

# Nullarbor Parks

## Management Plan 2019

Nullarbor Wilderness Protection Area

Nullarbor National Park

Nullarbor Regional Reserve

Mirning Country; the Nullarbor - vast, spectacular and unique, with strong and respected spirit. Mirning people are taking care of Country and providing opportunities for all.



# Minister's foreword



The Nullarbor has a rich Aboriginal history, diverse range of plants and animals, world-renowned geological features, and reminders of early pastoralism.

The finalisation of this plan is an important milestone in helping to protect many areas of this unique landscape.

The Nullarbor is one of Australia's most iconic regions, protected through a network of large parks in Western Australia and South Australia. South Australia's three Nullarbor Parks cover over 2.8 million hectares, making up one of Australia's largest contiguous protected areas.

This management plan has been developed by the Nullarbor Parks Advisory Committee – a partnership between the Far West Coast Aboriginal people and the South Australian Government. It sets out long term management strategies for the Nullarbor Wilderness Protection Area, Nullarbor Regional Reserve and Nullarbor National Park, which respect the cultural values of the Far West Coast Aboriginal people. It will ensure that the special values of these parks are protected and celebrated for generations to come.

This plan explains how these areas will be conserved while also enabling people to enjoy this remarkable landscape. The planning process has brought together people with different interests and cultivated new partnerships.

I thank all those who contributed to the plan's development. I commend the leadership of the Nullarbor Parks Advisory Committee in overseeing the development of this plan, and look forward to the continuation of Government's partnership with Far West Coast Aboriginal people.

I now formally adopt the Nullarbor Parks Management Plan under section 38 of the *National Parks and Wildlife Act 1972*.



**David Speirs MP**  
**Minister for Environment and Water**



Cover image ©Verna Lawrie

"The painting represents an aerial view of the Nullarbor plains with its salt bushes and rock holes scattered across the Nullarbor.

The gray dots are the salt bushes and the round circles are rock holes or blowholes. The top is the Head of the Bight and the whales, when it is the right season for the whales April to September & October."





# Developing this plan

This plan has been developed with the Nullarbor Parks Advisory Committee - a partnership between Mirning people (the traditional owners of the Nullarbor) and representatives of the South Australian Government.

The committee provides advice on the management of the Nullarbor Wilderness Protection Area, Nullarbor National Park and Nullarbor Regional Reserve. These parks are all part of Mirning Country and have been incorporated into a single management plan due to their ecological and cultural connectivity.

The *Far West Coast Healthy Country Plan* guides the management of Country and reflects the aspirations of Far West Coast Aboriginal people for their Country and communities. It was developed by the Nullarbor Parks Advisory Committee and the Yumbarra Conservation Park Co-management Board on behalf of the Far West Coast Aboriginal Corporation, through a series of on-country workshops with Far West Coast Aboriginal people. The *Far West Coast Healthy Country Plan* underpins the management of the parks and has been used to develop this plan.

A draft plan was released for public consultation in 2017 for a period of three months. Eighteen submissions were received, including a number of submissions from people who have an interest in caving within the parks. Each of these provided constructive feedback that has assisted in the development of this final plan. This will also lead to further engagement with caving stakeholders and the Advisory Committee.

This plan highlights the most important values of the parks, and describes the main threats to these values. It provides strategic direction for the protection of these values at a high level. It is not intended to cover every aspect of management in detail. This approach ensures that the plan is flexible and able to guide a range of future management challenges.

Mirning Elders and the Far West Language Centre provided guidance on the use of Mirning language within this plan.

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### Cultural Sensitivity Warning

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



## Directions for management

The Nullarbor parks are an interconnected network of parks located in Mirning Country. They are managed in an integrated way with advice from the Nullarbor Parks Advisory Committee. Through this committee, Mirning people have a central role in informing and setting directions for the management of the Nullarbor parks.

Several other Aboriginal groups within the Far West Coast region have associations and interests with these parks. Far West Coast Aboriginal people of South Australia as reflected in the native title determination include three major language groups; Kokatha, Mirning, and Wirangu. The Far West Coast Native Title Determination also recognises the rights and interests of the Yalata, Oak Valley and Roberts' family groups. In setting directions for management, their interests are acknowledged and respected. The ongoing involvement of Mirning people and other Far West Coast Aboriginal people will ensure that their cultural knowledge is used as a foundation for future management.

***"We are managing the Nullarbor Parks for all who visit them. We have responsibilities handed down from the old people to protect our sites and care for our traditional lands"***

Clem Lawrie, Mirning representative

Across the Nullarbor parks are numerous significant sites according to Aboriginal tradition, and sites that are important to Aboriginal archaeology, anthropology and history. All sites are protected under the *Aboriginal Heritage Act 1988* whether registered, unregistered or not yet recorded. The Nullarbor parks will remain subject to the native title rights and interests that continue to exist in relation to the land. The plan will be implemented in accordance with the relevant provisions of the *Native Title Act 1993*, the Far West Coast Native Title Determination (December 2013), and the Far West Coast Indigenous Land Use Agreement.

The Nullarbor parks are a central feature within the land and seascape that extends south into the Great Australian Bight and north into Australia's arid interior. Each of the Nullarbor parks has a different status under state legislation. As a result, management directions vary between each park.

The Nullarbor Wilderness Protection Area is situated between the border with Western Australia and the Yalata Indigenous Protected Area, adjacent to the Great Australian Bight and on the iconic Nullarbor Plain (Figure 1). It makes up 31% of the area of the Nullarbor parks. It is proclaimed as a wilderness protection area through the provision of the *Wilderness*



Mirning people and DEW staff at the Healthy Country Planning Workshop at Gilgerabbie Hut

*Protection Act 1992.* Wilderness protection areas are highly protected landscapes, managed to retain their natural and undisturbed qualities. Mineral and energy resources exploration and extraction are not allowed in wilderness protection areas.

It will be managed to avoid development of any new infrastructure and any further alteration of the landscape. The wilderness protection area will continue to provide the distinctive remote and natural experience which has become synonymous with Australia's iconic Nullarbor Plain.

The Nullarbor National Park is situated between the Nullarbor Wilderness Protection Area and the Nullarbor Regional Reserve (Figure 1). It makes up 1% of the Nullarbor parks and is a remnant of the original Nullarbor National Park which was reclassified as the Nullarbor Wilderness Protection Area in 2013.

The Nullarbor Regional Reserve (Figure 1) is proclaimed under the *National Parks and Wildlife Act 1972*. Under this Act, regional reserves are proclaimed for the purpose of conserving wildlife, natural and historic features while also allowing for the sustainable utilisation of mineral and energy resources. The regional reserve comprises 68% of the Nullarbor parks.

This plan, together with the objectives of the *National Parks and Wildlife Act 1972* will provide direction for the management of the regional reserve at a high level. However, the use of mineral and energy resources is primarily guided by other management frameworks and legislation including the *Mining Act 1971* and the *Petroleum and Geothermal Energy Act 2000*.

This is the first management plan for the Nullarbor Wilderness Protection Area, Nullarbor National Park and Nullarbor Regional Reserve. Once adopted, the Nullarbor Parks Management Plan will meet the requirement for the development of a management plan for the Nullarbor National Park and Nullarbor Regional Reserve, as specified under section 38 of the *National Parks and Wildlife Act 1972*. It will also meet the requirement for the development of a management plan for Nullarbor Wilderness Protection Area as required under section 31 of the *Wilderness Protection Act 1992*.

The Nullarbor Parks Advisory Committee will work with stakeholders and local communities to implement the priorities and strategies identified in this plan. Strategies will be monitored and regularly evaluated and adapted to ensure they are effective.



## Significance and purpose

The Nullarbor Wilderness Protection Area (894,245 ha), National Park (32,289 Ha) and Regional Reserve (1,919,527 ha) are situated approximately 300km west of Ceduna (Figure 1).

They are part of an iconic landscape, internationally renowned as the treeless plain (*null*=no *arbor*=tree in Latin). The saltbush (*Atriplex* spp.) and bluebush (*Maireana* spp.) scrublands-dominated plain is deceptively monotonous. Beneath the surface is part of the world's largest semi arid limestone karst system consisting of many hundreds of dolines, caves and blowholes. The Nullarbor parks are recognised as a largely intact and natural area and the area is recorded on the *National Wilderness Inventory* (Australian Heritage Commission 2003).

For Mirning people, connecting to Country and culture is essential for their health and wellbeing. The physical and spiritual landscapes of these parks are interconnected, and are inseparable from the physical and spiritual health of the people who have cultural connections to the area.

Gudda:mar is the Southern Right Whale. According to Mirning, the Nullarbor breathes, and is so because Gudda:mar created the blow holes and the Bunda Cliffs and major land features across the Nullarbor. The head of Bight is the nursery for Gudda:mar. Gudda:mar is family to the Mirning.

The significance of Country to Mirning people is also illustrated by the Dju Dju (Dingo). The wellbeing of such species, the landscape and the people is inextricably linked. The connection of particular groups of Mirning people to the Dju-Dju identifies those groups' responsibilities for the species and the landscape it relies upon.

Koonalda Cave is significant in the history of Aboriginal occupation and has particular historical and cultural significance for the Mirning people. The cave contains markings made by Aboriginal people during the last ice age some 22,000 years ago.

The caves, dolines, blowholes and rock holes form a cultural landscape, connected by ancient tracks. Some of these tracks were used to trade the flint mined on Mirning Country with other groups as far away as Lake Eyre/Kati Thanda and north west Australia.

The Nullarbor parks adjoin the Yellabinna parks to the east, Eucla National Park in Western Australia, the Maralinga Tjarutja Lands to the north and the Far West Coast Marine Park and Great Australian Bight Marine Park to the south. They form a vast area that enables ecosystems to function and support a wide variety of flora and fauna with minimal disruption to natural processes.

The Nullarbor Wilderness Protection Area was proclaimed in 2013 and is the largest wilderness protection area in South Australia. It protects a vast remote and natural area that is also an internationally recognised karst system.

Koonalda Homestead is recognised as State Heritage Place under the *South Australian Heritage Places Act 1993*. It is made of railway sleepers making it a rare example of World War II outback construction. It was a sheep station and due to the arid nature of the plain the farmers had to pump water from Koonalda Cave for their stock. The Old Eyre Highway passes by the homestead and so the homestead also served as a fuel stop for travellers crossing the Nullarbor until the 1970s.

The Nullarbor Regional Reserve was proclaimed to facilitate the conservation of a unique cultural and natural landscape, while also enabling the sustainable use of mineral and energy resources. Mineral exploration has largely focused on paleochannels of ancient fluvial sand deposits and precious metal, diamond and iron potential in the basement rock.

Approximately 50,000 people travel across the Nullarbor Plain on the Eyre Highway every year. Of those roughly 2,000 stop and explore, focusing on Koonalda Homestead, Koonalda Cave, Murrawijinie Caves and Bunda Cliff lookouts.



# What are we looking after?

## The Nullarbor parks protect:

### Aboriginal culture

- A place for Mirning and other Far West Coast Aboriginal people to continue their culture through stories and traditions.
- Aboriginal cultural sites, including caves, blowholes, and a landscape that is of profound significance to Mirning people.
- Bush tucker such as boorah (quandong) (*Santalum acuminatum*), bush medicine such as nyoonyoon (*Eremophila* sp.), and wanna mar (seafood) including mudi (fish).
- Culturally significant species of bush meat such as gibara (Australian bustard) (*Ardeotis australis*), marlu (red kangaroo) (*Macropus rufus*), wardu (southern hairy-nosed wombat) (*Lasiorhinus latifrons*), galda (sleepy lizard) (*Tiliqua rugosa*) and goanna (*Varanus* sp.)
- Totemic species such as yarda (wedge-tailed eagle) (*Aquila audax*) and Dju-Dju (dingo) (*Canis lupus dingo*).
- Culturally and ecologically important water sites, such as soaks, dams, claypans, rock holes and those occurring in caves.

### Land systems

- The Nullarbor Plain - an iconic Australian landscape known as an expansive flat treeless plain (Kuljinjah).
- The South Australian section of the world's largest semi-arid karst system (limestone caves and features).
- The longest south-facing line of cliffs in the southern hemisphere (the Bunda Cliffs).

### Flora and fauna

- Twenty fauna species that are listed as rare or threatened under the *National Parks and Wildlife Act 1972* (Appendix 2).
- The largest population of wardu (southern hairy-nosed wombat) (*Lasiorhinus latifrons*) in Australia, which is classified as near threatened on the IUCN Red List of Threatened Species.
- Nineteen flora species that are listed as rare or threatened under the *National Parks and Wildlife Act 1972*. Two of these are also listed as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (Appendix 1).

### Heritage

- Subfossil deposits in caves that indicate the past fauna composition of the area.
- Historic sites associated with early explorers and pastoralists including huts, roads, homesteads, outbuildings, fences, bores and graves.
- Caves which have ancient Aboriginal artifacts and artwork.

### Tourism opportunities

- An iconic tourism destination valued for providing a remote and natural visitor experience including the Nullarbor Plain, spectacular vistas of the Southern Ocean from the towering Bunda Cliffs, Murrawijinie Caves, the collapsed doline opening of Koonalda Cave, Koonalda Homestead and outstanding land based marine mammal viewing opportunities, all of which can be enhanced through Mirning cultural guides.

### Caves and other features of the karst landscape

- A major portion of the Nullarbor Plain which is the largest semi-arid karst region in the world. The karst landscape within the parks protect:
  - Koonalda Cave State and National Heritage site, which is also of cultural significance to Mirning people.
  - Other caves which are significant to Mirning and which have Aboriginal artefacts that extended the scientific knowledge of the occupation of the Nullarbor by Aboriginal people back 39,000 years.
  - The Bunda Cliffs which were formed around 15 million years ago when the Nullarbor Plain rose from the sea during the Miocene.
  - Cave fauna with a high degree of endemism.
  - Hundreds of intact geological surface and sub-surface features including collapse dolines, circular depressions known as 'dongas', blowholes, caves, speleothems, and underground lakes.
  - Examples of geomorphic processes that have shaped the Nullarbor Plain.
  - A chronological record of changes to the climate and past events.
  - Subfossil deposits that provide opportunities for palaeontological research into the region's ecology and the evolution of Australian fauna, including megafauna and remarkably well preserved specimens of species such as thylacines.
  - Opportunities for approved research, exploration, tourism and recreational caving activities.



## Finger flutings in Koonalda Cave

The human made markings in the soft limestone at Koonalda Cave are often termed 'art' although the reason for their creation is not fully understood. Made by drawing the fingers over the limestone surface, these markings are often called finger flutings. At the time of its discovery by archaeologists, the only comparable type of markings were found in the Garonne River in France.

The enigmatic 'art' of Koonalda Cave involves two styles of rock markings; the finger markings and similar marks made using a sharp tool in the harder rock. They cover two large sections of Koonalda Cave deep beneath the earth.

In 1956 archaeologist Dr Alexander Gallus determined that archaeological remains and the finger flutings were 22 000 years old. Prior to 1956, the extent of Aboriginal occupation in Australia was thought to be 8 700 years (Department of Environment 2014).

These distinctive human made markings are moving reminders of the people of the ice age, who had the skill

and knowledge to survive in this harsh environment. The markings at Koonalda Cave are considered some of the most complex and best preserved of their kind in Australia.

Other archaeological deposits found at Koonalda Cave provide evidence of silica mining activity that can be reliably dated to the same period. The location of the archaeological remnants of silica mining hundreds of metres below ground provides further confirmation of its human occupation over 20 000 years ago, and informs our understanding of the human life and activity during this time.

Koonalda Cave is unique as one of the few arid sites used almost exclusively by Aboriginal people during the Pleistocene epoch, representing their long and rich cultural connection with the landscape. It is a tangible link to the past and a place that continues to hold special significance for the Mirning people today.

Department of Environment (2014)

# What are the challenges and opportunities?

**Key challenges and opportunities in the protection and management of the Nullarbor parks are:**

- Incorporating traditional knowledge into the management of the parks and assisting Mirning people with the use and transfer of traditional knowledge through the maintenance of cultural sites.
- Ensuring that the hunting of bush meat, fishing, and gathering bush tucker, bush medicine and coastal food is enabled in a safe and sustainable way.
- Minimising the impacts of pest animals including cats, foxes and wild dogs on native fauna and camels on water sources, native vegetation and cultural sites.
- Minimising the impacts of pest plants, particularly buffel grass, on flora, fauna and cultural sites across the vast plain.
- Providing visitors with a unique Nullarbor parks experience while protecting cultural sites and the fragile environment.
- Providing opportunities for visitors to learn about the special landscape, caves, animals, plants and Mirning people's history and culture so they gain a greater appreciation of and respect for the Nullarbor parks.
- Increasing understanding of and respect for Mirning people, their heritage, and their role in managing the Nullarbor parks.
- Providing for the increasing interest in scientific and recreational exploration of caves while protecting sensitive cultural, geological and biological values.
- Managing fire to protect life, cultural sites, heritage sites such as Koonalda Homestead, and property such as the telecommunications infrastructure, while allowing natural processes to occur.
- Allowing for the maintenance of important communications infrastructure and the nationally significant Trans Australian Railway.
- Providing for mineral and energy resource exploration and extraction rights while minimising the impact on cultural sites and a sensitive and fragile environment.
- Providing scope for commercial tourism businesses to develop new tourism experiences while protecting the parks' natural and cultural values.
- Facilitating opportunities for Mirning people to work on Country.
- Understanding and responding to the effects of climate change on flora and fauna.



## Management themes and priorities

This section of the management plan addresses the most important management issues for the park, focusing on five key themes.

### Theme 1: Maintaining Healthy Country

Mirning people lived harmoniously on Country for thousands of years. When Europeans arrived, the lack of permanent surface water limited the use of the plain for grazing. Freshwater was drawn from underground sources at Koonalda and Nullarbor Stations for sheep. Although grazing by sheep and rabbits has had an impact on the type and structure of vegetation, the parks have protected the area for several decades allowing natural processes to occur. The healthy condition of the parks is due to their remote location and the ongoing care by Mirning people, Far West Coast Aboriginal people and government. To maintain the health of the parks, Mirning people and other Far West Coast Aboriginal people need to be able to care for Country and natural ecological processes need to continue.

The Nullarbor karst system consists of hundreds of caves and rock holes which is considered to be of international significance. The Nullarbor's network of caves were formed during a period when the climate was much wetter. These caves range from small caves close to the surface, to enormous cathedral-like chambers and lake-filled chambers that are much deeper. These spectacular geological formations are important to protect and are inhabited by unusual and endemic fauna which are specially adapted to life in caves.

The plants and animals of the Nullarbor Plain have adapted to the region's extreme climate. However, a changing climate has potential to affect many species. Large and healthy protected area networks such as the Nullarbor parks and adjoining protected areas are particularly important for biodiversity conservation because they are more likely to be resilient, giving species the opportunity to withstand the effects of a changing climate.

Water is a vital part of the system. Mirning people have cultural methods to use the fresh water and ensure it does not become contaminated. There are tracks across the Nullarbor Plain, connecting the water sources that enabled Aboriginal people to traverse the plain. These water sources, such as rock holes and in caves, are also important for the survival of wildlife. Feral animals, such as camels, can use all of the limited water so it is unavailable for native animals. The maintenance of these water sources is crucial to maintaining healthy Country.

The Nullarbor Plain is home to the largest population of wardu (southern hairy-nosed wombat) in Australia. They are listed as near-threatened on the IUCN Red List of Threatened Species (Woinarski and Burbidge 2016) due to the decline in numbers and extent. The Nullarbor parks provide important habitat for wardu as available habitat declines in other areas of its range.

A number of rare or threatened fauna species are found in the parks. The critically endangered plains wanderer has only been recorded in Nullarbor Wilderness Protection Area, but suitable habitat also occurs in Nullarbor Regional Reserve. A recovery plan for this species outlines actions for its conservation (Commonwealth of Australia 2016). The colonies of the nationally vulnerable Australian sea lion at the base of the Bunda Cliffs are significant as one of the few mainland breeding sites for the species. Most of the threats to Australian sea lions are at sea or due to rising sea levels which are managed through the implementation of the recovery plan developed for the species (Commonwealth of Australia 2016). Other native wildlife will be

conserved through the protection of habitat and the management of threats, such as targeted feral predator management.

Some rare or threatened flora are present in the parks including the state-rated rare Nullarbor daisy, nationally and state rated vulnerable needle wattle and the nationally and state rated vulnerable *Microlepidium alatum*. These will be managed through threat abatement, including weed management.

Priority pest plant and animal species need to be managed to minimise the pressure they place on native flora and fauna. Camels graze on native vegetation, whilst cats and foxes prey on native small mammals, reptiles and birds. Weeds can also outcompete native flora, removing habitat and food sources for native fauna. Rabbit populations have reduced significantly since the introduction of Rabbit haemorrhagic disease. However they have the potential to have a major impact in the future if not controlled.

Buffel grass is of particular concern due to its invasive nature, and is actively monitored and managed in the region according to the *South Australian Buffel Grass Strategic Plan 2012-2017* (Biosecurity 2012) and *Alinytjara Wilurara Buffel Grass Operational Strategy* (Tschirner et al. 2012).

Buffel grass, camels, foxes, cats and rabbits need to be controlled to limit their impacts. Targeted management programmes, particularly around rock holes, are necessary.

The Nullarbor parks are relatively flat and largely covered by grasses or low shrubs. The nature of this environment means that it is easy to deviate from official tracks and create new ones. These new tracks

can last for many years, destroying native vegetation and leaving the thin topsoil prone to erosion. Damage to vegetation as a result of illegal off-track vehicle use will continue to be managed by defining tracks and educating visitors.

The telecommunication repeater stations located along the Eyre Highway are provided with access through the parks for maintenance purposes. There is also cabling along the Old Eyre Highway which requires periodic maintenance. The maintenance of this infrastructure can be continued using existing tracks to prevent damage to native vegetation.

Large bushfires in this landscape can pose a threat to people, Aboriginal cultural sites, historic buildings and telecommunications infrastructure. Fire is managed to protect people, cultural sites and property within, and adjacent to the parks. Fire is also natural part of the ecology. For example, some vegetation associations require fire to regenerate and the fresh green pick after a fire can bring native animals, such as marlu (red kangaroo) to the plain. Knowledge about the pre-European fire regimes in this landscape is limited. Fire management will continue to be guided by the *Alinytjara Wilurara (AW) Fire Management Strategy* (Department of Environment, Water and Natural Resources 2014).

Water extraction for mineral sands mining occurs within the Nullarbor Regional Reserve. All mineral and energy resource activities, including water extraction, involve liaison with stakeholders and are managed in accordance with the *Mining Act 1971* and the *Petroleum and Geothermal Energy Act 2000*. Companies are also required to comply with other legislation.

## Objective and strategies

**Protect and conserve the Nullarbor parks' natural values and rich Aboriginal cultural heritage as well as non-Aboriginal heritage.**

- As guided by the *South Australian Buffel Grass Strategic Plan* (Biosecurity 2012) and *Alinytjara Wilurara Buffel Grass Operational Strategy* (Tschirner et al. 2012), monitor and manage buffel grass outbreaks.
- Develop and implement feral predator management programmes at caves and rock holes to allow native fauna populations to recover.
- Monitor and manage camels around sensitive sites through collaboration with regional stakeholders.
- As appropriate, authorise resource exploration and extraction activities and work with mining and energy resource companies to ensure that current and future resource development activities have a minimal impact on the parks cultural, environmental and tourism values.
- Continue to implement the *Alinytjara Wilurara (AW) Fire Management Strategy* (Department of Environment, Water and Natural Resources 2014) for the protection of people, cultural sites and property.
- Encourage research and monitoring that will help to maintain healthy Country, flora, fauna, geology, geomorphology, palaeontology, archaeology and other disciplines. Priorities include gaining a better understanding of threats to threatened species, including the effects of climate change. These activities will be undertaken in collaboration with Mirning and other Far West Coast Aboriginal people.
- Ensure that the conservation requirements of rare or threatened flora and fauna is considered and addressed prior to any infrastructure development in the parks.



## Theme 2: Keeping culture strong

Mirning people are the traditional custodians of the Nullarbor parks and have always held ceremonies, hunted, traded, created artworks and taken care of Country to ensure that it would continue to sustain future generations as it has for thousands of years. Mirning people and other Far West Coast Aboriginal people continue to use and care for the Nullarbor parks in both contemporary and traditional ways.

Co-management of the Nullarbor parks, through the Nullarbor Parks Advisory Committee, aims to build the capacity of both partners to cooperatively manage the parks. It also aims to enable greater involvement of Mirning people in the management of the parks.

Co-management of the parks means that both traditional knowledge and western scientific knowledge is used to manage the parks.

This sharing of knowledge is important for the co-management of the parks to progress. It is also important to protect Aboriginal people's intellectual property rights.

Mirning and other Far West Coast Aboriginal people still use the Nullarbor parks for traditional purposes. Bush meat such as Australian bustard, marlu (red kangaroo), wardu (southern hairy-nosed wombat) and galda (sleepy lizard) are hunted. Aboriginal people pass on their stories and responsibilities for totemic species such as dingo, white-bellied sea eagle and yarda (wedge-tailed eagle). Bush tucker such as boorah (quandong) and bush medicine such as nyoonyoon (*Eremophila* sp.) are collected and used.

***"I grew up on the Nullarbor, helping my father catch dingos and collecting boorah to eat and nyoonyoon to make medicines. Now I am an Elder passing on this knowledge to the next generation."***

Dorcas Miller, Mirning Elder

The use of modern techniques and equipment for hunting, fishing and gathering can affect the sustainability of the species collected. For traditional hunting purposes, the use of four wheel drives and firearms makes it much easier to catch Australian bustards. Far West Coast Aboriginal people are encouraged to minimise their impact on the parks by keeping to designated vehicle tracks and by managing their take through traditional means, whenever possible.

European use of the Nullarbor expanded during the 1860s and 1870s. By 1890 many Mirning people were displaced from the Nullarbor. Tens of thousands of kangaroos were killed for their pelts and rabbit plagues had a severe environmental and economic impact on the area. Droughts affected everyone and all of these combined meant that many Aboriginal people, including Mirning people, stayed at Fowlers Bay where the ration depot provided food. Despite this displacement, Mirning people have maintained their connection to Country.

The health of Country and the health of people are inseparable. The land must be actively taken care of to be healthy. Mirning people and other Far West Coast Aboriginal people need to be able to maintain their cultural sites and pass on their knowledge of how to do this.

Mirning family groups continue to live and work on their Country. The following story is as an example to illustrate this unbreakable connection to Country.

## An unbreakable connection to Country

The diary entries of the European explorers indicate that some of the first contact between Europeans and the Mirning people occurred in the early 1800's. First contact and the resultant displacement had a major impact on the culture, health, welfare and way of life of many Aboriginal people all over South Australia. By the turn of the century, many Mirning people were adapting by assisting European explorers, pioneers, and working on pastoral stations.

Mirning leaders such as William Michael Lawrie were determined to remain on and connected to their Country. William Lawrie, who was better known as Mickey Free Lawrie, was a Mirning man, born at Eucla on 5th November 1868. His Mirning mother, Tjabiltja, came from the Eucla district. Mickey Free grew up on the Nullarbor and spent some of his young adult life around Fowlers Bay. He was well known as a hardworking man; patrolling the dog fence, cutting wood, fencing, kangaroo hunting and rabbiting.

With his knowledge of the Nullarbor, he used a horse and buggy to travel around the Nullarbor with his young family. He assisted European explorers document the existence of some of the well-known Nullarbor caves. In the 1890s he worked in the Denial Bay district for the pioneer settlers, usually as the foreman of an Aboriginal scrub clearing

gang. In 1896 he leased a block of land just south of what became the Koonibba Mission and went kangaroo hunting to supplement his income. It is thought that he was hunting at the time when the Lutherans came looking for a suitable location for their mission. He showed them the country around Koonibba rockhole.

His hunting took him all over the Nullarbor region. In 1903 he was hunting with people from Ooldea, who then went on to attend ceremonies at Denial Bay. In 1912 Mickey Free wrote to the Chief "Protector of the Aboriginals" asking for land to be granted to the hardworking Aboriginal people because of their contribution to the country. He also asked for an English school for their children. Mickey Free was a leader and Elder in the Aboriginal community.

Over the years and to the present day, Mirning people continue to advocate for the protection of their cultural sites and to assert their traditional rights in relation to the Nullarbor. In December 2013, a native title consent determination was handed down by Justice Mansfield at a Federal Court hearing at Lake Pidinga, recognising the Mirning people as traditional owners of the Nullarbor region.

History of Mickey Free Lawrie provided by great-granddaughter April Lawrie with assistance from Mirning Elders.

## Objective and strategies

### Protect and care for cultural sites and enhance Far West Coast Aboriginal people's connection to Country.

- Enable maintenance of connection to Country through cultural activities in the Nullarbor parks.
- Continue to progress the partnership of co-management to enable Mirning people to have greater role in managing the parks.
- In partnership with Mirning and other Far West Coast Aboriginal people, develop a traditional hunting and gathering protocol and establish a process for monitoring species taken to ensure sustainability.
- Incorporate traditional knowledge and skills into research, monitoring and management activities whilst ensuring intellectual property rights are respected.
- Support Mirning people in their management of important cultural sites for cultural and ecological values.
- Facilitate opportunities for involvement of Mirning and other Far West Coast Aboriginal people to work on Country including employment and enterprise.



### Theme 3: Respecting and enjoying Country

The Nullarbor is internationally famous for being a vast, flat and treeless plain. The Nullarbor parks provide a quintessential Nullarbor experience for those that want to camp under the stars with no one else for miles around.

The Nullarbor parks also have some recent historical sites where visitors can learn about the Koonalda sheep station and spend a night or two at Koonalda Homestead (Figure 1). Koonalda Homestead is used by independent travellers and commercial tour operators as a campsite and base to explore the surrounding area, including viewing the opening of Koonalda Cave. This site has become more popular with people creating new spots in the nearby vegetation. To maintain the value of the homestead campsites have been defined and toilets have been installed. The surrounding areas will be protected from further damage so visitors can continue to enjoy the isolation and natural beauty.

The Nullarbor caves hold cultural significance for Mirning people and most can only be entered by certain people. The Murrawijinnie Caves are the only caves in the Nullarbor parks that are open for the public to explore. Improved access into and through these caves would protect the caves and provide a better visitor experience.

There is currently limited interpretive information at key sites such as Koonalda Cave and Murrawijinnie Caves. Improved visitor information, particularly about cultural associations, would enable visitors to gain a greater appreciation of the Nullarbor parks and the culture of the Mirning people.

Scientific research by speleological associations, museums and universities has provided valuable information about the

karst system as well as the human and ecological history of the area. The research is carefully conducted to prevent damage to geological features and Aboriginal heritage. There is some interest from recreational cavers to explore more of the caves. Caving activities will need to be carefully managed to protect cultural sites and the geological and ecological features of the caves. Controls for the management of cave access are set out in Theme 4.

Many visitors stop at one or more of the three lookouts along the Bunda Cliffs to admire the spectacular views and for the chance to observe marine mammals such as Australian sea lions and southern right whales. There are three official lookouts that provide the best viewing opportunities along the cliffs. New directional and interpretive signage will assist visitors in finding official lookouts which provide the best views and opportunities to observe wildlife. Information on the plants, animals, geology and cultural associations can provide visitors with greater appreciation of the special nature of the area.

A number of commercial tour operators offer tourism experiences within the Nullarbor parks, predominantly focussed on the Nullarbor Wilderness Protection Area. The Murrawijinnie Caves, Koonalda Cave entrance, Koonalda Homestead and the spectacular Bunda Cliffs are the most popular sites for these tours. Commercial tour operators are required to have permits to provide tours in the parks. Sustainable, nature-based and wilderness experience tours are encouraged, particularly those that provide an authentic cultural experience with the Mirning and other Far West Coast Aboriginal people.

## Koonalda Station

In the 1930's, the Gurney brothers, Roy and Cyril, made an application to graze sheep on the western portion of the South Australian part of the Nullarbor. However, their application was rejected due to the lack of water. Local Aboriginal people knew that there was water in Koonalda Cave. This knowledge was exploited, leading to approval of a grazing lease. The Gurney brothers got the lease once they proved that they could pump the water out for the stock. Cyril Gurney started building Koonalda Homestead in

1938 using railway sleepers and whatever material he could easily transport there. Cyril and Audrey Gurney brought up their children at Koonalda. They grazed sheep and cattle on the station and sold fuel to passing travellers. They continued to manage the station until the 1970s when it became a national park.

Now Koonalda Homestead is a popular camping area and is co-managed as part of the Nullarbor Wilderness Protection Area.

## Objectives and strategies

**Assist visitors develop a greater appreciation and respect for the Nullarbor parks and the deep cultural connection Mirning people have with their Country.**

**Provide more opportunities for nature-based and cultural tourism, whilst ensuring that the Nullarbor parks continue to provide a unique remote and natural experience.**

- Develop a visitor experience strategy for the Nullarbor parks that:
  - Identifies priority sites for the improvement of presentation to visitors. This will include revegetation, improved signs and rubbish removal.
  - Identifies the location of signage that welcomes visitors to the Country of the Mirning people.
  - Identifies sites that require improved information or interpretation for visitors.
  - Identifies opportunities for investment in tourism enterprises.
  - Sets out strategies for the improvement of vehicle access to sites that have been degraded over time. This may include the rehabilitation of areas that have been degraded through off-track driving.
- Continue to consolidate and maintain visitor access, camping areas and facilities in consultation with the broader community and Far West Coast Aboriginal people.
- Encourage sustainable tourism enterprises that provide tourists with superior visitor experiences, which involve Mirning people.
- Allow for camping at Koonalda Homestead and other areas identified in the visitor experience strategy.

## Theme 4: Conserving caves and features of the karst landscape

The Karst topography of the Nullarbor Plain has been formed by the dissolution of limestone. The caves and other karst features that have resulted from this process are a major feature of the Nullarbor Plain - the largest semi-arid karst region in the world.

Archaeological research conducted in several of the Nullarbor caves shows that these sites have had special significance for Aboriginal people for at least 39,000 years. Many of the karst features of the Nullarbor Plain and the processes that formed them have been well studied. Scientific specialists in geomorphology, geology, archaeology, speleology and palaeontology have explored the caves over many years, documented their values and advocated for their protection (Dunkley & Wigley; Lowry & Jennings; Webb & James; Davey & Spate).

The Australasian Cave and Karst Management Association, palaeontologists, the Australian Speleological Federation, other groups representing speleological researchers, cave explorers, and cave divers from South Australia and Western Australia have each had a long association with the Nullarbor caves. Management of cave and karst within the Nullarbor parks will draw on best practice guidelines (Watson et al. 1997) and the collective knowledge of specialists.

While the continuation of research is essential, all forms of cave access require careful management to ensure that the sensitive features of caves are not incrementally damaged. Access to caves in parks and wilderness protection areas is not allowed unless specifically authorised. Permits with conditions may be used to authorise access for research, exploration or tourism. Caves that are not sensitive to disturbance from visitation and have safe and sustainable access in place may be suitable for public access. Others are highly sensitive and/or very significant to Aboriginal

people such as the Mirning. These may be unsuitable for access or only suitable for a limited level of access for special purposes such as research.

Further investigation in conjunction with specialists is necessary to determine the values and potential threats to each cave. Once this is complete, an appropriate level of access within each cave will be defined by establishing a zoning plan. It is intended that each section of each cave will progressively be classified as one or more of the zones described in Table 1 below.

Murrawijinie caves and Koonalda cave are known to the public and have been visited for many years. A review of their values and strategies for their protection were identified in 2003 (Eberhard & McBeath). Due to their close proximity to the Eyre Highway and the Nullarbor Hotel, Murrawijinie caves has been a visitor destination for many years. These are the only caves that are currently open to the public for a self-guided experience. Some improvements to access, delineation of walking routes, and basic interpretation is needed at this site.

Koonalda cave is a place of outstanding heritage value to Australia and is listed as a national heritage place. The cave contains extraordinary art and archaeology. It is of great importance for its contribution to the history of Aboriginal occupation and is of particular significance for the Mirning people. Due to its sensitivity, Koonalda Cave is not suitable for self-guided visitation, however access to the cave for guided tours could be considered subject to Aboriginal heritage approvals and protocols. A short walk and a lookout over the Koonalda Cave doline could be developed to provide an experience for car-based visitors passing through the region.

Table 1

	Public access Zone	Controlled access zone	Limited Access Zone	Special Management Zone	Dangerous Zone	Unclassified Zone
Purpose	To appropriately present and interpret outstanding underground scenery and natural and cultural values in a manner that ensures their protection.	To provide opportunity for cave-based activities in a manner that ensures the protection and conservation of the cave environment and their natural and cultural values.	To protect and conserve sensitive cave environments and their natural and cultural features considered to be of outstanding scientific, conservation, educational or aesthetic value.	To protect and conserve sensitive cave environments and their natural and cultural features and to provide a baseline for scientific reference and/or monitoring.	Ensure human health and wellbeing where caves and karst features present high to extreme risks.	To protect and conserve cave environments and their natural and cultural values, and to provide opportunity for appropriate investigation, documentation and management of such features.
Appropriate activities	Self-guided tours, guided tours <sup>2</sup> , cave exploration and research <sup>1</sup> .	Guided tours <sup>2</sup> , cave exploration <sup>3</sup> and research <sup>1</sup> .	Research <sup>1</sup> .	Research <sup>1</sup> .	No access	No access without written permission

<sup>1</sup> Research permit required

<sup>2</sup> Commercial tour operator licence required

<sup>3</sup> Written permission required



## Objective and strategies

Conserve cave and features of the karst landscape, provide appropriate access and provide visitors with an opportunity to learn about the caves and their special significance

- Liaise with Mirning and other Far West Coast Aboriginal people, researchers and cave enthusiasts to initiate knowledge sharing and the development of a cave zoning plan. Progress the classification and conservation of known caves through a partnership between scientists and the Nullarbor Parks Advisory Committee.
- Encourage scientific research that improves understanding of the values and threats to caves. In the event of a Notifiable Act (as per native title legislation), ensure that any access is authorised via permit and approved as appropriate by the Far West Coast Aboriginal Corporation.
- Once classified, manage caves in accordance with conservation plans and the park cave zoning plan.
- Investigate opportunities to improve safety and the self-guided visitor experience at Murrawijinie caves.
- Protect, and if appropriate, provide opportunities for people to experience Koonalda Cave through the following priority actions:
  - Improve site security and monitor the impacts of any visitation to Koonalda Cave.
  - Investigate the opportunity to provide guided access into approved sections of the cave.
  - Investigate opportunities to develop a self-guided experience of the Koonalda cave and homestead precinct (without cave access).
  - Investigate the feasibility of nominating Koonalda Cave for listing as a world heritage site.
  - Realign access tracks and revegetate degraded areas around the cave and homestead.



## Theme 5: Nullarbor Wilderness Protection Area Visitor Management Strategy

The Nullarbor Wilderness Protection Area has been used wisely, and managed carefully, by the Mirning and other Far West Coast Aboriginal people. It is one of Australia's largest unmodified areas, and has retained its natural character. For these reasons, it meets the international criteria for classification as wilderness.

In South Australia, wilderness protection areas are managed according to the *South Australian Code of Management for Wilderness Protection Areas and Zones* (DEH 2004). This code guides the management of wilderness protection areas and requires a visitor management strategy to be included in any management plan.

Resource exploration and development is not allowed in wilderness protection areas. Any major alteration to the landscape such as the spread of pest plants, the construction of obvious visitor facilities or the development of vehicle tracks has potential to diminish wilderness qualities. Facilities for visitors within the Wilderness Protection Area are very minimal however more people are now visiting and camping within the Wilderness Protection Area.

The development of some low-key facilities at several sites is needed to ensure that visitors are safe, self-sufficient and aware of how they can avoid impacting on Aboriginal cultural features and sensitive vegetation. This work will be carefully planned to ensure that the remote and natural qualities of the Nullarbor Wilderness Protection Area are not lost.



## Objective and strategies

Maintain the remote and natural qualities of the Nullarbor Wilderness Protection Area.

- Rehabilitate areas that have been degraded through off-track driving.
- Install signs at the Nullarbor and Border Village roadhouses and replace some existing signs with visitor facilities information and interpretive material about the cultural and natural values.
- Provide for self-sufficient camping at Koonalda Homestead and other sites identified in the visitor experience strategy via the online booking system.
- Make information available to visitors and the local community to encourage awareness of wilderness values, adoption of minimal impact practices, and awareness of appropriate activities.
- Approve commercial tourism proposals that are consistent with the *Wilderness Protection Regulations 2006*, the principles contained in the *South Australian Code of Management for Wilderness Protection Areas and Zones* (DEH 2004) and the requirements of the *Minimum Impact Code for Wilderness Use in South Australia* (DEH 2006).
- Periodically assess the impact of visitor activities on wilderness values within the Wilderness Protection Area with a particular focus on Koonalda Cave, the Bunda Cliffs and Murrawijinie Caves.
- Implement strategies that are consistent with the *South Australian Code of Management for Wilderness Protection Areas and Zones* (DEH 2004) to address any emerging impacts arising from visitor activities.

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# Appendix 1 - Rare or threatened flora

Flora Species	Common Name	Conservation Status	
		EPBC Act Cwlth <sup>1</sup>	NPW Act SA <sup>2</sup>
<i>Acacia carneorum</i>	Needle Wattle	V	V
<i>Acacia erinacea</i>	Prickly Wattle		R
<i>Acacia mutabilis ssp. angustifolia</i>			R
<i>Brachyscome tatei</i>	Nullarbor Daisy		R
<i>Eremophila hillii</i>	Hill's Emubush		R
<i>Eremophila parvifolia ssp. parvifolia</i>	Small-leaf Emubush		R
<i>Eucalyptus diversifolia ssp. hesperia</i>	Coastal White Mallee		R
<i>Gratwickia monochaeta</i>			R
<i>Leiocarpa pluriseta</i>			R
<i>Lepidium pseudoruderale</i>			R
<i>Microlepidium alatum</i>		V	V
<i>Phlegmatospermum richardsii</i>	Nullarbor Cress		V
<i>Poa drummondiana</i>	Knotted Poa		R
<i>Pomaderris forrestiana</i>			R
<i>Ptilotus symonii</i>			R
<i>Santalum spicatum</i>	Sandalwood		V
<i>Sarcozona bicarinata</i>	Ridged Noon-flower		V
<i>Spyridium tricolor</i>	Rusty Spyridium		V
<i>Teucrium grandiusculum ssp. pilosum</i>			E

<sup>1</sup> Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)

<sup>2</sup> National Parks and Wildlife Act 1972 (South Australia)

E - Endangered

V - Vulnerable

R - Rare

## Appendix 2 - Rare or threatened fauna

Fauna Species	Common Name	Conservation Status	
		EPBC Act Cwlth <sup>1</sup>	NPW Act SA <sup>2</sup>
<i>Acanthiza iredalei</i>	Slender-billed Thornbill (western)		R
<i>Ardeotis australis</i>	Australian Bustard		V
<i>Arenaria interpres</i>	Ruddy Turnstone		R
<i>Burhinus grallarius</i>	Bush Stonecurlew		R
<i>Coturnix ypsilophora</i>	Brown Quail		V
<i>Ctenophorus maculatus</i>	Spotted Dragon		R
<i>Falco peregrinus</i>	Peregrine Falcon		R
<i>Haematopus longirostris</i>	(Australian) Pied Oystercatcher		R
<i>Leporillus conditor</i>	Greater Stick-nest Rat	V	V
<i>Lerista arenicola</i>	Beach Slider		R
<i>Lerista baynesi</i>	Speckled Slider		R
<i>Lichenostomus cratitius occidentalis</i>	Purple-gaped Honeyeater (mainland SA)		R
<i>Lichmera indistincta</i>	Brown Honeyeater		R
<i>Lophochroa leadbeateri mollis</i>	Major Mitchell's Cockatoo		R
<i>Lophoictinia isura</i>	Square-tailed Kite		E
<i>Morelia spilota</i>	Carpet Python		R
<i>Neophoca cinerea</i>	Australian Sea Lion	V	V
<i>Northiella narethae</i>	Naretha Bluebonnet		R
<i>Pedionomus torquatus</i>	Plains-wanderer	CR	E
<i>Turnix varius</i>	Painted Buttonquail		R

<sup>1</sup> Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)

<sup>2</sup> National Parks and Wildlife Act 1972 (South Australia)

CR – Critically endangered

E - Endangered

V - Vulnerable

R - Rare

## For further information please contact

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