Yarluyandi people know this area as Munga-Thirri. The co-naming of this National Park acknowledges the ongoing connection of the traditional owners to their Country.

This is Australia's largest national park and, together with adjacent parks in South Australia, Queensland and the Northern Territory, contributes to one of the largest continuous protected areas in Australia. The objectives and strategies set out in this plan will ensure the national park is managed wisely into the future, as part of landscape-scale conservation efforts that extend across state and territory borders.

This plan focuses on keeping Wangkangurru Yarluyandi culture alive, conserving the fragile natural desert landscape, and maintaining a distinctive desert experience for visitors.

I am pleased to adopt the Munga-Thirri—Simpson Desert National Park Management Plan under section 38 of the *National Parks and Wildlife Act 1972*.

David Speirs MP
Minister for Environment and Water

Developing this plan

In 2021, Munga-Thirri--Simpson Desert National Park was created from the reclassification of Munga-Thirri--Simpson Desert Conservation Park and Munga-Thirri--Simpson Desert Regional Reserve. This change required a new management plan to be developed.

The management plan for the previous conservation park and regional reserve had been developed and adopted in 2019 with advice from representatives of the Wangkangurru Yarluyandi Aboriginal Corporation. This was the first management plan developed for these reserves and involved a review of the management practices and considered emerging management issues.

Recognising the time invested by stakeholders and staff in developing the original management plan, much of that information remains unchained and forms the basis of this plan.

This plan differs in recognising national park status of the land, and identifying a buffer zone around the Kallakoopah

Creek that supports the protection of the area's wilderness values. Further community input was sought through public consultation of a draft management plan as required under the National Parks and Wildlife Act 1972, and feedback received during this time helped in the finalisation of this plan.

The Wangkangurru Yarluyandi people know this area as Munga-Thirri, meaning Big Sandhill Country. The national park, as with the previous conservation park and regional reserve, is co-named to recognise that this land has always been, and will continue to be, the Country of the Wangkangurru Yarluyandi people.

Members of the Wangkangurru Yarluyandi Aboriginal Corporation and the South Australian Government wish to thank those who provided comment on the draft plan.

This is where the old people lived. The landscape unites people and there is a sense of connection to Country.

Wangkangurru Yarluyandi community workshop, Birdsville, March 2016

Directions for management

The Munga-Thirri–Simpson Desert National Park is the traditional lands of the Wangkangurru Yarluyandi people.

This iconic Australian landscape is diverse and changeable. It is fragile but can also be unforgiving.

We will care for and respect our Country to maintain its cultural and natural values.

Wangkangurru Yarluyandi (Won-kun-gu-ru) (Yar-loo-yan-dee) people are the native title holders over their Country which encompasses Munga-Thirri–Simpson Desert National Park. As traditional owners they set directions for management in partnership with the South Australian Government.

Munga-Thirri–Simpson Desert National Park is proclaimed under the *National Parks and Wildlife Act 1972*. As a result it is protected and managed to achieve conservation goals. It is also managed to foster the use, enjoyment and appreciation of the park.

Areas of the park which were previously categorised as regional reserve contain existing mining rights. Appropriate exploration and production may be authorised in these areas of the national park, subject to approvals under the *Mining Act 1971* and the *Petroleum and Geothermal Energy Act 2000*. Exploration or production activities are not permitted within the area previously categorised as conservation park. A zone around the Kallakoopah Creek area is also subject to restrictions.

Together with South Australia's Witjira National Park and Munga-Thirri National Park in Queensland, the Munga-Thirri–Simpson Desert National Park forms the central part of an enormous multistate landscape that is focused on broad scale conservation. The effective management of threats such as pest plant and pest animals across this landscape is a primary focus and requires a coordinated approach with land managers in South Australia, the Northern Territory and Queensland. In South Australia, this integrated approach is guided by regional landscape plans. It is also supported by ongoing liaison between each state and territory.

Significance and purpose

The Simpson Desert is the world's largest sand dune desert, with the world's longest parallel dunes. South Australia's Munga-Thirri–Simpson Desert National Park is Australia's largest national park at approximately 3.6 million hectares, and sits just within the South Australian border, abutting south-western Queensland and south-eastern Northern Territory (Figure 1).

The Wangkangurru Yarluyandi people have lived with this Country for tens of thousands of years. Their intimate knowledge of the natural environment enables them to perform many rituals for continued existence. This includes long-established customs such as 'rain making' ceremonies. The Munga-Thirri landscape is an integral part of their creation stories, with each prominent feature being associated with a story or being celebrated in song cycles.

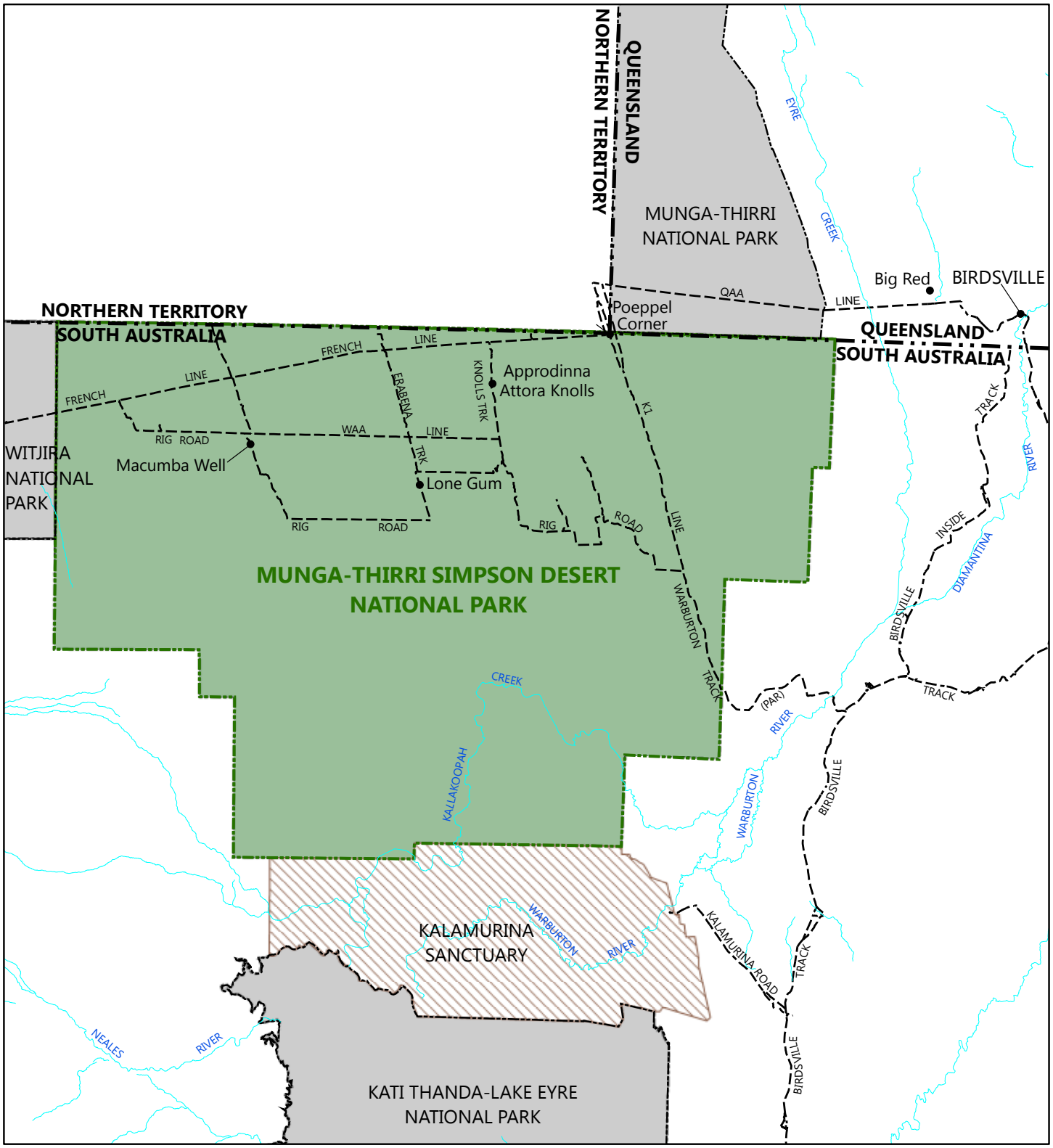
My ancestral line connects me to Munga-Thirri where I learned the beliefs, traditions and cultures of the Wangkangurru from my elders. I learned how to track, hunt, fish and find bush tucker from my grandmother, who also taught me how to understand the dreamtime and how these narratives spiritually bonded the Wangkangurru people to the Munga-Thirri. I feel that spiritual bond now, and it drives a care for this Country. I feel I come from Munga-Thirri, and was born there.h

I believe that all Australians can benefit enormously from developing an understanding of their Country by appreciating the ways of the old people; the culture and beliefs that sustained the indigenous people of Australia for thousands of years.
By sharing the knowledge of survival and the benefits of coexisting with the land, we can promote attention to the positive aspects of respecting and nurturing the ancient cultures of Wangkangurru/ Yarluyandi people, and develop a deeper understanding between all Australians.

Don Rowlands, Wangkangurru elder

The national park is part of an interconnected desert ecosystem and supports a diverse range of plants and animals adapted to living in the harsh desert environment. Given the geographical size of the park and the seasonal boom and bust climate cycles, species vary both spatially and temporally. Grasses dominate the desert, but there are also a number of tree species. The desert supports a number of small mammals and reptiles, and frog species and migratory birds visit the park in wetter years. Many of these species are of state or national conservation significance (Appendices 1 & 2).

Crossing the Simpson Desert is considered the trip of a lifetime for many travellers, enticing visitors from near and far to experience the true Australian outback. At times the desert is hot, dry and seemingly lifeless. Following rain, the desert greens up dramatically, hosting displays of wildflowers in some years. Similarly, spectacular natural flood events can transform the normally dry claypans and salt lakes of the desert into an expansive wetland, brimming with life. With such great seasonal variation, one can visit the park many times and never see it the same. Regardless of the season, the Simpson Desert is also variable travelling from one side to the other – the height, spacing and colour of the dunes changes noticeably and the swales are diverse.



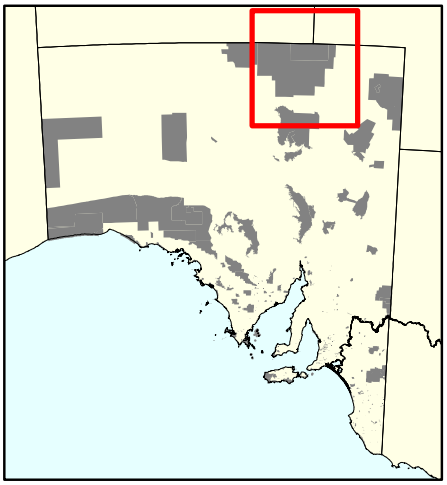


Figure 1

Munga-Thirri Simpson Desert National Park

0 km 20 40 60

Legend

- Road/track
- Watercourse
- State or territory border
- Munga-Thirri Simpson Desert National Park
- Other park
- Kalamurina Sanctuary

What are we looking after?

The Munga-Thirri–Simpson Desert National Park helps protect:

- Culturally significant sites and landscapes, including rare gypsum outcrops, known as the Approdinna Attora Knolls (the Knolls). These rare and extremely fragile land formations were formed by the gypsum swept off local salt lakes to create high dunes. These later produced a hard outer crust, creating the Knolls.
- Ancient song lines that reflect the creation of desert landforms and provide a geographical reference, enabling Wangkangurru Yarluyandi people to navigate their way across the desert.
- Bush tucker species such as Pitcheri (*Duboisia hopwoodii*), Wadnangkani (woma python), and Ngardu (Nardoo) (*Marsilea drummondii*).
- The world's largest system of parallel sand dunes. The primary characteristic of the Simpson Desert is the extensive system of long, straight and evenly spaced parallel dunes that vary in colour from vibrant red to white. Individual dunes commonly extend continuously for over 150km, with some as long as 200km.
- One of the largest areas of high quality wilderness left in Australia (Australian Heritage Commission 2003).
- Fossil sites of extinct megafauna that once roamed the area, providing opportunities for scientific research.
- A variety of plants including ten that are listed as vulnerable or rare in South Australia under the *National Parks and Wildlife Act 1972* (Appendix 1). Sea heath (*Frankenia plicata*), a small dense shrub, is also listed as endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
- Important fauna including 16 species listed as rare or vulnerable in South Australia. Three of these species are also listed as nationally endangered or vulnerable under the EPBC Act - Ampurta (crest-tailed mulgara *Dasycercus cristicauda*), Itjaritjara (southern marsupial mole *Notoryctes typhlops*) and the plains mouse *Pseudomys australis* (Appendix 2).
- Suitable habitat for the night parrot (*Pezoporus occidentalis*), one of the most elusive and mysterious birds in the world and known to occur in the arid grasslands of South Australia, Queensland and the Northern Territory.
- One of the greatest four-wheel drive (4WD) trips in the world and a true Australian outback experience.

Challenges and opportunities

The Munga-Thirri–Simpson Desert National Park faces a number of challenges, but with these challenges are also opportunities:

- Enhancing the tourist experience through the establishment of cultural tourism experiences that share the stories and language of the Wangkangurru Yarluyandi people.
- Developing place names that reflect the area's Wangkangurru Yarluyandi culture.
- Increasing the protection and recognition of Aboriginal and early European artefacts through increasing visitors' understanding.
- Enabling Wangkangurru Yarluyandi people to monitor the health of plants and animals in order to better understand the impact of long term seasonal conditions and climate change.
- Improving the resilience of native plants and animals through reducing the impact of exotic plants including buffel grass (*Cenchrus ciliaris*), *Tribulus terrestris* and *Neurada procumbens*.
- Coordinating Simpson Desert management activities between South Australia, Queensland and the Northern Territory.
- Securing the habitat of small native mammals, reptiles and birds.
- Managing threatened species to ensure their long-term conservation, particularly in response to climate change.
- Preventing grazing pressure on native plants through controlling populations of exotic species including camels, rabbits and cattle.
- Managing the impacts of introduced predators such as foxes and cats on native animals.
- Using fire to manage habitat and support the health of native vegetation, in particular bush tucker species.
- Enabling visitors to have a safe and low impact experience on the fragile desert environment.
- Enabling appropriate exploration and production activities within the park while providing protections for the Kallakoopah Creek.

THEME 1:
Keeping Wangkangurru Yarluyandi culture alive

"I'm proud knowing the old people walked and knew the Country. My vision and passion is getting out on Country and sharing cultural information and stories, passing this knowledge down to the younger generations. It is important to secure knowledge, stories, knowing connections and having that cultural connection to Country and family. Going out in the desert is like going home."

Aulpunda, Jean Barr Crombie, traditional owner

The Munga-Thirri–Simpson Desert National Park forms part of an area of great significance to the Wangkangurru Yarluyandi people. Their stories, such as that of the Two Boys, intertwine tales of native animals and land features to explain the creation of the landscape. These stories form maps, helping the Wangkangurru Yarluyandi people to remember where they can find water, food and shelter on their travels across the desert.

To live in the desert, the Wangkangurru Yarluyandi people relied on seeds as a staple food source. Seeds require processing using implements, and the Wangkangurru Yarluyandi people sourced these implements through trading with neighbouring Aboriginal groups. They obtained sandstone grinding stones from the Flinders Ranges, and from Mt Isa in Queensland they procured dolomite stone axes. Other items were also acquired through trade, for instance, Pitcheri (*Duboisia hopwoodii*), a plant treated and chewed for its narcotic properties. Wood was also an important resource, and the Maya-Maya (gidgee) (*Acacia cambagei)* in particular was used to make digging sticks, bowls and mia mias (also known as wiltjas or humpies) for shelter.

Animal remains found at popular gathering sites reveal that the Wangkangurru Yarluyandi people ate a wide variety of animals such as bandicoots, bettongs, hare-wallabies, bilbies, desert rat-kangaroos, spinifex hopping mouse, Madla-Yapa (Dingo), carpet snakes, lizards, Warru-Kathi (Emu) and a number of smaller birds. Wadnangkani (woma python) were a highly prized food item but very hard to catch. The men would risk their lives digging out the snake's tunnels which could easily collapse and bury them. While the men were off hunting, the women would search for seeds in the dunefields.

Two Boys Dreaming

The story of the Two Boys is one of the most important Wangkangurru Yarluyandi creation stories.

The Two Boys lived with their mother at Dalhousie and were rainmakers who spent their days catching small birds. While chasing birds they gradually ended up in Munga-Thirri. Here they met the Karanguru people, to whom they gave feathers from the birds they caught, linking the Karanguru of the east with the Wangkangurru.

The lively Two Boys story is comprised of a string of story lines that takes the traveller from Dalhousie in the west to Birdsville in the east. The story contains important information on where water can be found, creating a pathway across the desert. This story is a small part of a much larger story that travels through South Australia, Queensland, and the Northern Territory.

The seed of Piltikardi (pigweed) (*Gunniopsis quadrifida*) was a favoured food and Ngardu (Nardoo) (*Marsilea drummondii*) was a useful food plant found growing in shallow pools in the eastern and north-eastern desert, where flooding was more regular.

While the Wangkangurru Yarluyandi people inhabited the central and southern-central Simpson Desert, a number of other Aboriginal groups also lived in the area. The Lower Southern Arrernte and Eastern Arrernte people occupied the west, and the Karanguru and Wangkamadla were found in the east. The range of the Wangkamadla also extended into the northern areas of the desert.

The rapid pastoral expansion on desert margins in 1860-1900 brought with it displacement of Aboriginal groups and at this time, the Wangkangurru Yarluyandi began leaving the desert. The last remaining Wangkangurru Yarluyandi people vacated the desert in the summer of 1899-1900. There was a dramatic decline in all Aboriginal populations during this time and a major influenza outbreak in 1919 took its toll. By the mid-1970s, only three Wangkangurru Yarluyandi who were born in the desert were still alive. The

descendants of those born in the desert are now spread across Australia, from Adelaide and Port Augusta in South Australia, to Birdsville in Queensland, Alice Springs in the Northern Territory, and New South Wales. Those that speak Wangkangurru language are determined to use and share this knowledge, ensuring that language is revitalised and passed on to the next generation.

My ancestors stretched from west of Dalhousie across the Simpson Desert. My father was a traditional man who came from the Macumba area, and my mother was a traditional women, born at Bloods Creek where she was tribally married. I was born in Marree and was part of the Stolen Generation, living at the Umeewarra mission in Port Augusta. The Simpson Desert means a lot to me as that is where my ancestors and family came from.

When I was back on Country with family, I learned the Wangkangurru language. Every chance I get, I go out into the desert visiting sites and sharing knowledge with my family.

Valerie Naylon-Fuschtei Senior, traditional owner

There are cultural campsites throughout the national park that are important to modern day Wangkangurru Yarluyandi people, as it is through the use of these sites that they remain connected to Country. Being sites for congregation, many artefacts including stone implements are scattered within their vicinity.

Approdinna Attora Knolls are rare gypsum outcrops that were once the highest dune crests in the area. There are small gypsum nodes in the southern and eastern sections of the Simpson Desert but the Attora Knolls are particularly significant due to their height and great geological, historical and cultural significance. The Knolls are the home of the Rain Ancestor 'Kuntili'.

The rain ancestor Kuntili came from the north to Lake Mirri-ngupa-ngupanha. This name means 'many (dead) people live here'. He came night after night with massive clouds and by the light of his flashes of lightning he could see two beautiful girls and was determined to take them as his wives. So he came again night after night with stronger and stronger thunderbolts, trying out his strength smashing trees and finally coming as the biggest storm ever. He killed everybody except the two girls: the people are still lying about as many boulders. He carried the girls off to Warra-bullana and their camp is still there as the Knolls.

The Knolls provide a great view across the country but the fragile gypsum has been prone to visitor damage in the past. Visitor access is now controlled through a designated carpark and walking trail to the summit of one of the Knolls. Camping is not permitted within two kilometres of the Knolls to protect cultural sites.

Artefacts of Aboriginal occupation remain in the park, including stone implements and workings. While some sites and places are documented in the Central Archive, which includes the Register of Aboriginal Sites and Objects, there has not been a comprehensive survey of the Munga-Thirri–Simpson Desert National Park. There are likely to be many more unrecorded sites. All sites are protected under the *Aboriginal Heritage Act 1988*, whether registered, recorded or unrecorded. Some artefacts are in danger from present land uses. Visitors may intentionally or unintentionally damage culturally significant sites through driving off the marked tracks or removing artefacts.

In some areas, gypsum outcrops are traversed by tracks which not only causes physical damage, but can impact on story lines. There is a need to increase the knowledge of the cultural significance of the area as a first step in increasing the protection of these artefacts and important cultural sites.

Under the Wangkangurru Yarluyandi Indigenous Land Use Agreement, traditional owners have the right to use firearms to hunt in the national park. Any firearms use must comply with Australian licensing and registration laws. Further work is needed to ensure this activity is appropriately managed through the designation of an area for traditional hunting and the development of a traditional use protocol which outlines safe and sustainable hunting practices.

Traditional owners also have the right to collect plants, animals and minerals for food, craft and ceremonial activities. The continuation of these resource-use practices and methodologies is important to maintain culture and share knowledge.

Continuing to use, share and record cultural practices, language, and stories is important to ensure this knowledge is passed on to the next generation. Providing opportunities for visitors to learn about the cultural significance of the area through signage, digital interpretive information, and cultural tourism will also increase visitor understanding of, and respect for, Wangkangurru Yarluyandi culture.

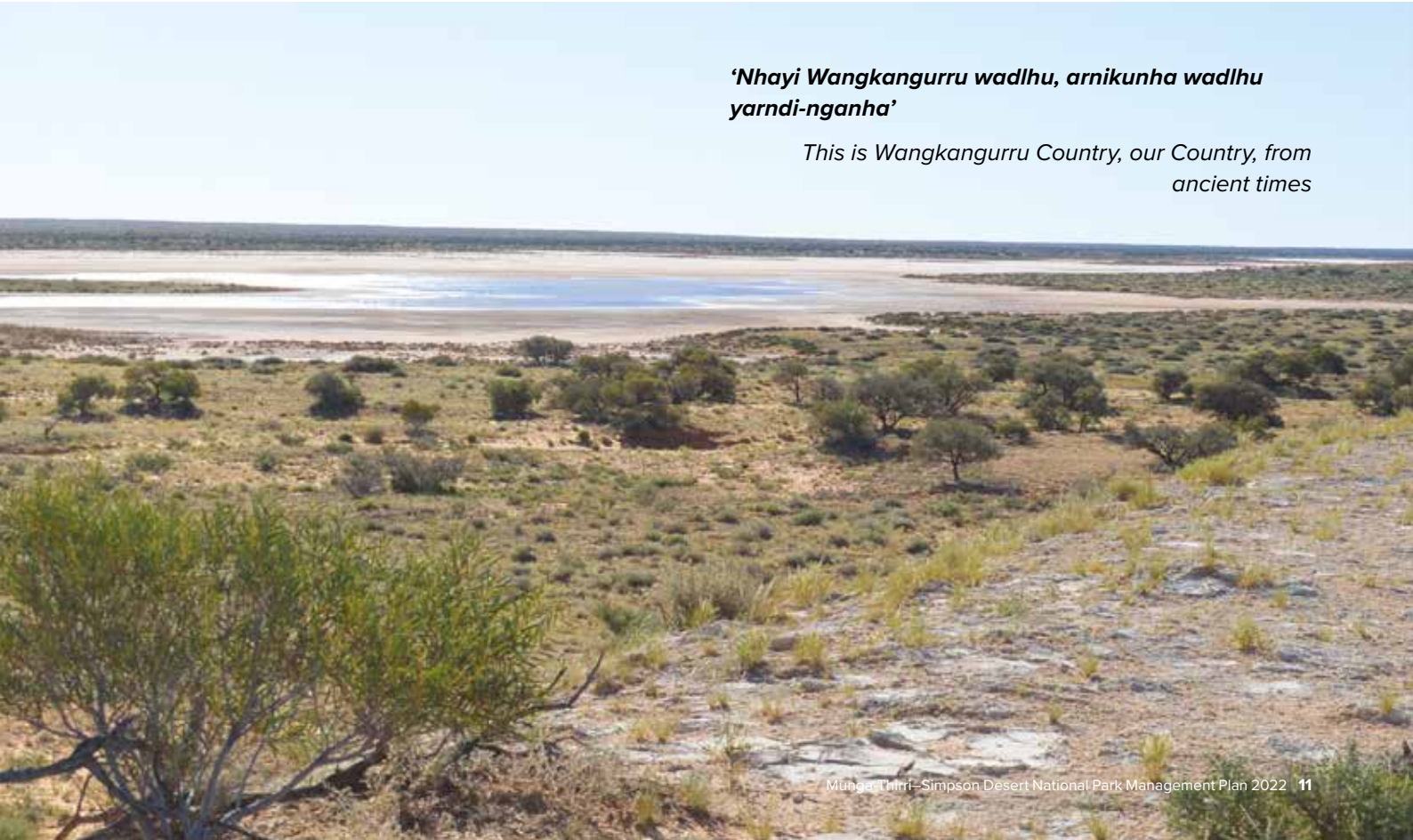
"I am a Wangkangurru Yarluyandi and Lower Southern Aranda descendant from my grandparents. I was given direction and knowledge from the Old People, and this is still in my head today. Now that we are the Elders, it's our responsibility to ensure that we document and pass our knowledge down to future generations, working in harmony to ensure that our culture is passed down and remains strong after we are gone"

Arthur Ah Chee Senior, traditional owner

Objective and strategies

Ensure that Country is protected, visitors can learn about Country, and Wangkangurru Yarluyandi people can pass on cultural knowledge to younger generations.

- Continue to recognise, respect, protect and maintain Aboriginal cultural sites. Conduct surveys to document cultural sites and realign tracks where required to avoid disturbing significant sites.
- Continue to use, share and record Wangkangurru Yarluyandi language so that it is passed on to the next generation.
- Support further research, survey and protection of flora and fauna, as well as fossil deposits in the reserve.
- Increase visitor understanding of the importance of the national park for Wangkangurru Yarluyandi people through the development of cultural tourism, the upgrade of park signage, and the upgrade and maintenance of digital interpretive information.
- Ensure the development of sustainable nature-based and cultural tourism provides employment opportunities for traditional owners and their communities.
- Continue to ensure cultural values and practices are recognised, promoted and respected in all decision making.
- Work towards the development of a protocol for traditional hunting by Wangkangurru Yarluyandi people with firearms within a designated area. Any traditional use protocol will include conditions developed for safe and sustainable hunting.



'Nhayi Wangkangurru wadlhu, arnikunha wadlhu yarndi-nganha'

This is Wangkangurru Country, our Country, from ancient times

THEME 2:
Maintaining the natural desert landscape

The aridity of the desert - expressed in the high mean temperature and low and erratic rainfall - provides for a specialised variety of flora and fauna species capable either of surviving or evading the periods of extended drought.

Sandhill canegrass (*Zygochloa paradoxa*) hummock grassland dominates the desert and helps to stabilise the dunes. The desert is far from ecologically uniform, however. On a local scale, swales provide habitat for dense gidgee (*Acacia cambagei*) communities and on a broader scale, the chain of playa lakes in the central part of the desert brings with it biogeographical variation. The smaller playa lakes, irpi (claypans), have a smooth and hard clay surface. Larger playa lakes have a bright white salt crust sitting over a layer of mud which remains damp even during drought. During wet years, the claypans and salt lakes provide important habitat for endemic and migratory species.

Grasslands such as those of the Simpson Desert do not usually support a great diversity or large numbers of vertebrate species. After rains, however, resources are abundant and populations boom. As a result, the distributions of local and regional species are continuously fluctuating. A complete picture of the fauna is therefore only possible through repeated observations over long periods. The remoteness and scale of the national park has limited the number of surveys and as a consequence, the desert animals are not as well-known as the desert plants. Further survey work is needed in future. Species which are known to occur include the Itjaritjara (southern marsupial mole), Ampurta (crest-tailed mulgara), and plains mouse. The Friends of the Simpson Desert Parks have undertaken some survey work which has complemented previous surveys in the area.

Buffel grass (*Cenchrus ciliaris*) has only been recorded at one site in Munga-Thirri–Simpson Desert National Park. However, there should be focus on its containment as this weed is a declared weed of national significance and considered to be one of Australia's worst due to its ease of establishment, and its fast maturation and spread. The plant can disperse its seeds broadly and these seeds can remain viable for over 12 months. The plants themselves can live for at least 20 years. The weed can quickly form a monoculture, out-competing native grasses and reducing food supply for native birds. The broader landscape is also compromised as buffel grass produces more combustible material than native grasses resulting in hotter and more intense fires.

Other weeds which are a priority for management include *Tribulus terrestris* and *Neurada procumbens*. Neurada was first observed in Australia in 2000 in the north-west corner of the Simpson Desert along French Line to west of Rig Road Junction. It is only otherwise known to occur at a couple of sites in the Northern Territory. *Tribulus terrestris* is a spreading vine found throughout mainland Australia. *Neurada procumbens* and *Tribulus terrestris* are most prevalent in areas where visitors stop their vehicles at track intersections, sites of interest and campsites. *Neurada procumbens* and T*ribulus terrestris* are resilient weeds owing to their ability to germinate only one seed at a time, only germinating others when moisture is detected. Both of these weeds, along with buffel grass, have seeds that allow them to be easily transported by tyres, shoes, camping gear and in the fur of animals. Visitors therefore have an important role in managing the spread of these weeds.

Many neighbouring pastoral properties run cattle, which can stray into the national park following favourable conditions and greening of vegetation in the Simpson Desert. The hooves of cattle can cause erosion to fragile soils. Cattle also directly impact native vegetation through trampling and grazing. Due to the size and remoteness of the park, it is difficult to know when cattle incursions have occurred and removing cattle is challenging. In most cases, cattle either move off the park or perish as water sources dry up.

Camels (*Camelus dromedarius*) were introduced into Australia for the purpose of transporting people and goods during exploration and development of central Australia. Afghan cameleers crisscrossed the desert from the mid nineteenth century. When cars became available, the use of camels declined and many animals were abandoned. Wild camels browse on most native species and can foul water sources, reducing the availability of clean water for native species. Both camels and cattle can also disturb or destroy cultural sites.

Rabbit populations fluctuate with seasonal conditions. When conditions are favourable, rabbits can be seen right across the desert. Especially when in large numbers, rabbits can decimate native plant and compete with native animals for available resources. This in turn causes erosion as the topsoil becomes exposed. Due to the remoteness and size of the desert, rabbits are difficult to control. Utilising biological control such as Rabbit Calicivirus disease may be the only option available to control rabbit populations in arid South Australia.

Foxes and cats predate on native species, and increase in number in parallel with prey species. Feral cats in particular can have a devastating impact on native reptiles and small mammals found in the park, a number of which are of state and national conservation significance (Appendix 2). As such, managing their impacts is also a priority. A recovery plan has been developed for the plains mouse (Moseby 2012) and the southern marsupial mole (Benshemesh 2004). Management of the national park aims to align with these plans, as well as other recovery plans that may be developed in the future.

Dingoes can play an important role in managing numbers of foxes and feral cats. The role of the dingo as an apex predator should be considered when managing dingo populations in the park.

The Wangkangurru Yarluyandi people used fire for tens of thousands of years as a landscape management tool. Fire is a natural part of the landscape and it has an important role in rejuvenating Country and protecting bush tucker plants and animals. The reintroduction of fire using a combination of contemporary and traditional fire practices should be developed in the future.

The natural and undeveloped qualities of the Simpson Desert provides a continental-scale protected corridor extending from western Queensland's Munga-Thirri National Park, through the Simpson Desert in South Australia and down to Kati Thanda-Lake Eyre National Park. This complements Kalamurina pastoral lease, managed by Australian Wildlife Conservancy, which captures 667,000 hectares of ecologically significant land between the southern Simpson Desert and the north shore of Lake Eyre/Kati Thanda (Figure 1). These large and interconnected protected areas provide corridors, through which species can move and adapt to a changing climate.

Climate change is expected to bring increased temperatures and decreased rainfall to the South Australian Arid Lands region (Suppiah 2006). Recent modelling demonstrates the extent of climate change impacts in the SA Arid Lands region, including the potential for an annual reduction in precipitation of 11.1% and a two degree increase in seasonal maximum daily temperature on 1986-2005 levels by 2090 under an intermediate emission scenario (Charles and Fu 2015). Potential implications of climate change include an increase in weeds and pest animals, a change in density and distribution of native plants, increased risk of extinction of vulnerable species, changes to the fire regime, and increased soil erosion. Management actions should be adaptive to take into account climate change and be consistent with any regional climate change adaptation plan.

Regulation of mineral and petroleum activities in South Australia

Processes for the assessment, approval and operation of exploration and production activities are primarily defined by the *Mining Act 1971* and the *Petroleum and Geothermal Energy Act 2000*.

The proclamation for the park sets out further requirements, including the need for the Minister for Environment and Water's approval of licences and associated operational documents. The Department for Energy and Mining requires energy and mining companies to undertake licensing processes, implement lease conditions, prepare environmental impact reports, consult with relevant stakeholders, and carry out activities in a safe and sustainable manner.

Companies are also required to comply with other legislation, including the *Native Title Act 1993*, the *Aboriginal Heritage Act 1988*, the *Environment Protection and Biodiversity Conservation Act 1999,* and the *Landscape South Australia Act 2019*.

The Munga-Thirri–Simpson Desert National Park was proclaimed to allow for resource use to continue to occur alongside conservation within the former regional reserve area. Any holders of mining rights within park boundaries are required to undertake ongoing liaison with the Department for Environment and Water and the Wangkangurru Yarluyandi people before, during and after exploration and production activities to minimise potential impacts to the values of the park.

The Kallakoopah Creek is an ephemeral creek system and anabranch of the Warburton River with recognised wilderness values which runs through the former regional reserve (Wilderness Advisory Committee 2011). The creek is part of the Lake Eyre Basin – one of the last remaining unregulated dryland river systems on earth – and is the only watercourse to run through the Simpson Desert. The Kallakoopah fulfils an important regional function as tributary to Lake Eyre/Kati Thanda, helping to transform that area into a wetland thriving with life during times of flood. The health of this river system is linked to continuing natural flows through the Lake Eyre Basin, particularly the Diamantina and Georgina rivers.

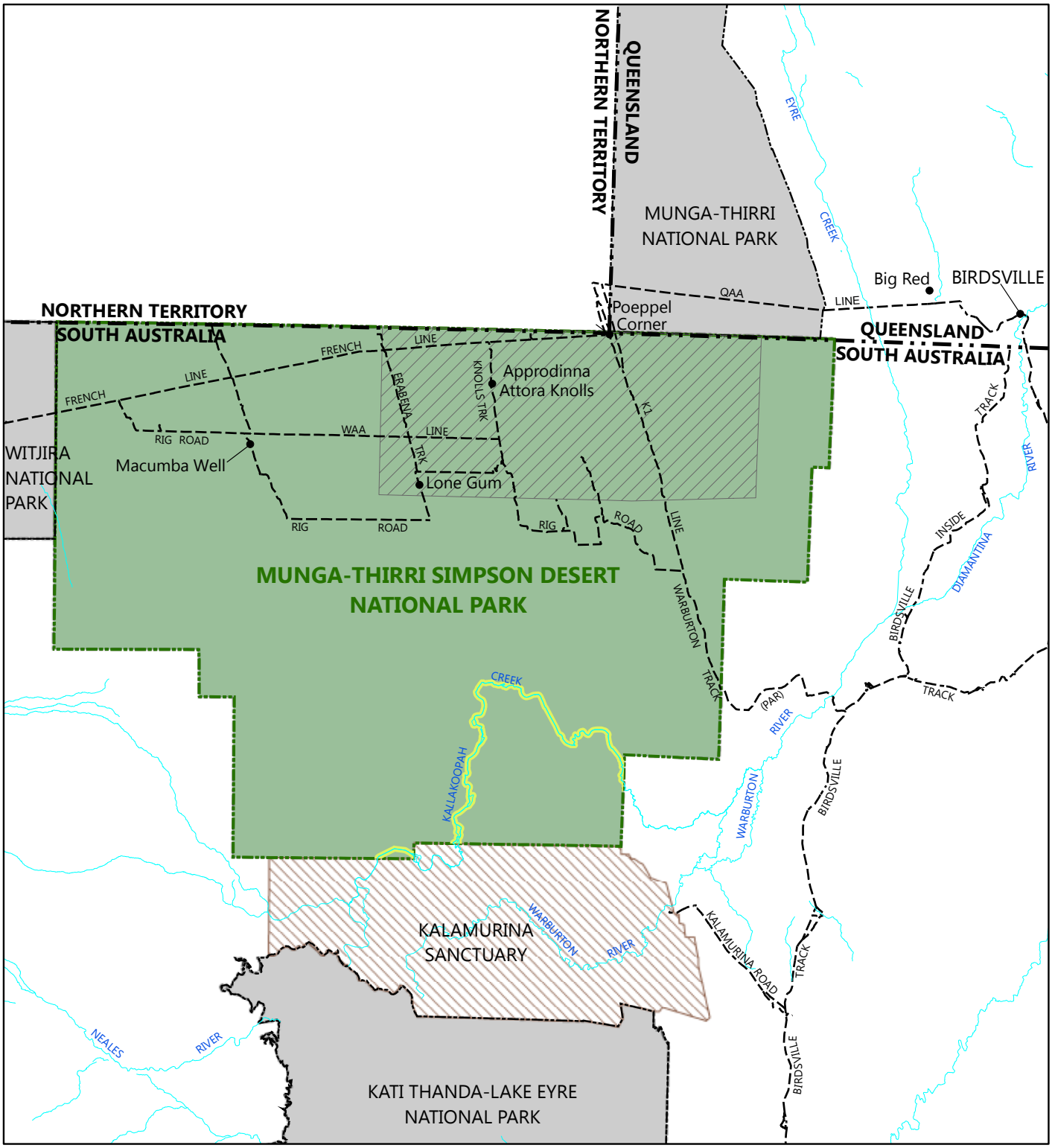
Park users are not permitted to visit Kallakoopah Creek due to the sensitivity of the area and its regional importance. An area extending one kilometre either side of the creek, forming an approximately 35,000 hectare zone, will be managed to support wilderness values (Figure 2). The zone will be managed in accordance with a wilderness code of management prepared under section 12 of the *Wilderness Protection Act 1992*, with a focus on the preservation of wildlife and ecosystems, and minimising access.

Tenement holders within this zone may be granted approval to construct infrastructure to support exploration or production in adjacent lands, such as new access tracks or the development of a pipeline if required. Any new infrastructure developed within the Kallakoopah zone will be subject to a high standard of construction, maintenance and rehabilitation, which ensures it is undertaken without significantly impacting on the values of the zone. These activities may only be permitted following statutory approval processes and consultation, including the approval of an acceptable Environment Impact Report and Statement of Environmental Objectives for energy resource-related exploration and production, or a Program for Environment Protection and Rehabilitation for mining related activities. Through the Department for Energy and Mining's statutory approval process, geophysical and/or drilling activities will not be authorised in the zone.

Objective and strategies

Conserve the fragile desert environment so that it can be enjoyed by all people for many generations to come.

- Encourage and support research, monitoring and surveys to increase our understanding of plants and animals in the desert.
- Continue the large herbivore aerial control program in the desert to keep camel numbers low and control cats and foxes opportunistically.
- Investigate and pursue opportunities to strengthen coordination of pest management activities and fire management activities across the broader landscape, including Queensland and the Northern Territory.
- Control buffel grass as a priority before it spreads further, conduct trials to control *Neurada procumbens* at track junctions and educate visitors on how they can limit the spread of weed seeds and encourage the reporting of new buffel grass infestations.
- Develop an understanding of the use of fire to manage habitat for threatened species, and to increase health and achieve rejuvenation of the landscape, particularly bush tucker.
- In the event of future mineral and petroleum exploration or production activities within permitted areas of the national park, ensure that the national park's remote and natural qualities are maintained, precautions are taken to minimise the spread of weeds, tracks are rehabilitated, and visitor experience and Aboriginal cultural heritage is not impacted.
- Manage the wilderness values within the Kallakoopah Wilderness Zone by limiting mineral and energy resource exploration or production activities, and not permitting visitor access.



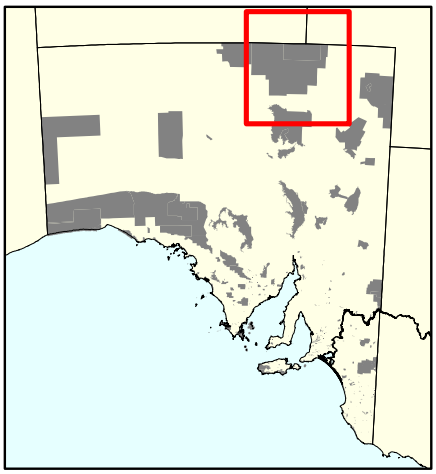


Figure 2

Munga-Thirri—Simpson Desert National Park Management Zones

0 km 20 40 60

Legend

- Road/track
- Watercourse
- State or territory border
- Munga-Thirri Simpson Desert National Park
- Other park
- Kalamurina Sanctuary
- Kallakoopah Wilderness Corridor
- Former conservation park – no resource use permitted

THEME 3:
Providing a unique cultural and nature-based experience for visitors

This seemingly endless, ever-changing landscape is one of the quintessential Australian experiences, providing a sense of remoteness and a unique wilderness experience which park management seeks to maintain. Depending on the track travelled and the season, visitors will see the surprising diversity of the desert. Some years may be dry with only sparse vegetation whilst in other years, the desert puts on a display of wildflowers complemented by lush green vegetation.

'Despite its inherent harshness the Simpson Desert is a living, fertile and resilient environment. It is a land to be enjoyed for its wilderness attributes, its cultural and natural history, its colour and contrasts. The Simpson Desert is many things to many people – formidable and implacable, intolerant to the ill-advised and unprepared, a place to be respected and admired. It is a land for all Australians to enjoy.'

Mark Shephard, author - The Simpson Desert: natural history and human endeavour, 1992

Managing visitor safety

High visibility safety flags displayed at least 2.5 metres from the bull bar are mandatory for all vehicles and UHF radios should be tuned into channel 10 to check for oncoming traffic. All visitors must purchase a Desert Parks Pass before entering the national park. The national park is closed from 1 December to 15 March each year due to extreme summer temperatures that can reach over 50 degrees Celsius, making peak travel time between May and September.

The major relics of European exploration are the marks of explorers. Two of the most significant items, Poeppel's Peg and one of surveyor Linday's 1886 marked trees, were originally within the park boundaries but have now been removed and are preserved in Adelaide. A replica corner marker stands in place of Poeppel's Peg and a plaque commemorates Lindsay's marked tree. Also on the tourist route is the Lone Gum – a single coolibah tree oddly located in the middle of the desert.

Cultural tourism enterprises driven by Wangkangurru Yarluyandi people would significantly enhance the visitor experience. There is increasing interest and support for the establishment of nature-based and cultural tourism ventures in South Australia. Such opportunity not only provides employment for Wangkangurru Yarluyandi people, but undertaking tours helps to increase the knowledge and understanding of visitors, providing them with an insight into why the national park is so special.

Visitor use is largely limited to well-equipped and self-sustaining groups possessing suitable four-wheel drive vehicles and competent leaders. It takes 2-3 days to cross Simpson Desert. Four-wheel driving skills are needed. There is no mobile phone reception or fuel services and there are no rubbish bins, toilets or shelters. Some sections of tracks have become degraded due to a combination of increased visitor traffic and incorrect tyre pressures being selected for vehicles. There is also concern that the use of trailers contributes to track damage, in particular on the crest of dunes. It is acknowledged, however, that some visitors require the use of a trailer to make the journey possible. Effort has been made over previous years to monitor the health of the dunes via photo-points. The results are not yet conclusive but it seems that scalloping occurs during the high use tourist season and that the dunes then undergo a repair phase during the summer closure period with the help of sand movement and rainfall. Dune monitoring is ongoing and in the future, monitoring outcomes may highlight a need for mitigation actions to be taken to protect the dunes.

The Lone Gum

The Lone Gum is a single isolated coolibah tree in the middle of the Simpson Desert Dune field, far from any other trees. Little is known about the origin of the Lone Gum, how it came to be here, or its age.

The coolibah (*Eucalyptus coolabah*) is renowned for its hard, durable timber and provision of excellent shade. Aboriginal people collected seeds, grubs and lerps (sap sucking insects) from such trees for food, obtained water from roots and used the bark for medicinal purposes.

Coolibah generally grow on heavy clay soils in seasonally flooded areas such as floodplains, margins of water courses, lagoons and swamps. The location of this tree, in the middle of the southern Simpson Desert dune field, far removed from the nearest watercourses is both fascinating and intriguing.

Careless driving impacts the environment through damage to native vegetation, the spread of weeds such as buffel grass, erosion and generally scarring the landscape. Cultural campsites, artefacts and culturally significant land features such as gypsum outcrops can be easily damaged. Visitors must remain on public access tracks as identified in the Desert Parks Pass maps, and consider their impact when driving off tracks to camp. Where possible, using camp areas previously used by other visitors will assist reducing new tracks and impacts on park values.

Direction signs have been established to guide visitors across the desert. There is also some interpretive information about the park. The remoteness of the park adds significant costs for both implementation and maintenance of signage.

Camping is currently allowed within 100 metres of public access tracks. Minimal impact camping is encouraged. A camping strategy is being developed to ensure consistency with the neighbouring Munga-Thirri National Park in Queensland, and the Central Land Council managed section of the Simpson Desert in the Northern Territory.

Sitting by the glow of a campfire under a sky of stars is part of the desert experience. Fallen tree branches, sticks and other dead wood may seem ideal for campfire fuel, but these provide valuable habitat for reptiles, small mammals, insects and emerging plants. In addition suitable campfire wood is extremely limited. The collection of firewood for campfires is not prohibited but visitors are encouraged to bring their own firewood from sustainable sources outside the park. Restrictions on the collection of firewood for campfires may be considered if impacts become apparent.

Wangkangurru Yarluyandi people have traditional rights which enable them to collect firewood for cultural purposes. However, supply is limited, and the Wangkangurru Yarluyandi people want the habitat provided by this dead wood to be protected. As such, traditional owners will also bring in their wood from sustainable sources outside of the national park.

A number of events take advantage of the uniqueness of the desert and the challenge it offers. The Simpson Desert Bike Challenge sees competitors cycle across the desert and Variety - the Children's Charity has held charity 4WD events in the past. These events help to increase the profile of the national park. Event organisers are required to ensure that activities have a minimal impact, and are undertaken in a manner that ensures the safety of participants and organisers. Opportunities for events to provide benefits to local communities are also considered. Any event or new visitor experience including camel trekking or horse riding will be considered on a case by case basis and agreements developed as required. Culturally significant sites and places must be carefully considered in the planning of any future events or developments. Each proposal will be assessed to ensure the activity is compatible with the values of the national park and the aspirations of the Wangkangurru Yarluyandi people.

Objective and strategies

Enable visitors to have a positive experience without impacting on the environmental values of the national park.

- Encourage and promote appropriate cultural and nature-based tourism. Work with Wangkangurru Yarluyandi people to identify opportunities for the establishment of cultural tourism ventures driven by Wangkangurru Yarluyandi people.
- Ensure tracks provide for tourism experiences but do not jeopardise culturally significant sites or ecologically sensitive areas.
- Continue to monitor the condition of tracks. Provide guidance to visitors to prevent the establishment of new tracks or damage to vegetation. Instigate mitigation actions as appropriate.
- Promote a coordinated and consistent message about minimal impact camping in conjunction with Munga-Thirri National Park in Queensland and the Central Land Council in the Northern Territory.
- Promote the correct setup for four wheel drive vehicles, including loading and most importantly tyre pressures through signage and publications to limit environmental impact and remind visitors to stay on the marked tracks.
- Improve interpretive material for the national park which includes online applications to enhance the visitor experience through sharing more information about the environmental, cultural and European history of the Simpson Desert.
- Maintain directional signage at entry points, track junctions and other key locations to increase public safety.

Wangkangurru Yarluyandi Language

Wangkangurru Yarluyandi name	Common name
Fauna	
Madla-Yapa	Dingo
Kapirri	Goanna
Warru-Kathi	Emu
Yatyaparra	Zebra Finch
Karrawara	Eagle
Ampurta	Crest-tailed Mulgara
Itjaritjara	Southern Marsupial Mole
Wadnangkani	Woma
Flora	
Piltikardi	Pigweed
Ngardu	Nardoo
Maya-Maya	Gidgee
Murumpa	Bogan Flea

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Appendix 1: Flora species of conservation significance

Flora species	Common name	Conservation status	
		EPBC Act Cwlth[1]	NPW Act SA[2]
Frankenia plicata	Sea Heath	En	Vu
Plantago multiscapa	Many-stem Plantain		Vu
Acacia georginae	Georgina Gidgee		Ra
Acacia jennerae	Coonavittra Wattle		Ra
Eragrostis lacunaria	Purple Love-grass		Ra
Frankenia cinerea			Ra
Frankenia cupularis			Ra
Lobelia heterophylla ssp. centralis			Ra
Pimelea penicillaris	Sandhill Riceflower		Ra
Swainsona oligophylla			Ra

Appendix 2: Fauna species of conservation significance

Fauna species	Common name	Conservation status	
		EPBC Act Cwlth[1]	NPW Act SA[2]
Notoryctes typhlops	Southern Marsupial Mole (Itjaritjara)	En	Vu
Pseudomys australis	Plains Mouse	Vu	Vu
Dasycercus cristicauda	Crest-tailed Mulgara (Ampurta)	Vu	
Ardeotis australis	Australian Bustard		Vu
Cladorhynchus leucocephalus	Banded Stilt		Vu
Neophema chrysostoma	Blue-winged Parrot		Vu
Elanus scriptus	Letter-winged Kite		Ra
Falco hypoleucos	Grey Falcon		Ra
Falco peregrinus	Peregrine Falcon		Ra
Hamirostra melanosternon	Black-breasted Buzzard		Ra
Phaps histrionica	Flock Bronzewing		Ra
Plegadis falcinellus	Glossy Ibis		Ra
Stipiturus ruficeps	Rufous-crowned Emuwren		Ra
Sminthopsis youngsoni	Lesser Hairy-footed Dunnart		Ra
Aspidites ramsayi	Woma (Wadnangkani)		Ra
Notoscincus ornatus	Desert Glossy Skink		Ra

[1] *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)

En - Endangered
Vu - Vulnerable

[2] *National Parks and Wildlife Act 1972* (South Australia)

En - Endangered
Vu - Vulnerable
Ra - Rare

Source: Biological Databases of South Australia

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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