

Witjira Waru Management

Pulka (Fire) Strategy 2018-2028

Waru Pulka means big fire

The Witjira National Park

Witjira was proclaimed a National Park in 1985 under section 43 of the *National Parks and Wildlife Act 1972* to protect Australia's largest array of artesian springs, the nationally significant Dalhousie Mound Springs complex (Figure 1). At over 768 850 hectares in size the park also conserves relatively pristine areas of gibber and sandy country, river floodplains, and floodouts (DEH 2009).

The determination of Native Title rights in 2008 for the Lower Southern Arrernte and Wangkangurru people and the declaration of the Witjira National Park Co-management Board formally represents the importance and cultural connectivity to this Country.

This *Waru Pulka* (Fire) Management Strategy was prepared for the Witjira National Park Co-management Board, as recommended in the Witjira National Park Management Plan (DEH 2009). This Strategy identifies:

- natural, built, and cultural heritage values, assets and objects vulnerable to inappropriate fire regimes or damage by fire;
- a framework for the management of bushfire suppression, including the identification of fire management zones and potential strategic access and control lines (as shown on DEW's Fire Management Maps);
- fire management strategies, including prescribed burning, to protect or maintain natural, built, and cultural assets, values, and practices; and
- opportunities to explore and implement Aboriginal Cultural Knowledge and fire management methods for ecological management and fuel reduction purposes, and maintaining connection to Country.

Cultural significance

The Witjira National Park (Witjira NP) holds significant cultural value to both the Lower Southern Arrernte people, the Wangkangurru people, and community, and adjoining Aboriginal nations through associated sites and story lines. With over 100 sites and places at Witjira NP that are documented in the Register of Aboriginal Sites and Objects under the *Aboriginal Heritage Act 1988*, it is the highest reported concentration of cultural heritage in central Australia.

The Lower Southern Arrernte and Wangkangurru people place a high value on their lands and view it as a significant cultural asset through which to practice and learn about their culture. Altyerre (cultural lore and customs) and its relationship to the land are the foundations of Aboriginal culture. The Dalhousie Mound Springs complex is of particular significance to the Traditional Owners, as many stories are associated with, or pass through the springs.

The Homelands, in the north east of the park, is the most culturally significant area within the park. There is no public access to this area. This dedicated area enables Traditional Owners to live on Country.

This area also represents the area of highest overall fuel hazard across the park, which significantly increases after big rains. The 2014 Homelands bushfire (*waru pulka*) came close to burning two homes and burnt approximately 950 hectares of the park.

The Dalhousie Mound Springs complex, Homelands, the Finke River and Floodout, and Spinifex (Awilura) Country across Witjira NP, provide a diversity of flora, fauna, and natural resources for the Lower Southern Arrernte and Wangkangurru people.

With the contrast in landscape features across Witjira NP, an immense array of species are utilised for food, fibre, or medicine. A better understanding of these species and their use by Aboriginal nations can offer important understandings for environmental and cultural management.

This Fire Management Strategy seeks to be a teaching resource about culture and land and will assist and facilitate the Witjira NP Co-management Board, the Lower Southern Arrernte, and Wangkangurru people utilise fire in managing their Country and practicing culture.

Post-contact heritage and culture

Witjira NP also contains sites of non-Aboriginal importance including Dalhousie homestead ruins and European relics. Dalhousie Springs is also an important tourist sight promoting public use and enjoyment of the park whilst minimising the impact on cultural and European sites, mound springs, and the surrounding environment.

Travel and camping at several sites across Witjira NP is common place and management of fuel loads around these camping sites is necessary, particularly after significant rainfall.

The importance of fire

Cultural burning and a land management tool

Cultural burning is an important part of caring for Country and describes the burning practices developed by Aboriginal nations, used to enhance the health of the land and its people. Cultural burning can include burning (or prevention of burning) for the health of particular plants, animals, and Country. It may involve patch burning to create different fire intervals or used specifically for fuel and hazard reduction purposes. Fire may be used to gain better access to Country, to clean up important pathways, or to maintain cultural responsibilities.

This strategy supports the intergenerational transfer of Traditional Ecological Knowledge, which can be facilitated and supported through cultural burning practices. Where possible, employment and capacity building opportunities will be investigated and utilised.

Aboriginal burning techniques are being more widely regarded as a key management tool; highly valuable in the maintenance and enhancement of biodiversity values. Within the Witjira NP lands many native species have adapted to fire for a variety of reasons.

The Common Reed (*Phragmites australis*) regenerates vigorously post fire. Its rapid growth contributes to large volume of biomass and organic material that build up and can block spring vents and tails. Incorporating traditional fire management practices such as burning the Common Reed helps to remove this build-up of biomass and organic matter. This maintains a diversity of aquatic habitat types such as open water, closed flowing channels, and mixed shallow cool water, ensuring that the endemic fish found in the mound springs thrive (DEWNR 2017b).

While little is known about the historical fire regimes of Witjira NP, management and use of the mound springs by Traditional Owners involved regular burning of dead reeds that clogged spring waterholes and restricted access to water (DEH 2009). Spring vents and tails are well suited to cultural burning practices, which can in turn create a mosaic of fire age classes, providing valuable refuges for important plants and animals. Re-introducing cultural fire practices to open up and restore the balance to these sites is essential. Given the isolated nature of Witjira NP and the number of threatened and culturally significant species reliant on the health of the Dalhousie Mound Springs environmental processes, re-introducing cultural fire practices is essential to restoring the balance to these sites.

Cultural burning across the Finke River floodplains and floodouts, and Spinifex (Awilura) Country is also important for cultural and environmental management. There are many similarities and differences between Lower Southern Arrernte and Wangkangurru and western ecological knowledge; to ensure a successful relationship, all parties need to acknowledge and consider these respectfully. There should be an emphasis on encouraging the retention of Cultural Knowledge by Lower Southern Arrernte and Wangkangurru people and to develop and maintain sincere relationships with people and their land. This strategy aims to provide high level guidance along with DEW Fire Management Zoning (DEWNR 2017) to assist and facilitate the Witjira NP Co-management Board and the Lower Southern Arrernte and Wangkangurru people to utilise fire in managing Country.

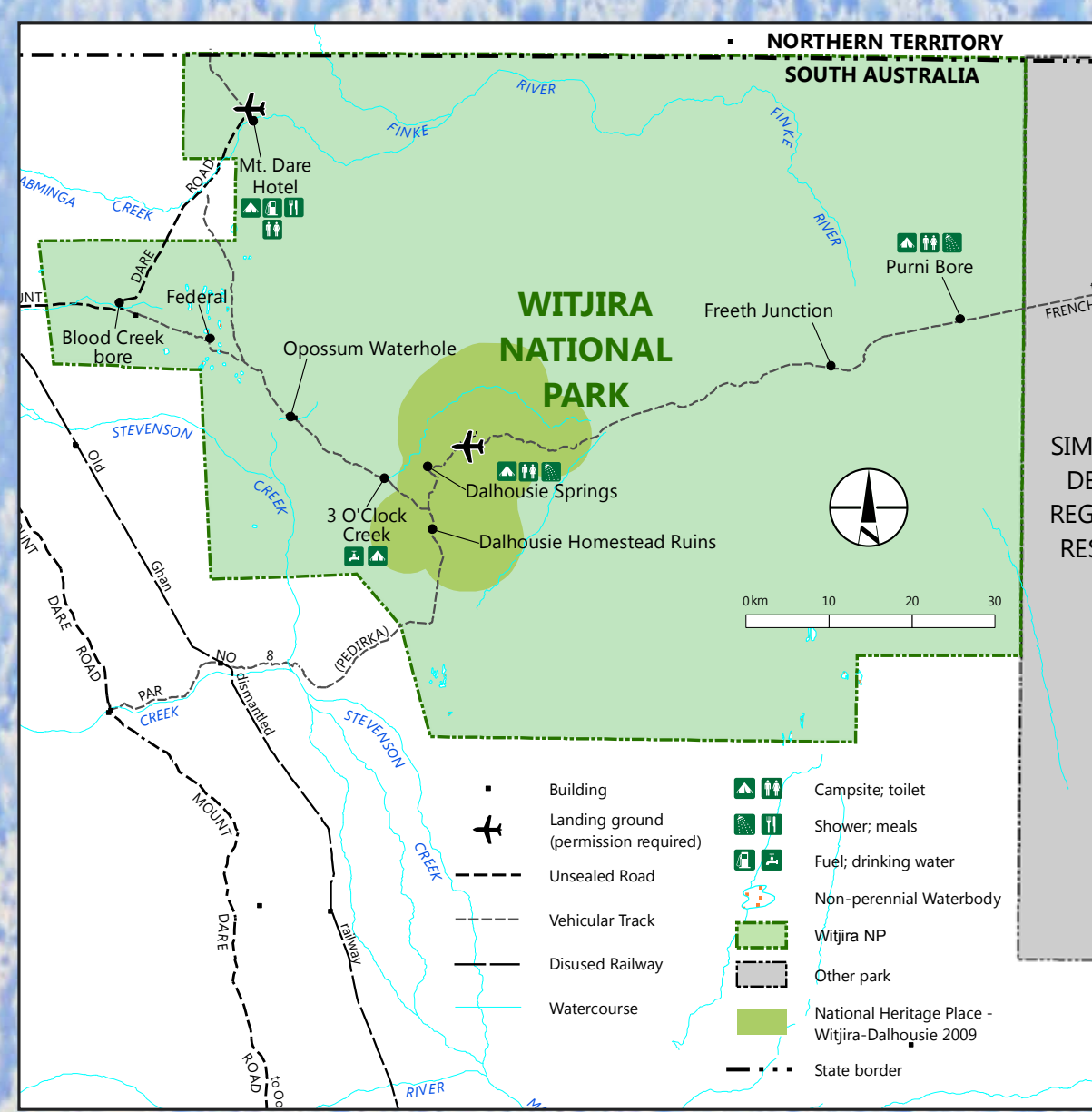


Figure 1: Witjira National Park Location Map



Biodiversity significance

Witjira NP contains a nationally significant assemblage of biodiversity including:

- Dalhousie Springs and Australia's largest array of Great Artesian Basin (GAB) artesian springs, which provides habitat for at least 16 endemic species, 28 threatened fauna species, 21 threatened flora species (out of a total of over 543 vascular plant species), and one threatened ecological community;
- the greatest diversity of habitat in the northern part of the SAAL NRM Region (with over 569 species documented within and adjacent Witjira NP); and
- large areas of arid mallee, chenopod and GAB spring ecosystems and extensive areas of pristine condition native vegetation with no environmental weeds.

This strategy recognises the significance of government legislation, guidelines, and actions prescribed by agencies and organisations to protect and enhance the natural and cultural values of this Country, including threatened species, endangered ecological communities, and Aboriginal and non-Aboriginal cultural values and assets. This plan also recognises the importance of adaptive management and actions that are informed by ongoing monitoring and observation of the land.

The fire response of many of the significant and endemic species are data deficient and further research is required to understand suitable fire management regimes. Following an adaptive management framework will inform appropriate fire regimes and management strategies for significant species and ecological communities.

Culturally significant species

Culturally significant species within Witjira NP include the following:

- Dingo (*Canis lupus dingoi*)
- Kangaroo (*Macropus rufus*)
- Perentie (*Varanus giganteus*)
- Goanna (*Varanus gouldii*)
- Australian Bustard (*Ardeotis australis*)
- Emu (*Dromaius novaehollandiae*)
- Mosquito (*Culicidae* spp)
- Medicine Bush/Native Fuchsia (*Eremophila freelingii*)
- Wild Tobacco (*Nicotiana benthamiana*)
- Dalhousie Catfish (*Neosilurus gloveri*)
- Dalhousie Goby (*Chlamydogobius gloveri*)
- Dalhousie Purple-spotted Gudgeon (*Mogurnda thermophila*)
- Dalhousie Yabbyie (*Cherax albidus*)
- Spangled Perch (*Leiopotherapon unicolor*)
- Grass Owl (*Tyto longimembris*)
- Red Mulga (*Acacia cyperophylla*).
- Sea-heath (*Frankenia* sp)
- Bush Tomato (*Solanum* sp)
- Desert Paperbark (*Melaleuca glomerata*)
- Ruby Saltbush (*Encalypta tomentosa*)
- Wild Onions (*Cyperus bulbosus*)
- Kingfisher (*Todiramphus* sp.)

Many of these species rely on the health of the Dalhousie Mound Springs complex. Appropriate cultural management of the springs will benefit these culturally significant species, which are important to the Lower Southern Arrernte and Wangkangurru people as they are attached to story lines.

Abundant and pest species

A number of abundant and introduced species occur within the Witjira NP. Date Palms (*Phoenix dactylifera*) were planted at some of the mound springs in 1899 by early settlers and now pose a threat to the ecology of the mound springs. The Date Palm is an aggressive invader of wetland habitats as it can grow in high densities, forming a continuous and dense canopy, which effectively blocks light from plants beneath and its roots form a dense mat that is both extensive and invasive.

The native yet overly abundant Common Reed (*Phragmites australis*) threatens the mound springs as it grows quickly and forms a dense mat, choking out other plants (DEWNR 2017b). Buffel Grass (*Cenchrus ciliaris*) also poses a significant risk to the region. It can directly affect native floral diversity and composition, and threatens flora and fauna communities that are not adapted to fire (SAAL NRM Board 2009), by carrying fire into areas where it is not normally part of the ecosystem, and increasing the intensity and frequency of natural fire regimes (SAAL NRM Board 2010).

Fire contributes to the management of abundant and pest species, complementing other management techniques to reduce the impacts on endemic and native species. Fire is already used to assist the Witjira NP Co-management Board in the removal of Date Palm stands from around Dalhousie. This has shown that with careful planning and through a cooperative approach by the Witjira NP Co-management Board, the Lower Southern Arrernte, and the Wangkangurru people, successful outcomes can be achieved.

Ecological-cultural monitoring

Monitoring will be conducted in areas impacted by fire to improve knowledge about the response of species and their habitats, and ecological communities within Witjira NP. Where possible Traditional Owners will be involved in monitoring activities. The results from post-fire monitoring will be used to further refine fire management, consistent with an adaptive management approach.

Legislative requirements

This Strategy adheres to the legislative requirements of the *National Parks and Wildlife Act 1972*, the *Fire and Emergency Services Act 2005*, DEW's *Fire Policy and Procedures Manual* (DEWNR 2017) and other relevant State and Federal legislation.

Fire management strategies

The following fire management strategies will guide fire activities across the Witjira National Park:

- Support and develop cultural burning aspirations
- Develop Ecological Fire Management Strategies for:
 - the Great Artesian Basin Springs
 - Spinifex (Awilura) Country
 - the Homelands and Finke Floodout
- Maintain fire access tracks as per the GAFM (GAFMWG 2014) guidelines to provide a strategic fire access and egress network for fire suppression
- Implement and manage all fire management zoning in accordance with the DEW Policy and Procedures Manual (DEWNR 2017).

Fire management works and activities are to be implemented over the life of this strategy and are consistent with the above Fire Management Strategies. These can be found on the back of this poster in Appendix 1: Recommended Works.

Message from the Board

Witjira National Park is the traditional land of the Wangkangurru and Lower Southern Arrernte people.

We will always value the land, water, plants and animals.

We're working together to holistically maintain, protect and preserve the park for the betterment of all people, now and into the future.

This is our Country, our responsibility, so please help us to look after the place.

Witjira National Park Co-management Board, September 2016

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Artwork

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