

Department for Environment and Heritage
Management Plan



Brookfield Conservation Park
2005



Government
of South Australia

OUR PARKS, OUR HERITAGE, OUR LEGACY

Cultural richness and diversity are the hallmarks of a great society. It is these qualities that are basic to our humanity. They are the foundation of our value systems and drive our quest for purpose and contentment.

Cultural richness embodies morality, spiritual well-being, the rule of law, reverence for life, human achievement, creativity and talent, options for choice, a sense of belonging, personal worth and an acceptance of responsibility for the future.

Biological richness and diversity are, in turn, important to cultural richness and communities of people. When a community ceases to value and protect its natural landscapes, it erodes the richness and wholeness of its cultural foundation.

In South Australia, we are privileged to have a network of parks, reserves and protected areas that continue to serve as benchmarks against which we can measure progress and change brought about by our society. They are storehouses of nature's rich diversity, standing as precious biological and cultural treasures. It is important to realise that survival of species in 'island' reserves surrounded by agriculture or urban areas is uncertain, and that habitat links between reserves are essential for their long-term value as storehouses.

As a result of more than a century of conserving nature and cultural items, we possess a "legacy" which is worth passing on to future generations.

There are twelve essentials for the protection of our park environments:

- Recognition that a primary purpose of our national parks system is to conserve the wide diversity of South Australia's native plants and animals and to improve their chances of survival through active wildlife management.
- Recognition that all our parks also protect cultural legacy of relevance to both Indigenous and Non-indigenous people, and that Indigenous people have had cultural association with this land over many thousands of years.
- Freedom to improve our legacy by making additions to the park system -- enhancing existing protected areas and including landscapes and environments containing native plant and animal communities not already protected.
- Realisation that the continuance of our native species cannot be dependent upon island reserves alone but should be provided for in a regional landscape with linkages between natural areas to enhance the prospect of long-term survival.
- Recognition that there is potential for new and useful substances or genetic material to be found in native plant and animals.
- Recognition of economic and social benefits for local communities, which arise from the presence of national parks in their region and the consequent opportunities to offer service for visitors.
- Development of close relationships with the community, so that there is an understanding of the role of parks in conserving native wildlife, cultural items and in providing recreational opportunities.
- Promotion of community participation in making decisions on the management of parks, so that a sense of community ownership of the reserve system may be fostered, and so that parks and surrounding landscapes are managed in harmony.
- Appreciation that those qualities presented to visitors for their use and enjoyment in parks, should be the diversity of plants, animals and landscapes for which the parks were set aside.
- Understanding that development in a park should proceed where it:
 - contributes to the conservation of the environment;
 - provides for better appreciation of the need to conserve the diversity of plants and animals;
 - protects wildlife habitats and landscape (especially vulnerable and threatened species or communities); and
 - is necessary for management of the park.
- Reassurance, in support of our cultural character, that natural areas can survive even though those who care deeply for their survival may never visit them.
- Provision of valued natural areas for people to be at one with nature and for personal and spiritual refreshment.

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This plan of management has been prepared and adopted in pursuance of section 38 of the *National Parks and Wildlife Act 1972*.



Government of South Australia

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FOREWORD

Brookfield Conservation Park (5,534 hectares) has a high conservation value as it forms an integral part of a major area of mallee vegetation extending from Swan Reach to Morgan, and joining with the riparian vegetation along the River Murray at some points. The park is home to a number of nationally, state and regionally threatened flora and fauna, including the nationally endangered *Dodonaea subglandulifera* and vulnerable Malleefowl.

The park was originally purchased by the Chicago Zoological Society in 1971, for the conservation of the Southern Hairy-nosed Wombat, and was named the Brookfield Zoo Wombat Reserve. In 1977, faced with rising costs, the Chicago Zoological Society offered the reserve as a gift to the Government of South Australia. Proclamation of Brookfield Conservation Park occurred in 1978.

Since its proclamation, Brookfield Conservation Park has remained an important location for ongoing research into the biology of the Southern Hairy-nosed Wombat. However, in more recent times, the function of the reserve has changed from being primarily a research facility to the broader objectives of a Conservation Park. The management objectives of this plan complement these broader objectives, by addressing conservation of the ecosystem while still supporting research in the reserve.

Many people have contributed to the development of this plan of management. Their interest and helpful suggestions are greatly acknowledged.

I now formally adopt the plan of management for Brookfield Conservation Park under the provisions of section 38 of the *National Parks and Wildlife Act 1972*. I encourage you to read the plan and visit and enjoy this exceptional park.



JOHN HILL

MINISTER FOR ENVIRONMENT AND CONSERVATION



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1 INTRODUCTION

This management plan has been prepared in accordance with the *National Parks and Wildlife Act 1972*.

Section 38 of the Act states that a management plan is required for each reserve. A management plan should set forth proposals in relation to the management and improvement of the reserve and the methods by which it is intended to accomplish the objectives of the Act in relation to that reserve.

2 LEGISLATIVE FRAMEWORK

2.1 National Parks and Wildlife Act 1972

Reserves are managed by the Director of National Parks and Wildlife subject to any direction by the Minister for Environment and Conservation or the Chief Executive of the Department for Environment and Heritage (DEH). When managing reserves, the Director is required under section 37 of the *National Parks and Wildlife Act 1972* to have regard to, and provide actions that are consistent with the following objectives of management stated in the Act:

- preservation and management of wildlife;
- preservation of historic sites, objects and structures of historic or scientific interest within reserves;
- preservation of features of geographical, natural or scenic interest;
- destruction of dangerous weeds and the eradication or control of noxious weeds and exotic plants;
- control of vermin and exotic animals;
- control and eradication of disease of animals and vegetation;
- prevention and suppression of bush fires and other hazards;
- encouragement of public use and enjoyment of reserves and education in, and a proper understanding and recognition of, their purpose and significance;
- generally, the promotion of the public interest;
- insofar as a reserve is located wholly or partly within the Murray-Darling Basin, the promotion of the objects of the *River Murray Act 2003* and the *Objectives for a Healthy River Murray* under the Act; and
- preservation and protection of Aboriginal sites, features, objects and structures of spiritual or cultural significance within reserves.

Section 38 of the Act states that a management plan is required for each reserve. A management plan should set forth proposals in relation to the management and improvement of the reserve and the methods by which it is intended to accomplish the objectives of the Act in relation to that reserve.

DEH is responsible for preparing management plans and undertaking the prescribed community consultation process for the park. A standard management planning process is mandated, to ensure that all statutory obligations are met. Help and guidance with plan preparation is sought and obtained from individuals, community groups or relevant advisory committees, although ultimately the decision on whether or not to adopt a management plan remains a ministerial prerogative.

The draft plan for Brookfield Conservation Park was released for public exhibition in August 2004. At the close of the comment period, two written submissions were received, raising issues regarding camping, walking trails and acknowledging the dedication of the Friends of Brookfield to the park. All comments and concerns were considered by the Murraylands Consultative Committee and forwarded to the South Australian National Parks and Wildlife Council for review and endorsement before the plan was presented to the Minister for adoption.

In accordance with the Act, the provisions of this management plan must be carried out and no actions undertaken unless they are in accordance with this plan. In order to achieve this, each year park managers, taking regional and district priorities into account, draw up work programs to implement some of the strategies proposed in management plans. Implementation of these projects is determined by, and subject to, the availability of resources (eg staffing and funding).

2.2 Native Title Act 1993

Native Title describes the rights and interests Aboriginal and Torres Strait Islander People have in land and waters according to their traditional laws and customs. Commonwealth legislation, in the form of the *Native Title Act 1993* was enacted to:

- provide for the recognition and protection of native title;
- establish ways in which future dealings affecting native title may proceed and to set standards for those dealings;
- establish a mechanism for determining claims to native title; and
- provide for, or permit, the validation of past acts, and intermediate period acts, invalidated because of the existence of native title.

This management plan is released, and will be adopted, subject to any native title rights and interests that may continue to exist in relation to the land and/or waters. Before undertaking any acts that might affect native title, DEH will follow the relevant provisions of the *Native Title Act 1993*.

2.3 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) establishes a Commonwealth approval process for assessment of proposed actions that are likely to have a significant impact on matters of national environmental significance.

With regard to Brookfield Conservation Park, two nationally threatened species, the nationally vulnerable Malleefowl bird (*Leipoa ocellata*) and the nationally endangered plant *Dodonaea subglandulifera* occur within the park. Commonwealth approval is required for any action that has, will have, or is likely to have, a significant impact on these nationally threatened species in addition to any State approval that may be required.

Furthermore, in consultation with relevant State authorities, the Commonwealth Minister for the Environment and Heritage may develop and implement recovery plans and threat abatement plans for threatened species and ecological communities listed under the EPBC Act. Where applicable, DEH will contribute to, and incorporate actions from, these plans into park management regimes and operational procedures.

3 MANAGEMENT CONTEXT

3.1 Purpose of Reserve

Brookfield Conservation Park was originally purchased by the Chicago Zoological Society in 1971. The objectives of this purchase were:

- to provide a permanent refuge for the Southern Hairy-nosed Wombat (*Lasiorchinus latifrons*);
- to provide an area where study of the biology of the wombat could be encouraged and undertaken;
- to provide an area for research into the conservation and/or restoration of the various habitats and their associated flora and fauna that existed in this semi-arid zone before the influence of white settlement;
- to provide an area where changes associated with the removal of pastoral land use could be studied, including regeneration of flora, weed control, rabbit control, etc., after removal of stock; and
- to provide an area where the operation and impact of the foregoing could be seen and/or studied by members of the public, especially students and others with a relevant interest.

Following the transfer of the reserve to the Government of South Australia and the proclamation of Brookfield Conservation Park in 1978, the reserve continues to be managed for the conservation of and research into the Southern Hairy-nosed Wombat and its environment.

3.2 Location and Park Features

Brookfield Conservation Park is located 100 kilometres northeast of Adelaide, north of the Sturt Highway (Highway 20) and 11 kilometres west of Blanchetown (Figure 1). It covers an area of 5,534 hectares and comprises the following Sections in County Eyre, Hundred of Skurray: 8, 45, 46, 47, 48, 56, 57, 58, 59, 60, 61, 72, 73, 74, 75, 76, 77, 78, 79, 183, 184, 185, 186, 187, 188, 189, 190, 191 and 192.

Brookfield Conservation Park has been a research field site since the early 1970s. Two thirds of the park is closed to the public, as it is set aside for long and short-term scientific research programs.

3.2.1 Climate

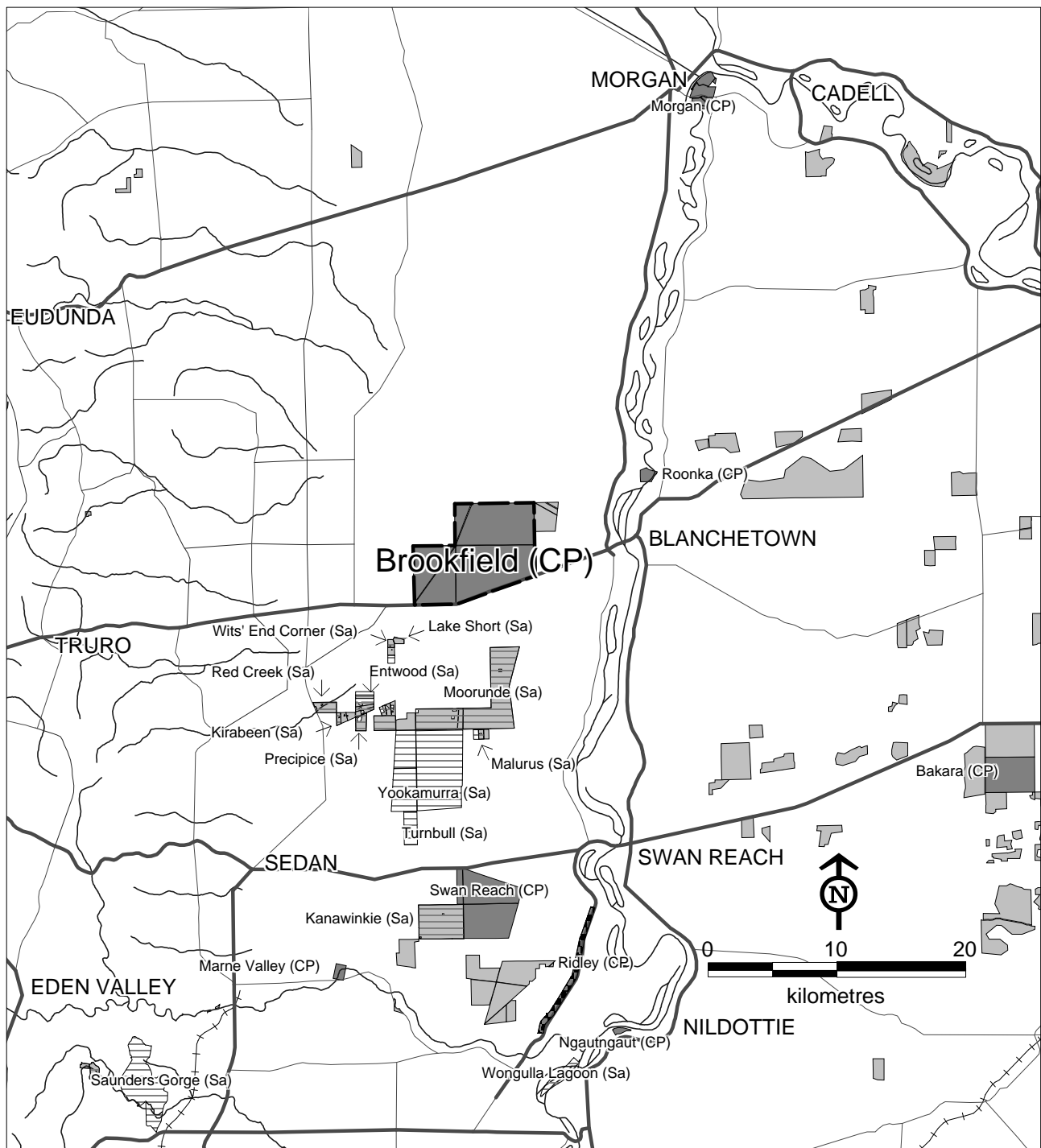
Situated in the rain-shadow of the Mount Lofty Ranges, the park is on the fringe of the arid zone in South Australia. The area is hot and dry during summer and cold and wet during winter. Average maximum temperature for January is 32.8°C and the minimum 15.2°C. The lowest monthly average maximum occurs in July (16.2°C) with an average minimum of 5.3°C. The highest recorded temperature is 46.5°C and the lowest -1.7°C. Annual rainfall at nearby Blanchetown is low, averaging 248 mm, and varying from 150 to 550 mm per year.





3.3 Regional Setting

Brookfield Conservation Park is located in the South Australian Murray-Darling Basin. The mallee zone occupies most of the Murray-Darling Basin, displaying a moderate representation of rare and threatened plants at all levels (Lang and Kraehenbuehl, 1989).

Other National Parks and Wildlife Act reserves in the vicinity include Roonka, Swan Reach, Marne Valley, Ridley, Ngautngaut and Morgan Conservation Parks.

The Interim Biogeographic Regionalisation of Australia (IBRA) provides a bioregional planning framework within which to identify the gaps and to set priorities for developing the National Reserve System. IBRA regions represent a landscape-based approach to classifying the land surface from a range of continental data on environmental attributes.



-  Brookfield CP
-  DEH Reserve
-  Sanctuary (Sa)
-  Heritage Agreement





-  Main Road
-  Road
-  Drainage
-  Railway



Figure 1

Brookfield Conservation Park

Location

Map designed and created by
Reserve Planning using PAMS
Projection: MGA Zone 54 (GDA 94)
2003

Brookfield Conservation Park forms an integral part of a major area of mallee vegetation extending from Swan Reach to Morgan, and joining with the riparian vegetation along the River Murray at some points. Nearby Heritage Agreements include Section 434, adjoining the eastern boundary (374 hectares). Less than 10 kilometres southwest of the park is a group of almost 20 contiguous Heritage Agreements, totalling approximately 3,126 hectares and covering a range of mallee vegetation types. There are also several sanctuaries that adjoin this area. These protected areas provide stepping stones or links that can facilitate movement of species, improve overall genetic diversity and boost ecosystem sustainability.

3.3.1 Biogeographic Regionalisation and Environmental Associations

Brookfield Conservation Park lies within the Murray-Darling Depression IBRA region, which is described as an extensive and gently undulating sand and clay plain of Tertiary and Quaternary age, frequently overlain by aeolian dunes, with vegetation consisting of semi-arid woodlands of Black Oak/Belah, Bullock Bush/Rosewood and *Acacia* spp., mallee shrublands and heathlands and savanna woodlands (Environment Australia, 2000).

The Murray-Darling Depression IBRA region totals 5,361,419 hectares. Approximately 12.9 % of this region is protected within National Parks and Wildlife Act reserves, and 9.9% in non-National Parks and Wildlife Act reserves (Heritage Agreements and sanctuaries).

Within the Murray-Darling Depression IBRA region, a series of Environmental Associations are recognised by Laut et al. (1977). The Environmental Association (EA) incorporating the park is the Blanchetown EA, described as a gently undulating calcrete plain veneered with sand and with occasional low dunes, supporting mallee woodland and open parkland. Brookfield Conservation Park conserves approximately 2.72% of the Blanchetown EA, which is also conserved in Roonka, Morgan, Swan Reach, Ridley and Ngautngaut Conservation Parks.

3.3.2 Regional Biodiversity Management

The following initiatives provide a regional framework for biodiversity management throughout the Murray-Darling Basin. The management of Brookfield Conservation Park will complement and contribute to these initiatives and their successful implementation, ensuring an effective contribution to the conservation of the Murray-Darling Basin as a whole.

Murray-Darling Basin Act 1993

This legislation was developed in order to ratify the Murray-Darling Basin Agreement, which provides the administrative framework and the legislative means for the integrated management of the Murray-Darling Basin. Clause 1 of the Agreement states that its purpose is “to promote and co-ordinate effective planning and management for the equitable efficient and sustainable use of the water, land and other environmental resources of the Murray-Darling Basin.”

River Murray Act 2003

The *River Murray Act 2003* provides an administrative framework for the protection and enhancement of the River Murray, related areas and ecosystems. Management plans relating to a reserve located wholly or partly within the Murray Darling Basin must seek to further the objects of the *River Murray Act 2003* and a series of statutory objectives relating to river health, environmental flows, water quality and the human dimension.

Due to the nature and management of Brookfield Conservation Park, this management plan does not require any specific strategies to meet the objectives of this Act.

Biodiversity Plan for the South Australian Murray-Darling Basin

On-park biodiversity conservation should integrate with broader regional programs. The *Biodiversity Plan for the South Australian Murray-Darling Basin* (Kahrmanis et al., 2001) identifies Brookfield Conservation Park as being within the Brookfield to Marne Large Remnant Area (LRA). LRA's are areas that have significant potential for the long-term retention of biodiversity. The Brookfield to Marne LRA covers an area of 62,000 hectares, of which more than 13,000 hectares (28%) of the remaining vegetation is formally protected in sanctuaries, privately owned Heritage

Agreements and DEH reserves. Within this large remnant area, the park is the largest and most diverse protected area.

Mid-Murray Council Development Plan

The Brookfield Conservation Park Management Plan has been developed with regard to the principles and policies of the Planning Strategy under the *Development Act 1993* and the provisions of the Mid-Murray Council Development Plan developed under the *Development Act 1993*, which classifies the area as a Conservation Zone. The objectives of the Conservation Zone relate to the retention of biodiversity, features of cultural heritage significance and natural beauty and the provision of appropriate environmental and heritage facilities.

3.4 History of Reserve Management

Moves to purchase a reserve for the conservation of the Southern Hairy-nosed Wombat were initiated by the Director of the Brookfield Zoo in Chicago. In 1971, the Chicago Zoological Society purchased Glen Leslie Station, an area of 5,527 hectares.

The property was renamed the Brookfield Zoo Wombat Reserve and administered by a committee of management funded by the Chicago Zoological Society. The former landholder, Mr. Raymond Clifton Dorward, was employed as full-time resident warden.

The Committee of Management, comprised of representatives from the then National Parks and Wildlife Service, Chicago Zoological Society and tertiary educational institutions involved in research, laid down the following guidelines:

- to achieve a wombat population of optimum size and structure consistent with the maintenance of an intact habitat;
- destruction of native animals within the reserve should only be undertaken as a last resort, as this is contrary to the principle under which the reserve was established. Culling may occur only when there is a consensus of scientific opinion that an animal population has developed an imbalance and there is no likelihood that natural events will restore the balance before the reserve suffers an irreversible loss of fauna and flora. The methods used and the monitoring of results must be based on a current and continuing scientific research program, and the destruction, monitoring and research must be carried out by qualified personnel appointed by the Committee of Management;
- species, which are not, and never have been, native to the region should not be introduced into the reserve unless for some carefully considered purpose which is consistent with the objectives of the reserve; and
- as a general principle, the artificial influences of human presence should be minimised and tranquillity and naturalness should be the rule.

In early 1977, faced with rising costs, the Chicago Zoological Society instructed the Committee of Management to offer the reserve as a gift to the Government of South Australia subject to certain conditions:

- the reserve would be proclaimed a Conservation Park;
- the primary purpose of the reserve would be for conservation of, and research into, the Southern Hairy-nosed Wombat and its environment;
- the proclamation would be accompanied by a relatively simple management plan giving effect to the purpose for which the reserve was established;
- the Warden, DG Newell, would continue in his employment at the reserve, and subject to the approval of the Public Service Board, be given the status of Ranger;
- a small "Research Advisory Committee" would be set up which will include a nominee of the Chicago Zoological Society; and
- the reserve would be named Brookfield Conservation Park.

In August 1977 the then Department for the Environment assumed financial and managerial responsibility for the reserve. It was proclaimed as Brookfield Conservation Park on 6 July 1978. As part of the agreement between the Department for the Environment and the Chicago Zoological Society, the Brookfield Conservation Park Scientific Advisory Committee was set up.

Following dedication in 1978, the park has remained an important location for ongoing research into the biology of the Southern Hairy-nosed Wombat. The first management plan was adopted in 1983, and the following actions were undertaken:

- the park was zoned to provide for limited development at the park headquarters (Glen Leslie Homestead precinct) and the development of a barbecue and picnic area;
- a Restricted Access Zone was placed over the majority of the park, which prohibited entry to all except DEH staff and legitimate researchers;
- a public access zone (designated Natural Area Zone) was designated over the southeastern portion of the park and a single entry point was designated on the southern boundary;
- direction and identification signs were erected;
- pest plant and animal control was undertaken;
- flora and fauna continued to be monitored, utilising photo-points and transects established during the period of ownership by the Chicago Zoological Society;
- boundary and internal access tracks were maintained for fire control access and to facilitate research and management;
- the tanks, troughs and bore were maintained; and
- interpretive material was prepared and provided (brochure and interpretive signs near picnic area).

By the early 1990s the function of the reserve had changed from being primarily a research facility to the broader objectives of a Conservation Park, whilst the scientific advisory committee has since dissolved, and other structures have been put in place to coordinate research in the park.

3.5 Existing Management Arrangements

DEH has encouraged and maintained strong liaison with state, national and international academic and educational institutions that continue to conduct research and training programs in the park.

In 1996 dedicated volunteers constituted the Friends of Brookfield Conservation Park (FoBCP), who have published a quarterly newsletter, continued to maintain a herbarium and a census of wildlife populations, and contributed to the maintenance of infrastructure in the park.

3.6 Management Philosophy

The role of reserves is predicated by the twin aims of the *National Parks and Wildlife Act 1972*: to provide for public benefit and enjoyment and to conserve wildlife in a natural environment. Increasingly, the importance of biodiversity conservation is being recognised and the future use and management of reserves must address this issue.

This is particularly so for Brookfield Conservation Park, which has always restricted recreational use so that there is no interference with the ecological and wildlife population research being undertaken. Conservation of the ecosystem, and the value of scientific research, is the most important component of the future direction of the management of Brookfield Conservation Park.

The *Biodiversity Plan for the South Australian Murray-Darling Basin* (Kahrimanis et al., 2001) includes actions to facilitate the conservation of wombats on a regional scale. The southeastern corner of Brookfield Conservation Park is identified in the plan as part of an area of high wombat warren density, or 'core area', and is therefore regionally significant. DEH will ensure that the management of wombat habitat and threat abatement activities will be undertaken from a regional perspective within Brookfield Conservation Park.

The vision for Brookfield Conservation Park is a park, valued and managed by the community for its biodiversity, scientific research and heritage values. To achieve this vision, DEH is keen to explore the possibility of partnership arrangements with agencies and organisations that have a legitimate interest in the management of this park. DEH recognises the importance of community and volunteer organisations and will continue to provide ongoing support and assistance, where possible.

4 MANAGEMENT PRESCRIPTION

4.1 Zoning

Section 39 of the *National Parks and Wildlife Act 1972* provides for the designation of zones in a reserve and constrains the use of land in those zones to the conditions specified in an adopted management plan. Zoning aims to ensure that public use and management actions remain compatible with the protection of park values.

The management zones described below and shown in Figure 2, establish a framework for the sustainable use of the reserve during the life of this plan.

Development Zone

This zone includes Glen Leslie Homestead, adjacent structures and up to 250 metres around them. Developments in this zone will be restricted to minor alterations and improvements of existing facilities, aimed at improving the capacity for research and management.

Restricted Access Zone

Access to this zone will be restricted to facilitate undisturbed scientific research. Structures and developments will be for scientific research purposes only.

Public Use and Education Zone

This zone is a publicly accessible area for visitor use and education. Developments will be limited to the provision of appropriate low impact visitor facilities as determined by level of use.

4.2 Natural Heritage

4.2.1 Geology and Landform

Brookfield Conservation Park is in a part of the mallee characterised by gently undulating to flat plains, with consolidated dunes running in a northwest to southeast direction. The soils are shallow and cover a thick calcrete layer over Miocene limestone. The calcrete forms caps on the ridges.

4.2.2 Native Vegetation

The vegetation associations of Brookfield Conservation Park occur as follows:

Eucalyptus incrassata / *E. leptophylla* / *E. socialis* over *Triodia scariosa* mallee.

On the ridge in the northern section of the park, and extending north into the adjacent area, Ridge-fruited Mallee (*Eucalyptus incrassata*), Red Mallee (*E. socialis*) and Narrow-leaved Mallee (*E. leptophylla*) dominate over Porcupine Grass (*Triodia scariosa*) and sparse Bitter Saltbush (*Atriplex stipitata*). This small area provides significantly different habitat to the other mallee areas of the park.

Eucalyptus gracilis ± *E. oleosa* mallee.

The northwestern corner of the park is dominated by Yorrell (*E. gracilis*) open mallee over sparse Bitter Saltbush and Pearl Bluebush (*Maireana sedifolia*). Yorrell grades into the Ridge-fruited Mallee, Narrow-leaved Mallee and Red Mallee dominated mallee on the ridge in the north of the park. The south-western corner of the park has a more diverse mix of mallee species. Narrow-leaved Mallee and Red Mallee tends to be more dominant with occasional White Mallee (*E. dumosa*) and Yorrell. A small stand of Mallee Box (*E. porosa*) also occurs in this area.

Maireana sedifolia ± *Lycium australe* low open shrubland.

In the southeastern section of the park the understorey consists of a large expanse of regenerating Pearl Bluebush in significant contrast with the adjoining property.

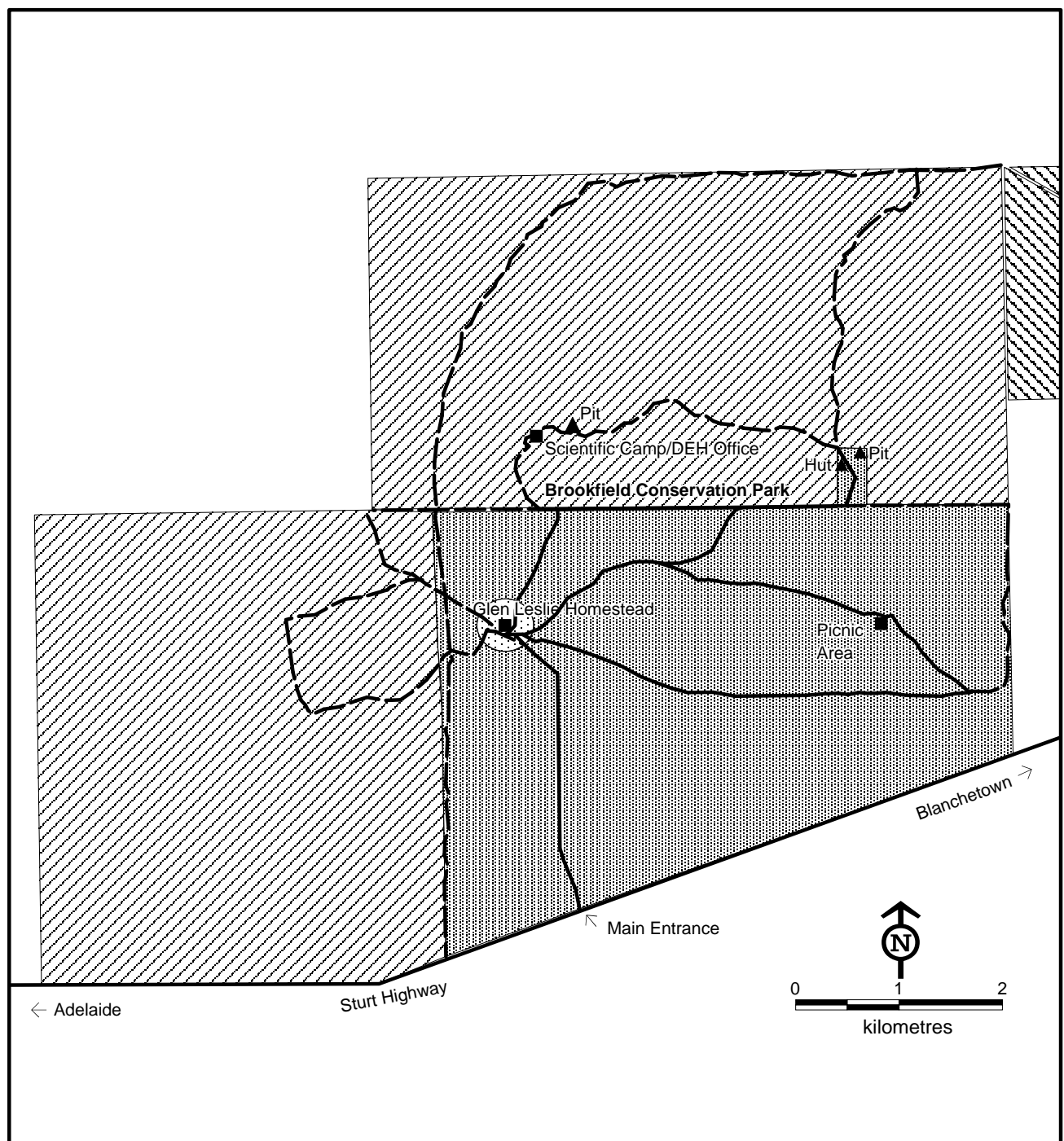


Figure 2

Brookfield Conservation Park

Features and Zoning

Map designed and created by
Reserve Planning using PAMS
Projection: MGA Zone 54 (GDA 94)
2003


-  Restricted Access Zone
-  Public Use and Education Zone
-  Development Zone
-  Heritage Agreement
-  Public Access
-  DEH Management Access









Figure 3

Brookfield Conservation Park

Vegetation Communities

Map designed and created by
Reserve Planning using PAMS
Projection: MGA Zone 54 (GDA 94)
2004

- | | |
|---|--|
|  | <i>Eucalyptus incrassata</i> and <i>E. leptophylla</i> ,
<i>E. socialis</i> mallee over <i>Triodia scariosa</i> |
|  | <i>Eucalyptus gracilis</i> +/- <i>E. oleosa</i> mallee |
|  | <i>Geijera linearifolia</i> / <i>Myoporum platycarpum</i>
very open woodland |
|  | <i>Maireana sedifolia</i> +/- <i>Lycium australe</i>
low open shrubland |
|  | Public Access |
|  | DEH Management Access |

Geijera linearifolia / *Myoporum platycarpum* very open woodland.

Central areas of the park are covered by low woodland and tall shrubland typically dominated by Sheep Bush (*Geijera linearifolia*) and Sugarwood (*Myoporum platycarpum*) in varying densities. Dryland Tea-tree (*Melaleuca lanceolata*) is often found around claypans. The understorey is characterised by Australian Boxthorn (*Lycium australe*), Bullock Bush (*Alectryon oleifolius*), Caustic Weed (*Euphorbia drummondii*) and Heron's Bill (*Erodium cygnorum*).

A conspicuous feature of the understorey in the Park is the extreme variation between good and poor seasons. After a good wet season, much of the shrubland areas are covered by large areas of fresh, green spear grass intermingled with many small ephemeral flowering plants. However, during poor seasons the understorey is dominated by Ward's Weed (*Carrichtera annua*).

Several species of conservation significance are found within the park, including Plumbush (*Santalum lanceolatum*) (regionally endangered), Bottle Fissure-plant (*Maireana excavata*) (state vulnerable) Spreading Cress (*Phlegmatospermum eremaeum*) (state rare), *Pycnosorus chrysanthes* (state endangered) and the nationally endangered *Dodonaea subglandulifera*.

4.2.3 Native Fauna

One of the primary aims of the management of Brookfield Conservation Park is to conserve Southern Hairy-nosed Wombats and their habitat. The Southern Hairy-nosed Wombat is a nocturnal, colonial animal that survives in its harsh environment by spending the hottest part of the day in underground burrows. Burrows are interconnected and grouped into warrens. In the Murraylands, their main food comprises native grasses such as *Danthonia* spp. and *Stipa* spp. and successful breeding occurs only when food supply is adequate.

Southern Hairy-nosed Wombats favour the Sugarwood dominated open areas of the park, preferentially grazing on native grasses. Regeneration of natural vegetation in the park may adversely affect the area of preferred wombat habitat. In the absence of sheep grazing, further establishment of trees could lead to a significant alteration in wombat habitat through reduction of grassland areas. Evidence from transect counts indicates that kangaroo and rabbit populations have increased and may compete with wombats for food. The long-term effects of these interactions are presently unknown. Further research may suggest active manipulation of the vegetation and animal populations to maintain optimum wombat habitat as a priority.

Thirteen native mammals have been recorded within Brookfield Conservation Park. The most common include the Western Grey Kangaroo (*Macropus fuliginosus*), Red Kangaroo (*M. rufus*) and White-striped Freetail-bat (*Tadarida australis*). Kangaroo surveys are currently conducted twice a year, with Western Grey Kangaroo numbers estimated at 20-23 per km² and Red Kangaroo numbers at 1-20 per km², though this is likely to vary with seasonal conditions. Other less common native mammals include Common Brushtail Possum (*Trichosurus vulpecula*), Short-beaked Echidna (*Tachyglossus aculeatus*), Common Dunnart (*Sminthopsis murina*) and Fat-tailed Dunnart (*S. crassicaudata*).

The park's bird life has been extensively studied by numerous researchers. There are 133 species recorded within Brookfield Conservation Park, two of which are introduced. The mallee vegetation, particularly older trees, provides nesting hollows for numerous Australian Owllet-Nightjars and parrots as well as habitat for honeyeaters, thornbills and other birds. During wet times, water accumulates in the dam near the homestead providing an environment for water birds that is not a regular feature of this landscape.

Woodcutting for charcoal and fence posts during the early 20th Century in the park has depleted the available hollows required for the nesting and breeding of parrots and other birds, arboreal mammals and small reptiles. Regeneration of the mallee after woodcutting has created a mallee growth-form consisting predominantly of small diameter stems and branches, with few places above ground level where adequate hollows can develop. Understorey and grasses are also important habitat and food for a range of mammals and reptiles.

Malleefowl (*Leipoa ocellata*) have been sighted historically and there are some active mounds in the northern area of the park near the ridge. It is expected that they occur in the adjacent property to the north. Foxes are present in the park and pose a threat to the conservation of Malleefowl. Control programs are necessary to reduce fox numbers and facilitate the conservation of Malleefowl (see Section 4.2.5 Introduced Animals).

Three amphibian and 48 reptile species have been recorded within the park, of these, most are skinks and geckos. The amphibians were recorded in water after significant rainfall events.

Fauna species of conservation significance in the park include:

- Southern Hairy-nosed Wombat (<i>Lasiorhinus latifrons</i>)	Regionally Significant ¹
- Malleefowl (<i>Leipoa ocellata</i>)	Vulnerable in SA ² and Australia ³
- Bush-stone Curlew (<i>Burhinus grallarius</i>)	Vulnerable in SA ²
- Painted Button-quail (<i>Turnix varia</i>)	Vulnerable in SA ²
- Carpet Python (<i>Morelia spilota</i>)	Vulnerable in SA ²
- Striped Honeyeater (<i>Plectorhyncha lanceolata</i>)	Rare in SA ²
- Chestnut Quail-thrush (<i>Cinclosoma castanotus</i>)	Rare in SA ²
- Peregrine Falcon (<i>Falco peregrinus</i>)	Rare in SA ²
- White-browed Treecreeper (<i>Climacteris affinis</i>)	Rare in SA ²

Although there are no nationally threatened reptiles or amphibians listed in the mallee region, there is concern for the conservation of the Dwarf Three-toed Slider (*Lerista muelleri*) and the Adelaide Snake-eye (*Morethia adalaidensis*) (Stephens, 1992). Recent surveys discovered the Short-legged Ctenotus (*Ctenotus strauchii*) within the park, which represents one of the southern most records for this species in South Australia.

4.2.4 Introduced Plants

This part of South Australia has a long history of heavy grazing and a number of species of pest plants have become established in the degraded natural vegetation. The removal of sheep in 1971 and subsequent good seasons (particularly 1977) have resulted in a significant recovery of the native vegetation in the park. However, in disturbed areas such as those surrounding wombat warrens, significant weed problems still exist.

Onion Weed (*Asphodelus fistulosus*) is infiltrating the park from the roadside on the southern boundary and from the open area around the homestead. Other introduced plants of concern include Horehound (*Marrubium vulgare*), Skeleton Weed (*Chondrilla juncea*) and Ward's Weed (*Carrichtera annua*).

4.2.5 Introduced Animals

One of the primary reasons for the Chicago Zoology Society's investment in the park was to promote an environment in which to study the regeneration and rehabilitation of native habitats and species after removal of native and feral grazing pressure. This goal is not achievable without adequate control of competition from feral herbivores and predators.

Introduced mammals include goats (*Capra hircus*), feral cats (*Felis catus*), house mice (*Mus musculus*), European rabbits (*Oryctolagus cuniculus*), black rats (*Rattus rattus*) and red foxes (*Vulpes vulpes*). Goats and sheep entering through fences from adjoining properties cause degradation and compete with native herbivores for available food.

¹ Not listed in the schedules of the *National Parks and Wildlife Act 1972*; noted in Kahrmanis et al. (2001) as a species of conservation significance.

² Listed in the schedules of the *National Parks and Wildlife Act 1972*.

³ Listed in the schedules of the *EPBC Act 1999*.

Goats are widespread in the region and transient mobs are occasionally found in the park. From 1996 to April 2000 more than 260 goats were removed. The typical stock fencing on the boundaries is ineffective in preventing the entry of goats from adjoining properties.

Rabbit populations are low within the park. Numbers were reduced dramatically by Rabbit Haemorrhagic Disease (RHD), which is still active. Though currently in low numbers, rabbits are the principal pest animals in the park. Recent surveys estimated rabbit density to be one per 16 kilometre transect and indicated an increase in overall population size. Control measures that involve warren destruction can conflict with wombat habitat conservation objectives as rabbits often share warrens with wombats, so alternative means of control must be utilised.

Control of foxes and cats will be most effective with the support and involvement of the surrounding landholders.

Objectives

Conserve native vegetation and fauna, especially those species and communities of conservation significance.

Maintain and restore wildlife habitat.

Control, and eradicate if possible, introduced plants and exotic animals.

Strategies

- Support surveys, research and monitoring of the native flora and fauna of the reserve.
- Utilise research, monitoring and survey findings to provide guidance and support for the conservation and management of flora and fauna within the reserve.
- Implement strategies to promote the regeneration of the vegetation and wildlife habitat in the reserve.
- Seek to maintain biological links with nearby areas of habitat.
- Implement strategies to protect native fauna and flora from introduced species through appropriate control regimes.

4.3 Cultural Resources

4.3.1 Indigenous Heritage

Ngaiawang Culture and Heritage

The land comprising Brookfield Conservation Park forms part of the 'Country' of the Ngaiawang people (Tindale 1974). For Ngaiawang people, land and waters of the Murray-Darling basin have many interconnected complex meanings and values.

The first Aboriginal occupation of the Western Murray Plains is believed to date from the late Pleistocene about 10,000 years ago. However, recent carbon dating work at Roonka Flat suggests occupation as far back as 18,000 years.

Archaeological exploration (South Australian Museum, 1977), combined with the reports of early colonists such as the journals of Edward John Eyre, describes Aboriginal customs and land-use in the mallee region. At the time of European settlement, the Ngaiawang people were found in the surrounding Western Murray Plains. The Murray River was the focus of activity, providing a permanent water source and continuous food supply. In comparison with the river, the plains to the west were inhospitable, providing no surface water and little vegetable food. Consequently, the plains were visited only occasionally by Aboriginal people for hunting expeditions in the winter months. Evidence of Aboriginal occupation has been uncovered along the river, creek lines to the west and at the Craige Plain lake-bed, approximately ten kilometres to the north of the park (South Australian Museum, 1977).

For Aboriginal people, land and waters have many interconnected complex meanings and values. The significance of land and waters is central to Aboriginal people's lives: at birth, death, ceremonies and socially, whilst hunting, gathering camping, and travelling. The term 'story line' is

used to describe the combination of these aspects of life, religion, mythology, law and history, which includes the past, the present and the future. The term 'story lines' should be understood in its Aboriginal context, which relates to significant and holistic spiritual and cultural stories and events, which weave together broad and complex concepts and describes the present and ancient journey of Aboriginal peoples in a comprehensive manner.

However, due to historical or cultural reasons, any knowledge of the cultural heritage of the region may be privileged to selected Ngaiawang people and therefore unable to be recorded. Given the lack of existing information, it is considered important that further research be undertaken in order to gain a better understanding of the Aboriginal occupancy and use of the area.

Aboriginal Heritage Act 1988

The purpose of the *Aboriginal Heritage Act 1988* is the protection and preservation of Aboriginal sites, objects and remains. The Department of Aboriginal Affairs and Reconciliation (DAARE) maintains a Central Archive, including the Register of Aboriginal Sites and Objects. Aboriginal site is defined under the Act as "an area of land that is of significance according to Aboriginal tradition; or that is of significance to Aboriginal archaeology, anthropology or history."

There are currently no sites listed on the Central Archive for Brookfield Conservation Park. However, this lack of recordings does not reflect a comprehensive survey of the park. To promote better cultural heritage management at Brookfield Conservation Park, further research needs to be undertaken to identify and record sites of significance on the park.

To ensure the protection of sites and to avoid inadvertent damage, DEH will consult with DAARE and the relevant Aboriginal Heritage Committee before commencement of any development works.

Objective

Ensure Ngaiawang cultural heritage sites and objects are conserved and protected.

Strategies

- Consult with Ngaiawang traditional owners, Native Title claimants and relevant Aboriginal heritage authorities, in decisions regarding the management of Ngaiawang cultural heritage and before proceeding with any significant development works within the reserve.
- Identify and protect known or relocated sites and items of Aboriginal cultural significance in cooperation with DAARE, relevant authorities and organisations. Ngaiawang cultural heritage sites require conservation plans to facilitate appropriate management.
- In consultation with the Ngaiawang community, submit cultural sites and stories that relate to the park for inclusion on the DAARE Central Archive.

4.3.2 Non-Indigenous Heritage

In March 1906, following the demise of previous small leaseholders, GS Freeman gained right of purchase on an extensive area of land that included what is now Brookfield Conservation Park. Since this time, a number of owners have used the area to provide gum strainers, charcoal and sheep grazing. Freeman fenced the property and installed a windmill to pump river water to stockyards on the southeastern boundary of the property. He also built the four-roomed, stone and brick Glen Leslie homestead.

Charcoal burning was carried out *in situ* in Brookfield Conservation Park. Charcoal was made from burning mallee, and there was extensive clearing of the mallee scrub west of the River Murray. There are two charcoal-burning sites, each with 15 pits in the eastern part of the park (see Figure 2). Survey pegs are also present within the park. They were placed on the land when land was proclaimed into hundreds in around 1860. Later, in 1873, the sections were surveyed and further divided into smaller parcels.

The principal items of cultural significance are the Glen Leslie homestead and the charcoal burning pits and hut. The sites of charcoal burning (in particular the hut) are prone to rapid deterioration. Currently, there is no public access to these sites, nor is there any information made

available to the public on these sites of interest. However, it is considered feasible to allow public access to these sites and provide relevant interpretive information in future.

Glen Leslie homestead was extensively restored and renovated to act as a ranger residence. For this asset to fulfil its potential as long term residency, it must be further upgraded to meet relevant Australian Standards (see Section 4.5 Infrastructure and Built Assets).

Objective

Ensure significant non-indigenous heritage sites within Re Banks Conservation Park are conserved and protected.

Strategies

- In cooperation with the Heritage branch of DEH and other relevant authorities, protect and restore sites of historical significance located in the park.
- In cooperation with the Heritage branch of DEH and other relevant authorities, research historic sites and stories that relate to the park. All sites should be recorded to the standards set by the Heritage branch of DEH and submitted for inclusion on the State Heritage Register.

4.4 Fire Management

Due to the nature of the vegetation in the park, fire probability is low. No bushfires have been recorded since European settlement. Given favourable wet conditions, spear grass could become dense enough to possibly carry a fire. Stakeholders and the wider community will be consulted to ensure an understanding of fire risks and mitigating actions being proposed or undertaken in the Park. The use of fire as an ecological management tool may be considered within the park, if supported by sound scientific data.

Fire management planning has been undertaken for the park and will be regularly reviewed and updated in consultation with adjoining Country Fire Service Groups (CFS) and the District Bushfire Prevention Committee, to integrate district fire management. Stakeholders and the wider community will also be consulted to ensure an understanding of the fire risks and mitigating actions being proposed or undertaken in the reserve.

Fire management planning will:

- identify natural and cultural heritage values and built assets;
- provide a framework for the management of wildfire suppression, including identification of strategic access and control lines;
- provide a framework for prescribed burning for biodiversity conservation, ecological management and fuel reduction purposes; and
- identify performance indicators.

Objective

Manage fire to ensure the protection of life and property, the maintenance of biodiversity and the protection of natural, cultural and built values.

Strategies

- Implement and review fire management plans in association with CFS and other stakeholders.
- Continue to work with the relevant District Bushfire Prevention Committee and CFS to minimise risk to life and property within and surrounding the reserve.

4.5 Infrastructure and Built Assets

Glen Leslie Homestead, built in 1901 and consisting of a stone house and shed. The homestead was vacant at the time of this plan's development. A tank and bore provide water to the homestead. In addition there are several rainwater tanks at the homestead. The header tank at the homestead requires power to drive the pump. When the house was occupied, a diesel generator supplied this power. The generator has since been decommissioned; power cables removed and power points in the homestead have also been decommissioned. The homestead is

now set up to run from a small generator, which runs lights, a gas heater fan, and a pressure pump for water. A fence with a lockable gate surrounds the property.

Securing the long-term leasing of the homestead has been problematical. Whilst a long-term concessionaire agreement is being sought, DEH will also allow for short-term use of the site for a gazetted fee by community groups working within the park and surrounding areas, such as Green Corps and Correctional Services (MOWCamp).

A scientific field camp, cooking and sleeping facilities and undercover working area is located in the centre of the park, along with a small transportable DEH office. The scientific camp has its own rainwater tank, as there is no supply of mains water. These facilities will continue to be maintained for use by groups conducting scientific research.

DEH management tracks run along the eastern and western sections of the northern boundary and along the entire length of the eastern and western boundaries. These tracks are not open to the public and will be maintained to provide for DEH vehicle access.

Objective

Provide safe and effective infrastructure within the park.

Strategies

- Maintain essential infrastructure at a functional level.
- Provide for the use of the Glen Leslie Homestead on a long or short-term basis subject to conditions specified by DEH. Charge a gazetted fee if necessary.

4.6 Public Access

The dedication of the land as a Conservation Park under the *National Parks and Wildlife Act 1972* brought the area into the State reserve network and facilitated its opening for public visitation.

In the past, visitors to the reserve have primarily been people with an interest in conservation, including scientists and students from a number of primary, secondary and tertiary institutions. Day visitor use of Brookfield is currently minimal. Between 1973 and 1977 an average of 140 visitors per year signed the visitors' book, which was discontinued on 31 July 1977. No formal record of visitor numbers has been kept since then. However, visitor numbers are currently estimated at 500 per year.

The main access to the park is from the Sturt Highway, which adjoins the southern boundary (see Figure 2). There are Telstra access gates at intervals of approximately 1.5 kilometres along the southern boundary fence. An unsealed graded road runs from the entrance on the Sturt Highway to Glen Leslie homestead. Access and walking tracks radiate from near the homestead to specific areas of interest. However, not all are currently open for public access.

A nature drive runs from the former headquarters at Glen Leslie Homestead towards the east boundary of the park. There is a toilet and picnic area in the south-eastern corner along the nature drive track.

Camping is currently not permitted within Brookfield Conservation Park. However, it is considered feasible to provide for low impact camping at the picnic area in future, providing visitor impacts are monitored on a regular basis. Concerns have been raised regarding potential visitor impacts on wombats and disruption of scientific research projects, should camping be permitted at locations other than the Scientific Camp. However, overall, current visitor impacts are generally low.

Wood fires are permitted in the picnic area outside the Fire Danger season.

The Friends of Brookfield Conservation Park are currently designing a system of walking trails that will traverse mallee/saltbush, mallee grassland and bluebush habitats. The 'Three Habitats Walking Trail' will be combined into one trail. As it is designed and developed, interpretive information associated with the walk will be designed and distributed at the beginning of the trail.

The Friends of Brookfield Conservation Park are currently designing nature drives and walking trails with information signage relating to historical and natural areas of interest in the park.

There are currently no information and interpretation signs within Brookfield Conservation Park. Information should be made available to indicate the purpose of the park and should describe some of the vegetation and animals found in the park. As the park was proclaimed primarily for the conservation of the Southern Hairy-nosed Wombat, it is important that visitors are able to obtain up-to-date and professionally presented information about this aspect of the park. In addition, there are historical sites, including the charcoal burners' hut and pits, which present opportunities for interpretation. Relevant information regarding these sites is not currently available to day visitors.

The existing nature drive presents an important opportunity for interpretation, as will the 'Three Habitats Walking Trail' when it is completed.

Objective

Ensure that visitor use is consistent with the protection and promotion of the park's values.

Strategies

- Restrict public vehicle access to the defined nature drive.
- Provide safe walking trails that minimise impacts on the natural values of the reserve.
- Permit camping in the picnic area, provided visitor use and impacts are monitored regularly to ensure there are no impacts on any research programs being undertaken in the reserve.
- Monitor and review the impacts of visitor use on the park's values and modify practices if required.
- Provide information to visitors on reserve values and issues such as the history of the park, importance for conservation and research, visitor safety, permitted activities and regulations.

4.7 Commercial Activities and Other Land Use

4.7.1 Bee Sites

There are two bee sites within Brookfield Conservation Park. These sites are deemed 'marginal sites', meaning they are not pegged to a specific location within the reserve.

With the adoption of this management plan, DEH will strategically remove the two bee sites from Brookfield Conservation Park to ensure the natural values of the park are not compromised. This phasing out of bee sites will occur over a three year period, in accordance with the *1997 Bee Site Policy for National Parks and Wildlife Act and Crown Lands Act Conservation Reserves* or its successor.

4.7.2 Public Utilities

An easement exists along the east-west track of the park, in order to accommodate a Telstra cable.

The Australian Government or organisations operating under the authority of Commonwealth legislation (eg telecommunications carriers) may undertake actions on the reserve subject to ministerial approval, even though they may not be referred to in specific terms within this management plan, provided that such actions are consistent with the objectives of this plan and are demonstrably in the public interest.

Objectives

Ensure that ongoing service of utilities is compatible with reserve values and that utilities are not impacted by reserve development and maintenance works.

Remove the two bee sites from Brookfield Conservation Park to ensure the natural values of the park are not compromised.

Strategies

- Strategically phase out the two bee sites from within the park, in accordance with the *1997 Bee Site Policy for National Parks and Wildlife Act and Crown Lands Act Conservation Reserves* or its successor.
- Maintain liaison with utility companies and periodically review maintenance programs.
- Maintain accurate records of underground and overhead services to minimise damage through reserve maintenance and development work.

4.8 Management Arrangements

4.8.1 Research and Volunteer Involvement

The early focus on research within Brookfield Conservation Park and the adoption of an experimental management approach has resulted in one of the state's longest running wildlife monitoring programs. This research has provided DEH with important management insight and the park provides one of the state's most accessible semi-arid zone teaching and research facilities. The long-term data collection and monitoring increases the value of the park's research facility to academic institutions.

Since the dedication of this area as a Conservation Park, all existing and proposed scientific research projects have been subject to the provisions of the *National Parks and Wildlife Act 1972*. All researchers are required to hold a current permit to undertake scientific research on a reserve and are required to submit to DEH a report on the results of any research.

The Friends of Brookfield Conservation Park (FoBCP) are a small but active group dedicated to maintaining Brookfield as a research facility and to improving the day visitor experience. Many of the wildlife census, research and maintenance tasks at Brookfield are fulfilled by FoBCP with the support and coordination of the District Ranger. FoBCP is involved in the maintenance of the herbarium, infrastructure, population wildlife census and research.

There are a number of groups that undertake scientific research in the park. They stay at the scientific camp for periods ranging from overnight to three months. Most of the experimental sites are in the northwestern section of the park, and are centred on active wombat warrens in an area that is not currently accessible to visitors.

Primary, secondary and tertiary students use the park for the study of semi-arid ecosystems. Five primary schools, one secondary school and four tertiary institutions have incorporated the park research into their curriculum. By 1997, eight PhD, two Masters, 11 Honours and many other long and short-term postgraduate research programs had been undertaken at the park. Groups using the park for a wide range of scientific monitoring studies include students and researchers from:

- | | |
|--|--|
| - The University of Adelaide; | - University of Chicago (Wren Biology); |
| - University of South Australia; | - Karl Franzens University (Austria); |
| - Flinders University (Biological Sciences); | - University of Heidelberg (Germany); |
| - Cornell University (Ecology and Systematics) (New York); | - University of New England (NSW); |
| - Chicago Zoological Society; | - Monash University (Vic); |
| - Onkaparinga and Port Augusta TAFE Colleges; | - Royal Australian Ornithologists Union; and |
| - Tauondi College (SA); | - School groups. |

Survey and research activities include long-term and ongoing collection of information from vegetation surveys, rainfall data, photo-points, kangaroo and wombat transect counts and a variety of grazing exclosures. Information on some of the research projects undertaken at Brookfield Conservation Park is kept in the DEH office at the Scientific Camp, though this library is incomplete. The Friends of Brookfield Conservation have an important role in maintaining this

library. Long-term monitoring data is housed and maintained by the Biological Survey and Research Branch (DEH).

Findings from research and monitoring conducted on the park have had far reaching conservation outcomes, including the dedication of the Murray Sunset National Park in Victoria. This area was to be sold off “freehold” for pastoral production, mainly because the *Myoporum platycarpum* woodlands were so degraded, however data on the recovery of similar environments in the park led to the Victorian Land Conservation Council recommending its dedication for conservation (Williams, pers. comm. 2000).

Sites that are no longer used for research should have any equipment and materials removed.

4.8.2 Partnerships and Cooperative Management

DEH supports and promotes partnerships and cooperative management arrangements to establish integrated natural resource management. This requires the development of substantial working relationships with government agencies, local authorities and local communities.

Adjoining Landowners

It is well recognised that conservation goals cannot be achieved through the reservation of public land alone. Conservation is also dependent on the efforts of private landowners and other non-government organisations. DEH encourages adjacent landowners to consider a cooperative approach to the management of remnant vegetation and other habitat within the vicinity of parks, particularly where it adjoins the park boundary. The *NatureLinks* initiative provides a framework to guide the development of connected habitat throughout the Murray-Darling Basin in cooperation with private landowners.

Cooperative management arrangements can vary from the development of formal management plans or statements, to informal voluntary meetings between park managers and park neighbours to discuss issues of common interest. Benefits include more effective pest plant and pest animal control programs through an integrated approach, practical fire prevention and fencing arrangements, opportunities for landowners to improve biodiversity on their land and improved regional biodiversity.

Objectives

Encourage and maintain the use of the park for appropriate research.

Support partnerships with organisations, statutory bodies and landowners that assist with the management of the park and help fulfil the reserve’s potential without compromising its natural values.

Strategies

- Involve the community, particularly the Friends of Brookfield Conservation Park and adjoining landholders, in the implementation of this management plan.
- Encourage and support the participation of volunteers, educational institutions and other organisations in research projects in the reserve and promote research programs that address the actions of the management plan.
- Incorporate appropriate research findings into the management of the reserve.

4.9 Future Directions

4.9.1 Additional Land

Brookfield Conservation Park includes a number of gazetted, though undeveloped, road reserves. A number of one chain wide, unmade road reserves cross the park including a central southwest road reserve, a road reserve running along the northern boundary within the current boundary fence and a diagonal ‘coach’ road. There is no readily discernible track on this last alignment. It is normally the policy of the DEH to formally close such road reserves under the *Roads (Opening and Closing) Act 1991* and include them within the DEH reserve, thereby bringing all the land

within reserve boundaries under the control of one authority. Resolution of this issue has implications for the cost of installing adequate fencing along the northern boundary.

The addition of surrounding land will be considered where it provides significant management, nature conservation or recreation benefits. An assessment using the Comprehensive Adequate and Representative Reserves System (CARRS) criteria will provide an objective basis for any moves to include additional land within the park.

Objectives

Consolidate the boundaries of the reserve.

Incorporate land of conservation significance into the park.

Strategies

- Review all current parcels of Crown land including unused road reserves in and surrounding Brookfield Conservation Park to determine whether they would add to the integrity of the reserve.
- Dedicate Crown Land that will add to the integrity of the Brookfield Conservation Park.

5 SUMMARY OF MANAGEMENT STRATEGIES

STRATEGY	Priority	Duration
Natural Heritage		
Support surveys, research and monitoring of the native flora and fauna of the reserve.	High	Short
Utilise research, monitoring and survey findings to provide guidance and support for the conservation and management of flora and fauna within the reserve.	High	Ongoing
Implement strategies to promote the regeneration of the vegetation and wildlife habitat in the reserve.	High	Ongoing
Seek to maintain biological links with nearby areas of habitat.	High	Short
Implement strategies to protect native fauna and flora from introduced predators through appropriate control regimes.	High	Ongoing
Cultural Resources		
Consult with Ngaiawang traditional owners, Native Title claimants and relevant Aboriginal heritage authorities, in decisions regarding the management of Ngaiawang cultural heritage and before proceeding with any significant development works within the reserve.	Med	Short
Identify and protect known or relocated sites and items of Aboriginal cultural significance in cooperation with DAARE, relevant authorities and organisations. Ngaiawang cultural heritage sites require conservation plans to facilitate appropriate management.	Med	Short
In consultation with the Ngaiawang community, submit cultural sites and stories that relate to the park for inclusion on the DAARE Central Archive.	Med	Short
In cooperation with the Heritage branch of DEH and other relevant authorities, protect and restore sites of historical significance located in the park.	Med	Short
In cooperation with the Heritage branch of DEH and other relevant authorities, research historic sites and stories that relate to the park. All sites should be recorded to the standards set by the Heritage branch of DEH and submitted for inclusion on the State Heritage Register.	Med	Short
Fire Management		
Implement and review fire management plans in association with CFS and other stakeholders.	High	Ongoing
Continue to work with the relevant District Bushfire Prevention Committee and CFS to minimise risk to life and property within and surrounding the reserve.	High	Ongoing
Infrastructure and Built Assets		
Maintain essential infrastructure at a functional level.	High	Ongoing
Provide for the use of the Glen Leslie Homestead on a long or short-term basis subject to conditions specified by DEH. Charge a gazetted fee if necessary.	Med	Ongoing
Public Access		
Restrict vehicle access to the defined nature drive.	High	Ongoing

STRATEGY	Priority	Duration
Provide safe walking trails that minimise impacts on the natural values of the reserve.	High	Short
Permit camping in the picnic area, provided visitor use and impacts are monitored regularly to ensure there are no impacts on any research programs being undertaken in the reserve.	Med	Ongoing
Monitor and review the impacts of visitor use on the park's values and modify practices if required.	High	Ongoing
Provide information to visitors on reserve values and issues such as the history of the park, directions, visitor safety, permitted activities and regulations.	Med	Short
Commercial Activities and Other Landuse		
Strategically phase out the two bee sites from within the park, in accordance with the <i>1997 Bee Site Policy for National Parks and Wildlife Act and Crown Lands Act Conservation Reserves</i> or its successor.	Med	Short
Maintain liaison with utility companies and periodically review maintenance programs.	High	Ongoing
Maintain accurate records of underground and overhead services to minimise damage through reserve maintenance and development work.	High	Ongoing
Management Arrangements		
Involve the community, particularly the Friends of Brookfield Conservation Park and adjoining landholders, in the implementation of this management plan.	Med	Ongoing
Encourage and support the participation of volunteers, educational institutions and other organisations in research projects in the reserve and promote research programs that address the actions of the management plan.	Med	Ongoing
Incorporate appropriate research findings into the management of the reserve.	Med	Ongoing
Future Directions		
Review all current parcels of Crown land including unused road reserves in and surrounding Brookfield Conservation Park to determine whether they would add to the integrity of the reserve.	Med	Short
Dedicate Crown Land that will add to the integrity of the Brookfield Conservation Park.	Med	Short

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