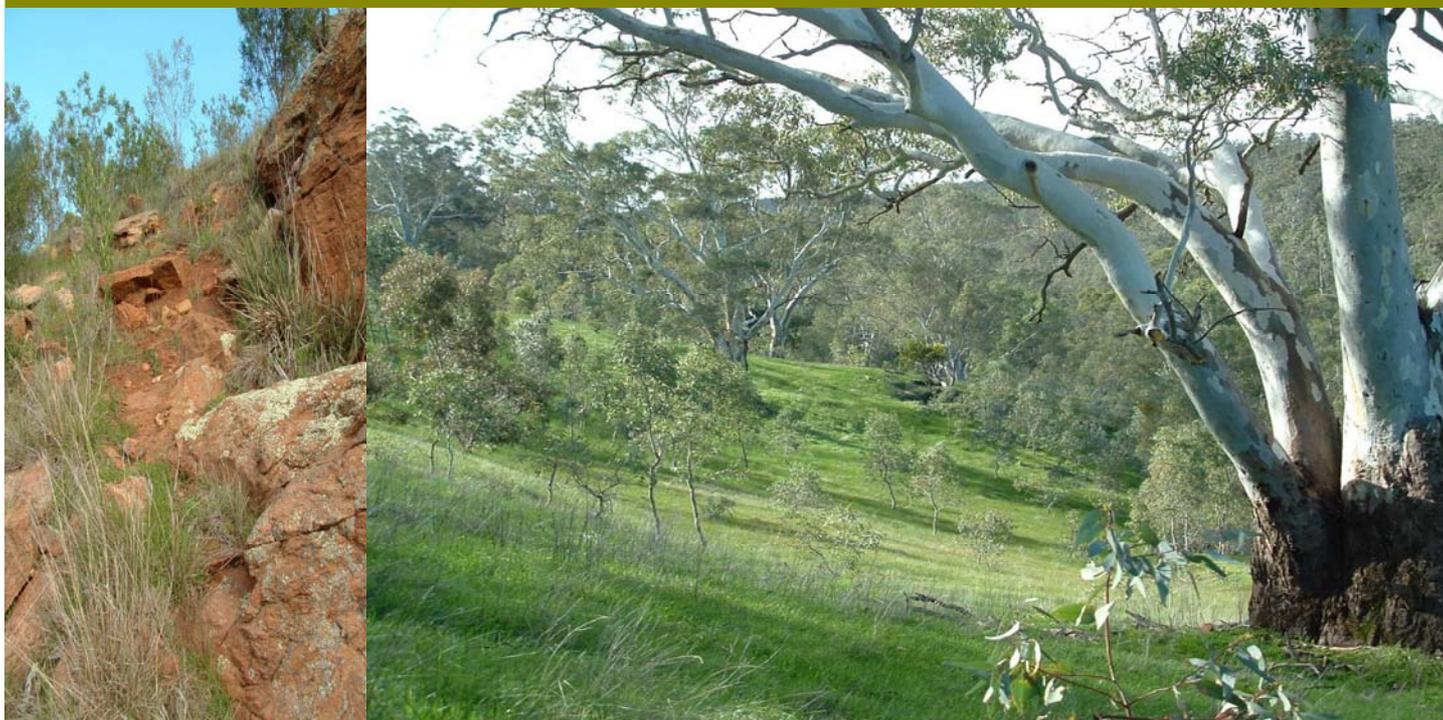


Department for Environment and Heritage  
Management Plan Amendment



Para Wirra Recreation Park  
2005



Government  
of South Australia

## OUR PARKS, OUR HERITAGE, OUR LEGACY

Cultural richness and diversity are the marks 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.

Department for Environment and Heritage

# Management Plan Amendment

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Published by the Department for Environment and Heritage, Adelaide, Australia

© Department for Environment and Heritage, 2005

ISBN: 1 921018 19 4

Prepared by Department for Environment and Heritage

Cover Photography: Courtesy of Tim Bond

This document may be cited as "Department for Environment and Heritage (2005) *Para Wirra Recreation Park Management Plan Amendment*, Adelaide, South Australia"

## **AMENDMENTS**

### **CONSIDERATIONS AND STRATEGIES (pp.20-1 of the *Para Wirra Recreation Park Management Plan*)**

#### **OBJECTIVE 2**

Protect the natural assets of the park, manage wildlife, control weeds, exotic plants and feral animals.

#### **Background**

Protection management must take into account statutory requirements to control weeds, manage wildlife, control vermin and undertake soil conservation measures. Fire protection is discussed under objective 3. The boundary of Para Wirra is contiguous with, and forms part of a 2,573 ha block of native vegetation, collectively managed by the Engineering and Water Supply Department, the Woods and Forest Department and the National Parks and Wildlife Service. As only twenty six percent (26%) of the Mt. Lofty Ranges remains uncleared, a block of native vegetation of this size is important in terms of its representativeness of vegetation types, for the maintenance of diversity of animal and plant species, maintenance of water quality, and as a valuable recreational resource for the community.

The high conservation value of Para Wirra and its regional significance justifies a comprehensive programme of weed control. Priority must be given to statutory requirements to control Schedule 1 and Schedule 2 weeds as proclaimed under the Animal and Plant Control Act, 1980. The National Parks and Wildlife Service also has a priority list of community pest plants, such as boneseed and other exotic plant species which need to be controlled throughout the park, subject to available resources. Revegetation programmes aimed at re-establishing indigenous plant species and suppressing weed growth will be undertaken as resources permit.

The vegetation of Para Wirra has been subject to over-grazing by western grey kangaroos. The population density of the western grey kangaroo and their impact on native vegetation is being studied to determine the best method of controlling their impact.

A successful goat eradication programme was conducted at Para Wirra in 1989/90 by the Animal and Plant Control Commission. Rabbits and hares are not major pest animals in the park, although they can have an adverse impact on revegetation programmes, and may need to be controlled in such situations.

There are some soil erosion problems within the reserve, particularly on the steeper sections of fire access tracks and some walking tracks, as well as in the lake area.

#### **Actions**

The National Parks and Wildlife Service will act in co-operation with adjoining land management authorities to develop joint management strategies to address common protection issues where appropriate. The National Parks and Wildlife Service will continue to meet its statutory obligations to control Schedule 1 and Schedule 2 weeds as proclaimed under the Animal and Plant Control Act, 1986. Revegetation programmes and the control of pest plants and exotic plant species will be undertaken as resources permit.

Management strategies addressing the problem of overgrazing and excessive kangaroo population densities will be formulated and implemented on the basis of their research.

Feral goat, rabbit and hare numbers will be monitored and control programmes instigated if, and when, necessary.

Particular attention should be directed to soil conservation on walking tracks, fire access tracks, in the lake area and in any area where new work is to proceed. Existing vehicle tracks that also serve as horse trails in the southern section of the park should be closely monitored to ensure soil erosion and any introduced weeds are effectively managed. Improved directional signage and closer liaison with horse riders should ensure riders keep to designated fire tracks to forestall a proliferation of tracks and potential erosion and weed problems.

Boundary fencing will be adequately maintained in consultation with adjoining landowners. Any necessary internal fencing and entry points will be erected where and as required.

## **DELETE:**

The vegetation of Para Wirra has been subject to over-grazing by western grey kangaroos. The population density of the Western Grey Kangaroo and their impact on native vegetation is being studied to determine the best method of controlling their impact.

## **Actions**

Management strategies addressing the problem of overgrazing and excessive kangaroo population densities will be formulated and implemented on the basis of their research.

## **INSERT:**

Kangaroo numbers have increased since European settlement in the northern Mount Lofty Ranges due to a number of factors. These include an increase in the number of permanent water points (eg. farm dams), and an increase in the amount of grazing areas due to the clearance of vegetation.

The condition of native vegetation at Para Wirra Recreation Park has been a concern for some time. The Para Wirra Vegetation Recovery Project was initiated in 1999 to pilot methods for improving vegetation integrity. This project includes vegetation monitoring, kangaroo population monitoring and management of the kangaroo population. Research has revealed that, notwithstanding integrated management of rabbits, hares and goats, species diversity is declining where grazing pressure from native herbivores is preventing the recovery of native vegetation communities.

The Western Grey Kangaroo appears to be a major contributor to the reduction in native species richness, increasing disturbance and subsequent promotion of weedy species. Of the 172 native indigenous plants in Para Wirra Recreation Park, 45 species are potentially impacted by kangaroos, resulting in nearly 84% of flora in the park being placed under grazing pressure (Dahl, unpublished data). Some native plant species at risk from the grazing of kangaroos are of conservation significance. A recent investigation of a nationally endangered orchid, *Caladenia behrii*, showed that even for larger populations in the northern Mount Lofty Ranges, over 40% of the population failed to set seed due to herbivory by kangaroos, with 100% eaten within a Kersbrook Forest population (Bickerton, 1999).

Within Para Wirra Recreation Park, *Astroloma conostephioides* (an important food source for native birds and reptiles) is regenerating only in areas protected from kangaroo grazing and is absent elsewhere in the park. While not a species of conservation significance, this plant is one of many being used as key indicator species to monitor the impacts of kangaroo grazing on native vegetation communities (Dahl, unpublished data).

At Para Wirra Recreation Park, surveys to identify kangaroo density were undertaken in 1995 and annually from 1996-2004. The estimated density has varied from approximately 20 to 40 individuals per km<sup>2</sup>.

There are a number of potential management options for controlling the overpopulation of kangaroos in Para Wirra Recreation Park, including restricting access to food and water, and culling. Fencing has been trialed as a management technique in the park in order to restrict access of kangaroos to food and water. However, restricting access to areas of improved pasture (eg. ovals) and watering points has not reduced the number of kangaroos in the park, nor the grazing impacts on vegetation communities. Experience from other protected areas in Australia shows that targeted culling can be effective in reducing the size of kangaroo populations (eg. Hattah-Kulkyne National Park in Victoria). In addition, the *National Code of Practice for the Humane Shooting of Kangaroos* requires that culling be conducted in a humane manner. While other techniques can and will continue to be investigated, culling is currently considered the only practicable method of controlling kangaroo populations.

Any restoration program involving kangaroo culling needs to be managed in an adaptive sense. Adaptive management directly addresses uncertainty by using management as a tool to gain critical knowledge (Johnson, 1999; Possingham, 2001). Thus, management strategies can be tailored as the understanding of the system increases (Johnson, 1999), resulting in greater success of the restoration program at Para Wirra Recreation Park.

Research and monitoring have determined that the kangaroo population impacts considerably on native vegetation and threatens species and communities of conservation significance. Consequently, when considered necessary to meet ecological restoration objectives, the kangaroo population will be culled in accordance with section 38 (10a) of the *National Parks and Wildlife Act 1972*.

#### **Actions**

Total grazing pressure and its effects on the flora and fauna within the park will be monitored.

The size of the kangaroo population will be reduced by culling, when considered necessary to meet ecological restoration objectives for the park.

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