Department for Environment and Heritage Management Plan



O'Halloran Hill Recreation Park 2008



This plan of management was adopted on **30 May 2008** and was prepared pursuant to section 38 of the *National Parks and Wildlife Act 1972*.



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Cover photography: View from O'Halloran Hill Recreation Park (C. Lovering, DEH)

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FOREWORD

O'Halloran Hill Recreation Park is located in the Southern Mount Lofty Ranges, 16 kilometres south of Adelaide in the suburbs of Seaview Downs and O'Halloran Hill.

The 290 hectare park provides both visual amenity and recreational opportunities for the rapidly growing southern suburbs.

The park is valued by the local community and is a popular recreation venue, mainly for residents of the surrounding suburbs, who use the park for walking, jogging, dog exercising, horse and bike riding. Portions of the park are leased to recreational organisations involved in archery, target shooting and model aircraft, while other portions are leased to commercial enterprises such as a golf driving range and a radio communications tower.

The plan defines a series of objectives and actions for the future management and use of this park and facilitates the development and implementation of high quality conservation programs.

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

I now formally adopt the plan of management for O'Halloran Hill Recreation 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 park.

(h) 1000

HON GAIL GAGO MLC
MINISTER FOR ENVIRONMENT AND CONSERVATION



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1 PARK LOCATION AND FEATURES

O'Halloran Hill Recreation Park was proclaimed in 1989 under the *National Parks and Wildlife Act* 1972 for recreation and nature conservation purposes. Commencing in the early 1970s, parcels of land had been acquired in this locality as part of a State Government strategy to create an open space buffer and to provide both visual amenity and recreational opportunities for the rapidly growing southern suburbs. The intention was to create a second ring of parklands around Adelaide that would cater for outdoor pursuits, as well as protecting the Hills Face Zone from development.

The park is located in the Southern Mount Lofty Ranges, 16 kilometres south of Adelaide in the suburbs of Seaview Downs and O'Halloran Hill (Figure 1). The park comprises 290 hectares but will expand to 334 hectares following boundary realignments and additions as identified in Figure 3 (see Section 10.3 Boundary Rationalisation). These boundary realignments comprise 26 hectares in the process of being excised, as now accommodating the Southern Expressway, and the addition of 70 hectares, consisting of land formerly owned by the Department of Transport Energy and Infrastructure (DTEI) and the undeveloped part of Morphett Road. Existing land tenure allotments are identified in Figure 4 (see Appendix A).

O'Halloran Hill Recreation Park and other National Parks and Wildlife Act reserves, along with Native Forest Reserves (*Forestry Act 1950*) and other Crown land within the Adelaide Region, are being managed in the broader context of a planning initiative known as Yurrebilla – The Greater Mount Lofty Parklands. The name was assigned in recognition of Kaurna culture and heritage. The aim of this project is to establish an integrated and cooperative management framework for approximately 40,000 hectares of land throughout the Mount Lofty Ranges that is variously managed by DEH, Forestry SA, SA Water and Planning SA. Yurrebilla can also include local government and voluntarily nominated, privately-owned areas. This initiative seeks to identify common natural, heritage and recreation resources and to develop regional level policies that will enable a consistent management approach to be adopted throughout the region.

The park is also part of the Metropolitan Open Space System and forms a key component of the proposed Great Southern Urban Forest by Planning SA, Department for Environment and Heritage and City of Marion. A small Council reserve adjoins the north-western boundary and there is potential to link O'Halloran Hill Recreation Park into the regional trail network.

The park is valued by the local community for its visual amenity and recreational values. Although it has no facilities, it is a popular recreation venue, mainly for residents of the surrounding suburbs, who use it for walking, jogging, dog exercising, horse riding and bike riding. Portions of the park are leased to recreational organisations involved in archery, target shooting and model aircraft. Other portions are leased to commercial enterprises (a golf driving range and a radio communications tower).

The park is within the 'Country' of the Kaurna Aboriginal people of the Adelaide area. It also contains some old buildings of historic interest, dating from previous agricultural land use.

Land uses in the surrounding region are in the end stage of a transition from agriculture to suburban residential and light industry. Other National Parks and Wildlife Act reserves and open space land in the vicinity of O'Halloran Hill Recreation Park include Sturt Gorge Recreation Park to the east and Hallett Cove and Marino Conservation Parks to the west. Other ecologically significant areas of open space that form connections to this region include: Glenthorne Farm (owned by University of Adelaide) and the Field River region (varied ownership between Sheidow Beneficiaries, Department of Transport, Energy and Infrastructure (DTEI), Boral Resources and City of Marion) to the south and the Linwood Quarry Buffer (owned by Boral Resources) to the west.

At one time O'Halloran Hill Recreation Park was virtually all cleared grazing land, but over the past 30 years much of the area has been revegetated. In the decade prior to the park's proclamation under the *National Parks and Wildlife Act 1972*, the previous management agency (the State Planning Authority) made a concerted effort to re-vegetate the area and sponsored mass plantings of thousands of trees. The first management plan (1990) recommended continuing with this work and also proposed several priority management initiatives to be completed during the term of the plan.

Some of the more notable management achievements that have been accomplished over the past 15 years have been: establishing a friends group; erecting signs; installing boundary fencing and gates; creating management access (fire) tracks and pedestrian walking trails; and undertaking extensive weed control and revegetation (eg olive poisoning and removal). Several recreation/sporting leases have also been established and a shared-use trail has been constructed.

This plan replaces the previous 1990 management plan for O'Halloran Hill Recreation Park.





O'Halloran Hill Recreation Park Location NP&W Act Reserves Heritage Agreements Drainage (CP) Conservation Park Roads (RP) Recreation Park Railway Map designed and created by Reserve Planning using PAMS Projection: MGA Zone 54 (GDA 94) Date: May, 2007 This map is indicative and only intended for the purposes of this management plan.

Figure 1

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; 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 the Minister ultimately decides whether to adopt a management plan.

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 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*.

3 VISION

The vision for O'Halloran Hill Recreation Park is a reserve that supports low impact recreational opportunities for the local community, connecting open space areas and land management programs while contributing to the visual amenity of the Hills Face Zone.

3.1 Key Values

- Fulfils an important open space need in the community and is popular for walking, horse riding, bicycle riding and dog exercising.
- Contains remnant stands of Grey Box Woodland and associated communities.
- Includes historic sites and objects, namely the Pea Farm ruins (listed on the Local Heritage Register); the old bluestone cottage and outbuildings; and the bluestone quarry.
- Provides visual amenity in a suburban setting.

3.2 Key Pressures

- Widespread introduced plant species threaten remaining stands of native vegetation.
- Introduced animals are likely to have an impact on native fauna populations.

4 ZONING

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

The first management plan (1990) divided the park into three zones; a Landscape Protection Zone on the lower hills face to the north, a Low Intensity Use Zone on the higher hills face, and a General Recreation Zone on the more level land to the south. That arrangement was useful when establishing the leased areas, but a consistent management prescription was applied elsewhere on the park and the zoning arrangement eventually proved superfluous.

The management zones described below and shown in Figure 2, establish a framework for the sustainable use of the park during the life of this plan. Given the nature of the park and the type of management, it is proposed that there be two zones, a Natural Zone over the majority of the area and a Lease Zone over the areas subject to third-party tenure.

Park management should be integrated with the management of any nearby open space areas or areas of natural habitat (both reserved lands and areas held in private ownership). Park managers should promote regional land uses in the area surrounding the park remaining compatible with protecting park values.

Once this management plan is formally adopted, any (State agency) developments described in this plan will have met the requirements of the *Development Act 1993* and will require no further development approval.

Natural Zone

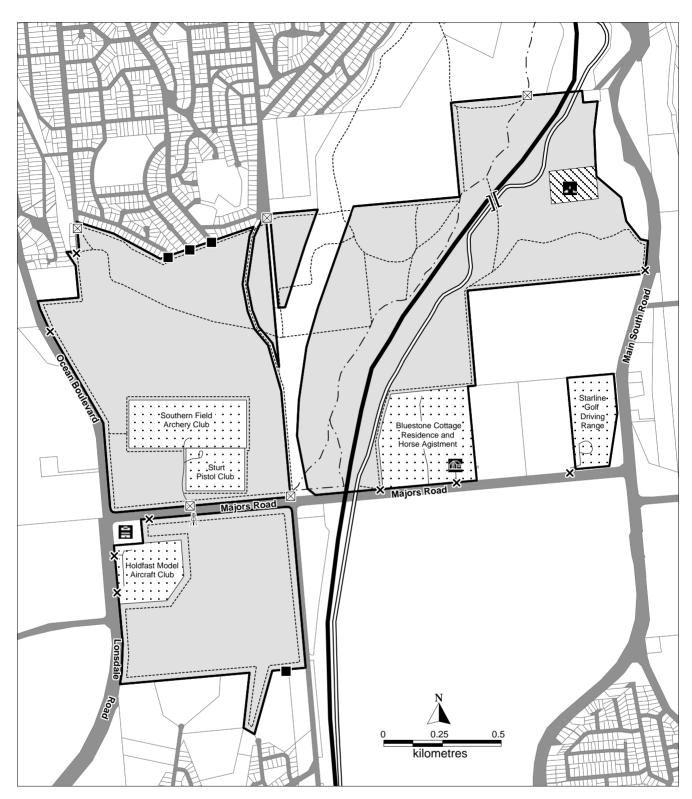
The Natural Zone comprises most of the park. Although degraded environmentally, this area has quasi-natural landscape values that should be protected. Recreational activities should be compatible with the environmental values of the area. Informal recreation is an important and appropriate activity within the Natural Zone. A range of recreational activities are permitted (see Section 8 Managing Tourism and Recreation) and the zone includes tracks and trails considered appropriate for walking, cycling and horse riding.

Dogs are permitted in the zone, provided they are leashed and under control of a responsible person. Motor vehicle use is restricted to emergency and management personnel, authorised lessees or by special arrangement. Orienteering will be permitted by prior arrangement with the park manager.

Mining access will also remain available over the 2.8 hectare area of the park, as shown in Figure 2, containing an old bluestone quarry. The proclamation conditions for this land permit the extraction of stone to be used for conservation work on heritage buildings (see Section 9.1 Exploration and Mining).

Prescription

- Ensure that vegetation communities and fauna habitats within the zone are protected/enhanced, introduced plants are controlled, and habitat restoration projects are undertaken.
- Permit a range of recreation activities within the zone. Develop and apply management strategies to minimise any negative impacts arising from human activity.
- Allow cycling and horse riding on designated tracks and trails.
- Dogs may be taken into the zone provided they are restrained on leads.
- Orienteering may be permitted as approved by the park manager.
- Access to remain available to the old bluestone quarry.





----- Walking Trail

--- Shared-use Trail

Lease Managed Vehicle Track

Veloway

Southern Expressway

Park Boundary

Natural Zone

Lease Zone

Area proclaimed for stone extraction

Old Bluestone Quarry

SA Water Tank

Bluestone House

Public Access

× Gate

♠ Communications Tower

1 Vehicle Underpass Tunnel

Figure 2

O'Halloran Hill Recreation Park

Zoning and Features

Map designed and created by Reserve Planning using PAMS Projection: MGA Zone 54 (GDA 94) Date: April 2008

This map is indicative and only intended for the purposes of this management plan

Lease Zone

There are a number of areas currently held under lease. Depending on the terms and conditions of those leases, lessees have exclusive use and sole responsibility for the management of those areas (and are responsible for the provision of any utility services). Development and building works are permitted within leased areas, subject to the lease conditions and relevant legislation, but should be sympathetic with the park's amenity value.

Prescription

- Allow for the operation of the existing leases within their prescribed areas during the term of this management plan.
- Ensure that any new leases established elsewhere on the park and associated buildings or permanent structures are consistent with the intent of this management plan and relevant legislation.
- Review leases against the objectives of this management plan to determine the appropriateness of their conditions or the continuation of the lease.

Objective

Zone the park to ensure an appropriate balance between regional amenity, outdoor recreation, and conservation.

- Designate and adopt the management zones prescribed in this plan and shown in Figure 2.
- Liaise with the City of Marion, other agencies, relevant authorities and neighbouring property owners in relation to any regional programs and nearby land uses.

5 MANAGING NATURAL HERITAGE

5.1 Geology, Soils and Landform

The park is located just south of the Eden Fault line. Underlying rock formations are of the Precambrian Umberatana Group. A bluestone quarry located on the park near Main South Road was utilised as a source of stone for some of the old buildings in the City of Adelaide (see Section 9.2 Exploration and Mining).

The park includes two basic landforms: an area to the south that is more or less level terrain; and an area to the north that is steeply sloping, with the north-west and north-east sections of the park characterised by deeply divided, hills face gullies with steep side slopes.

Soils on the more level area comprise heavy, black clays (gilgais) that can be boggy in winter but dry out in summer, with severe surface movement and cracking. The presence of this soil type can be a major impediment to vehicle access, building stability and tree planting success. However, on the remainder of the park, more stable terra-rossa soils overlay calcrete and shales. Although soil erosion is not currently a major issue, excessive storm water run-off can exacerbate soil erosion on the steeper slopes and gullies and should be avoided.

Any on-park activities should be carried out in a manner that minimises the risk of soil erosion. This risk particularly needs to be addressed when undertaking major earth-works or weed-control operations that involve the removal of substantial areas of non-indigenous vegetation. Recreational activities need to be monitored and managed effectively, because uncontrolled and irresponsible access away from designated trails can sometimes lead to localised, but potentially severe, soil compaction or erosion.

DEH and lessees should take soil type into account when planning building works or the construction of new access routes. The siting of tracks and trails should be done in such a way that the likelihood of wet weather access problems or soil erosion is minimised. Lessees and visitors, particularly those using the park for more active recreational pursuits, should be kept informed of any existing or erosion-prone areas and encouraged to avoid unnecessary damage (eg by only using designated tracks/trails).

Objective

Conserve the soils on the park.

Strategies

- Assess soil type and properties, including erosion potential, when planning and undertaking visitor access, management activities or development works.
- Ensure pest plant removal projects are complemented by natural regeneration or revegetation to maintain soil integrity.
- Manage visitor activities in the park to prevent erosion, providing updated information to encourage visitors to use existing walking trails and to avoid erosion prone areas.
- Maintain, improve, repair, re-route (or close temporarily or permanently) access tracks and walking trails as required to take account of soil characteristics.
- Identify any existing areas of erosion and undertake remedial works that may include storm water management and re-direction, or public exclusion.

5.2 Hydrology

There are no major watercourses on the park, but after periods of heavy rain the steeper slopes and gullies in the northern section can be subject to quite substantial flows of short duration. As well as the possibility of accelerating gully erosion on the park itself, there are water courses and housing subdivisions adjacent to and below the park that are the recipients of this storm water run-off.

This creates a situation where storm water run-off from the park could potentially impact on neighbouring properties if careful planning and maintenance of infrastructure is not undertaken. In at least one location, cut-off drains have been constructed (external to the park) to redirect run-off and appear to be working successfully, but such drains will need to be monitored and maintained if they are to remain effective over the long-term.

Storm water management and drain maintenance is the responsibility of DEH. However, there is no requirement for DEH to manage any 'natural' water flows that run off protected areas. Park managers should continue to liaise with the catchment authority, Councils and the Department of Transport Energy and Infrastructure (DTEI) in regard to storm water management.

If necessary, on-park flood mitigation works may be undertaken, but maintaining vegetative cover is probably the best way to restrict surface run-off after rain, and should be taken into consideration when planning and undertaking introduced plant removal projects. It is important that vegetation is re-established and so avoids situations where large areas of bare ground could contribute to increased run-off and associated problems.

Storm water run-off enters the park from a number of suburban roads and streets, in addition to the run-off from Southern Expressway. The City of Marion is aware of the issues at some of these locations. A small storm water retention pond is located on the western side of the Southern Expressway (currently within the park boundary) and may be excised from the park as part of boundary rationalisation (see Section 10 Managing Reserve Tenure).

Objective

Minimise the negative impacts of storm water run-off, both on and off the park.

Strategies

- Take precautions to minimise excess storm water both entering and leaving the park and take all steps necessary to reduce the potential for soil erosion and other damage.
- Liaise with local government and housing developers regarding the management of storm water run-off and maintenance of cut-off drains.

5.3 Native Vegetation

Before agriculture created different vegetation patterns, forests and grassy woodlands covered most of the Southern Mount Lofty Ranges. While the remaining native vegetation tends to be fragmented, degraded and infested with exotic plant species, it is thought that much of the park formerly supported Sheoak (*Allocasuarina verticillata*) and Grey Box (*Eucalyptus microcarpa*) Woodland. This habitat type once extended across much of the Southern Mount Lofty Ranges as sparse and open woodland with a grassy understorey. However, virtually all the native vegetation on the park was previously cleared for stock grazing and cropping. Grazing ceased in the early 1970s, apart from a small area that is currently leased and depastured to horses.

While very little of the original native vegetation remains, there are a few remnant stands of what could have been the prevailing association, Grey Box Woodland and associated communities. Native plant species remaining from the original flora and representative of the Southern Mount Lofty Ranges include Golden Wattle (*Acacia pycnantha*), Sheoak, Tea tree (*Melaleuca* spp.), River Red Gum (*Eucalyptus camaldulensis*), Peppermint Box (*Eucalyptus odorata*), and species of Grevillea and Hakea. Of the original flora, 29 species have been recorded.

Because of the open and degraded nature of the park, plus its high visibility and proximity to residential areas, once it became public land, concerted efforts were made to re-establish vegetation cover. From the mid-1970s the former management agency, other organisations, volunteers and DEH carried out numerous revegetation projects. Records (albeit incomplete) of the numbers and areas planted, as well as the species used, are held by DEH. It is known that over 26,500 trees were planted in the late 1970s and more than 78,000 in the decade from 1990 to 2000. As a result, areas of the park have developed into a visually attractive urban forest, with a cover over much of its area of both indigenous and non-indigenous shrubs and trees. DEH has a listing of species planted on the park and details of past revegetation efforts are available to interested persons on request.

This urban forest is essentially a cultural construct that is only superficially 'natural' and while it has excellent amenity value and provides habitat for some species, it obviously differs botanically from the pre-settlement situation. The early plantings included many species that were non-indigenous to the area, but in recent years revegetation using more appropriate native species has been integrated with woody weed removal projects. Additional revegetation is planned for the land additions on the northern part of the park that will involve the One Million Trees initiative and the Urban Forest Biodiversity Program.

Compilation of a revegetation action plan that will deal with the 55 hectares of land being added to the north of the park has commenced. Longer term, there is need for a landscape-scale vegetation management plan to address all land included in the proposed Great Southern Urban Forest put forward by Planning SA, DEH and City of Marion in the South Ward of the City of Marion, including O'Halloran Hill Recreation Park. Such a document would give some cross-agency uniformity to revegetation and weed management efforts on a regional basis. In addition, it could provide an opportunity to acknowledge land management linkages to Marino Conservation Park and other coastal conservation parks, as well as other significant land parcels that would contribute to an east-west nature link. It could also prioritise those areas where management effort should be applied to achieve the best results for biodiversity, regardless of land tenure or management agency. It could also suggest appropriate procedures and protocols for realistic revegetation programs, given the level of modification to date. Ideally, a landscape vegetation management plan would identify any significant remnant vegetation patches and sites where threatened native plant species occur.

Many of the earlier projects focussed on planting readily available trees and shrubs, with the aim of quickly establishing a dense cover of native vegetation. If the future landscape vegetation management plan aims to replicate the natural diversity and structure of pre-settlement vegetation communities, particular attention should be paid to local variations in species diversity and habitat structure.

The control of environmental weeds is probably the highest priority for native vegetation management. It is critical that any future revegetation strategies are planned with due consideration of fire prevention and suppression, to ensure fuel loads are not increased in high risk areas, near fire access tracks or along park boundaries.

The Friends of O'Halloran Hill Recreation Park and other volunteer groups have made a significant contribution with tree planting over many years. DEH remains committed to supporting community groups and cooperating with the managers of other public open space in the region in managing and regenerating native vegetation in a manner that protects and improves natural biodiversity and contributes to the creation of biological corridors, improved catchment water quality, and landscape amenity.

Phytophthora

Cinnamon Fungus (*Phytophthora cinnamomi*) and other species of *Phytophthora* are introduced plant pathogens that cause disease and death in a range of native plant species. *Phytophthora* is recognised by the Australian Government as a key threat to the survival of our native plants and animals and has developed a National Threat Abatement Plan (Environment Australia, 2001).

Symptoms of *Phytophthora* dieback have not been observed in O'Halloran Hill Recreation Park, but are present elsewhere in the region. Unfortunately, there is no cure for infected plants and it is extremely difficult to prevent the spread of *Phytophthora* from an infested area. However, the risk of human activity spreading *Phytophthora* into new areas can be minimised using the management strategies outlined in the DEH Standard Operating Procedures for *Phytophthora* Threat Management, which apply to all users of reserves. These strategies are aimed at minimising the transfer of *Phytophthora* in soil, water and plant roots by controlling access, adopting hygiene procedures, modifying work plans and ensuring awareness of *Phytophthora*.

Objective

Encourage restoration of native vegetation and reduce threats, particularly to species or communities of conservation significance, to help restore native biodiversity and landscape amenity.

- Prepare and implement a vegetation management program against identified priorities, encourage natural regeneration, and undertake integrated revegetation and pest plant control according to any recommendations embodied in that plan.
- Develop and maintain partnership arrangements with other agencies, authorities, community
 groups and the managers of nearby open space land to integrate native vegetation
 management and revegetation activities on a regional basis where feasible.

- Support and encourage the Friends of O'Halloran Hill Recreation Park and other volunteer organisations and individuals to continue regeneration/revegetation programs and to assist with monitoring species of conservation significance in collaboration with DEH.
- Consider the threat of *Phytophthora* and take steps to prevent its introduction whenever practicable, report and investigate suspected infestations, and treat whenever possible.

5.4 Native Fauna

While O'Halloran Hill may support only a few degraded remnants of the original vegetation and the revegetated area differs structurally and specifically from the pre-settlement condition, it forms an important island of habitat for native wildlife.

The revegetation efforts over the past three decades have created an environment favourable to some native species. Birds seem to have fared the best and although a number of the species present at the time of settlement are now regionally extinct (or under threat), other species have successfully adapted to the altered habitat. The park provides a refuge and feeding area for many avian species and for a variety of reptiles and invertebrates. The Common Brushtail Possum (*Trichosurus vulpecula vulpecula*) and Common Ringtail Possum (*Pseudocheirus peregrinus*) are the only native mammal species verified for this park.

Little management effort can be directed towards native fauna until re-vegetated habitats are more mature and threats have been abated. However during the term of this management plan, park managers and groups undertaking vegetation management need to remain cognisant of the habitat requirements of native fauna species. (Efforts to control introduced animals are discussed in Section 5.5 Introduced Plants and Animals).

Objective

Identify and protect native fauna species, especially those of conservation significance.

Strategies

- Take fauna habitat requirements into account when planning for and undertaking native vegetation regeneration and revegetation, and introduced plant control programs.
- Encourage volunteer groups and individuals to conduct fauna surveys and undertake population monitoring. Investigate opportunistic sightings to verify species identification.

5.5 Introduced Plants and Animals

Woody weeds once dominated much of the park and still pose a significant management problem. The park contains introduced species such as the European Olive (*Olea europaea*), Desert Ash (*Fraxinus angustifolia*), Broad-leaved Cottonbush (*Asclepias rotundifolia*), South African Daisy (*Senecio pterophorus*), and Thistle (*Carduus* spp.).

Other prominent exotics include Bridal Creeper (*Asparagus* asparagoides), Fennel (*Foeniculum vulgare*), Hawthorn (*Crataegus monogyna*), Radiata Pine (*Pinus radiata*), Portugese Heath (*Erica lusitanica*), Boneseed (*Chrysanthemoides monilifera*), Aleppo Pine (*Pinus halepensis*), Montpellier Broom (*Genista monspessulana*), Salvation Jane (*Echium plantagineum*), Soursob (*Oxalis* sp.), St. Johns Wort (*Hypericum perforatum*), Wild Onion (*Asphodelus fistulosus*), Cape Weed (*Arctotheca calendula*), and Cape Tulip (*Homeria collina*).

In addition, because of nursery supply problems, many of the species planted during the initial attempts at revegetation in the 1970s, although native to Western Australia and elsewhere, are not indigenous to the Southern Mount Lofty Ranges. Consequently, the park now supports both remnants and planted specimens of the original native vegetation, and numerous Australian species that are not indigenous to the area. While it is not a priority during the term of this management plan, depending on the aim of any future landscape vegetation management plan, it may be desirable to progressively remove the latter and replace them with native species of local provenance.

The 1990 management plan referred to the large number of non-indigenous plant species present and weed control was a major focus during the term of that plan, with much effort being directed towards controlling proclaimed pest plants and tackling woody weeds. Despite decades of effort at weed removal however, the park still supports a diverse population of non-indigenous plants. Most recently, weed control projects have focused primarily on poisoning and removal of olive trees.

Partnerships between DEH and the Urban Forest Biodiversity Program have contributed to the control of environmental weed species in targeted areas, and these projects have included the removal of olive trees.

The Friends of O'Halloran Hill Recreation Park have contributed significantly to the control of environmental weeds. In many areas, the diversity and cover of native species has increased and the incidence of exotic plant species has been reduced considerably. Lessees are required to undertake weed control as a lease requirement.

The extent of the environmental weed problem necessitates that priorities be set for any control work conducted on the park. Weed control priorities should be based on the impact, invasiveness, distribution, spread, efficacy of control, and threat posed by individual weed species. Action should focus on species that have the greatest potential threat to biodiversity, particularly woody weeds, and should be integrated with habitat revegetation, identifying the causes and controlling the further introduction and spread of pest plants. Effort should also be directed towards controlling declared plants that require control under section 181 of the *Natural Resources Management Act 2004*. Priority areas should be those of highest biodiversity value, where native vegetation remains.

To achieve these outcomes, DEH should partner other agencies, volunteer and community groups and the managers of land adjacent to the park including the City of Marion in a regional integrated weed control program in a manner that protects and improves biodiversity and contributes to the creation of biological corridors. The natural resources management plan by the Adelaide and Mount Lofty Ranges Natural Resources Management (AMLR NRM) Board (2008) includes programs that relate to biodiversity conservation and pest plant management and the AMLR NRM Board may be a potential funding source of this work.

While no comprehensive mammal survey has been undertaken in O'Halloran Hill Recreation Park, park managers have observed a number of introduced species in or near the park that are common throughout the Mount Lofty Ranges. These include the European Rabbit (*Orictolagus cuniculus*), Brown Hare (*Lepus capensis*), House Mouse (*Mus musculus*), Black Rat (*Rattus rattus*), and Red Fox (*Vulpes vulpes*). Cats and dogs (probably domestic strays) and some species of introduced bird are ubiquitous.

While no assessment of the impacts of foxes and cats have been conducted in the park, as with most of the Mount Lofty Ranges it is likely that fox and cat population do have an impact on native fauna in the park. Hares were the only pest animal of significance identified in the first management plan to impact the park, mainly due to damage recorded by park managers to newly planted trees. Anecdotal evidence suggests rabbits are not a current problem.

Careful management through integrated control programs is the best way to ensure that pest animal numbers are reduced with minimal off-target impact on native flora and fauna. In other reserves in the Mount Lofty Ranges, baiting foxes with 1080 poison (in support of the nationally endangered Southern Brown Bandicoot (*Isoodon obesculus obesculus*) populations) are believed to have been successful in reducing the numbers of these pest animals. However, lasting impact can be achieved only if baiting programs are conducted across the landscape.

Given the park's proximity to residential properties however, broad-acre baiting programs are unlikely to be feasible, although there may be opportunities to cooperate with regional authorities and neighbouring landowners to develop more acceptable control programs. Pest animal control should remain on the management agenda, to deal with issues such as hare damage to revegetation.

Objective

Control introduced plants and animals posing the most threat to biodiversity so that adverse impacts are mitigated and degraded environments are restored to a more natural condition.

Strategies

• Implement a vegetation management program against long-term, achievable and measurable goals and include programs for coordinated pest plant control, land rehabilitation, and revegetation with native species of local provenance.

- Continue to encourage and support partnerships with lessees, volunteers, the local community and other land managers in integrated, regional weed control programs that meet pest plant control priorities and strategies, and where feasible, combine weed control efforts with habitat regeneration/revegetation projects on the park and on neighbouring open space land.
- Monitor introduced/pest animal populations and devise control programs in accordance with priorities, taking into account the benefits versus the costs of possible adverse impacts to native wildlife and any other off-target impacts.
- If and when pest animal control is needed, work cooperatively with lessees, adjoining landowners, the AMLR NRM Board, the City of Marion, the Friends of O'Halloran Hill Recreation Park and the local community generally to achieve effective and acceptable control.

6 MANAGING FIRE

In December 2007 approximately 10 hectares of grassland at O'Halloran Hill Recreation Park were burnt as a result of bushfires sparked by lightening. Records indicate that there have been few, if any, bushfires in the park prior to this event. As the park is in close proximity to residential areas, fire management needs to be taken seriously.

Access for fire fighting activities is provided in the park through the track network developed during the term of the 1990 management plan and by major roads bisecting the park and on the perimeter which serve as fuel breaks. All tracks and trails within the park are also used for emergency vehicle access. Annual slashing and weed control programs are undertaken along access tracks and on the boundaries, to protect both park assets and surrounding residential areas from the threat of bushfire. While no fuel reduction or ecological burning has taken place thus far, numerous large heaps of waste material derived from woody weed control activities (eg olive and pine trees) have been burnt on site.

DEH prepared the *Draft Reserves of the Southern Foothills, Mount Lofty Ranges Fire Management Plan* (2007) (including O'Halloran Hill Recreation Park), in consultation with adjoining Country Fire Service Groups and the District Bushfire Prevention Committee, to integrate district fire management. Stakeholders and the wider community were consulted to ensure an understanding of the fire risks and mitigating strategies being proposed or undertaken in the park.

The fire management plan:

- identifies natural and cultural heritage values and built assets;
- provides a framework for the management of bushfire suppression, including identification of strategic access and control lines; and
- provides a framework for prescribed burning for ecological management and fuel reduction purposes.

Objective

Manage fire to ensure the protection of life and property, the maintenance and where practicable the enhancement of biodiversity, and the protection of natural, cultural and built assets.

- Implement and review the *Draft Reserves of the Southern Foothills, Mount Lofty Ranges Fire Management Plan* (2007) in association with CFS and other stakeholders.
- Continue to work with the relevant fire management authorities to minimise risk to life and property within and surrounding the park.
- Suppress fires as soon as possible.

7 MANAGING CULTURAL HERITAGE

7.1 Aboriginal Heritage

Kaurna Aboriginal Culture and Heritage

The land comprising O'Halloran Hill Recreation Park forms part of the 'Country' of the Kaurna people (Tindale, 1974).

Prior to colonial settlement in 1836, the Kaurna people managed and preserved the coastal and inland environment, which provided them with important seasonal food resources. Following colonial settlement, the Kaurna population was substantially reduced as a result of introduced diseases, dispersal, dispossession of their land and water supplies, and sometimes through violent conflict.

Today, Kaurna people live on their country and have retained some of their culture and language. Some of the language and traditional stories have also been recorded. However, to date the full extent of Aboriginal heritage at O'Halloran Hill Recreation Park has not been comprehensively researched.

Moreover, due to historical or cultural reasons, any knowledge of the cultural heritage of the region may be privileged to selected Kaurna 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. 'Aboriginal site' and 'Aboriginal object' are defined under the Act as 'an area of land or an object that is of significance according to Aboriginal tradition; or that is of significance to Aboriginal archaeology, anthropology or history.' The Aboriginal Affairs and Reconciliation Division (AARD) of the Department of the Premier and Cabinet maintains a Central Archive, including the Register of Aboriginal Sites and Objects.

Although there are no sites listed on the Central Archive for O'Halloran Hill Recreation Park, a comprehensive survey of the park is yet to be undertaken. In carrying out the activities and strategies proposed in this plan, DEH will ensure that it complies with the *Aboriginal Heritage Act 1988*.

To ensure the protection of cultural heritage sites, DEH staff will consult with AARD and the relevant regional Aboriginal heritage committees before commencement of any significant development works. If Kaurna cultural heritage sites are identified, they may require conservation plans to facilitate appropriate management.

Objective

Ensure that any Aboriginal sites, objects and remains are protected and preserved.

- Consult with traditional owners, the relevant regional Aboriginal heritage committees and relevant Government Aboriginal heritage authorities in decisions regarding the management of Aboriginal heritage.
- Identify and protect any Aboriginal sites, objects and remains in cooperation with traditional owners, the relevant regional Aboriginal heritage committees, AARD and other relevant authorities.
- In consultation with traditional owners and the relevant regional Aboriginal heritage committees, submit cultural sites and stories that relate to the park for inclusion on the AARD Central Archive and where appropriate provide interpretation for visitors.

7.2 Non-Aboriginal Heritage

The park and surrounding suburb is named after Major Thomas O'Halloran, a colonial Police Commissioner, who owned an adjacent property now known as 'Glenthorne'. Prior to it being proclaimed a park, the land had been utilised for agriculture for over a century. The early European settlers systematically cleared the entire area of native vegetation. Most of it was grazed, with smaller areas used for cropping and mining.

There are some sites and objects still evident on the park that relate to its prior history, namely the Pea Farm ruins (adjacent Main South Road), the old bluestone cottage and outbuildings (on Majors Road) and the bluestone quarry itself (below the Pea Farm ruins). The Pea Farm is listed on the Local Heritage Register.

It is important that historical sites and objects of significance are conserved. DEH should continue to support and encourage any historic survey, research or documentation of such sites and work with relevant authorities to undertake site stabilisation where required. There may be merit in interpreting some of the historic sites and providing appropriate interpretation material for visitors.

Objective

Ensure significant non-Aboriginal heritage sites within the park are conserved, protected and where appropriate, interpretive material provided.

- Support the ongoing survey of historic sites and stories that relate to the history of the park area and liaise with relevant authorities.
- Consider interpreting heritage sites that highlight the history of the park. Where appropriate, make this information available to visitors by preparing, displaying, maintaining and upgrading interpretive information that increases public awareness.

8 MANAGING TOURISM AND RECREATION

8.1 Visitor Access and Use

Visitors can enter the park from two public access points situated on Majors Road: one access point close to Ocean Boulevard, and the other opposite the southern portion of the old Morphett Road. There is limited vehicle parking provided at these locations. Pedestrian access points are also located at the northern end of the park through the streets of The Balconies subdivision in the suburb of Darlington, along Davenport Terrace (Seacliff Park) and the ends of Ridgefield Avenue, Greenfield Road and Fowler Street (Seaview Downs).

The park is recognised as a key element of the proposed Great Southern Urban Forest, an open space network encompassing public and private land for recreation, biodiversity conservation and water catchment management for the southern suburbs. Although no comprehensive surveys have been undertaken, park managers have observed that local visitors use the park's recreational trails and management tracks for walking, jogging, bicycle riding, horse riding and dog exercising. Visitor access for such activities will remain well-marked, safe and sustainable.

Although currently there are no public visitor facilities on the park, existing and future recreation opportunities will be assessed and any future requirements will be determined. DEH acknowledges that numerous trails have been established. As they are unauthorised, these trails will be closed and rehabilitated. A trails planning process will also be undertaken to assess existing tracks and trails. New trails may be established if their need is identified. The need for signage will also be considered. The park's importance as part of the Great Southern Urban Forest proposal will be taken into account.

Members of the various clubs who lease areas on the park participate in pistol and small-bore rifle shooting, field archery, model aircraft flying, horse riding and golf driving. The number of people participating in these activities is higher on weekends. The various facilities on leased areas are provided for the use of club members only and are not normally available to the general public.

Motorised bikes are not allowed within the park, except for access to lease areas.

By managing and providing for these activities, the park fulfils an important need in the community, allowing visitors to enjoy their chosen recreational activities, without adversely impacting ecologically or culturally sensitive areas of the park.

Vehicle Access

A network of management vehicle tracks is established within the park, which is maintained to facilitate management and emergency vehicle access (Figure 2). There is currently no public vehicular access apart from lessees and this arrangement will continue for the term of this management plan.

Vehicle access or parking congestion at entry points does not appear to be causing any immediate problems, however, roadside parking will continue to be monitored and a risk assessment undertaken if required and acted upon accordingly.

Walking Trails

Being surrounded by suburban housing with coastal views, the park provides excellent opportunities for walking. Visitors can explore the park from a variety of walking trails (Figure 2). The provision of future opportunities including links with other open space areas in the region will be assessed over time and any changes will need to be sustainable and safe.

Shared-use Trails

There is one shared-use trail that runs alongside the western side of the Southern Expressway that is available for walkers, bike riders and horse riders (Figure 2). That arrangement appears to be working acceptably. DEH will work with Horse SA to develop a code of conduct for horse riders on park, to restrict the possible spread of seeds and diseases with the animals.

Bike Trails

No trails have been formally designated for this use, but bike riders have been allowed to use the shared-use trail. This use can continue for the term of this management plan, subject to ongoing monitoring.

Visitors on bicycles can also access the park via the bicycle Veloway track, a well used facility located on the eastern side of the Southern Expressway that bisects the park, managed by the Department of Transport Energy and Infrastructure (DTEI).

Horse Trails

Currently, no trails are formally designated for this use, but horse riders have been allowed to use the shared-use trail. This use can continue for the term of this management plan, subject to ongoing monitoring.

Dog Exercising

The park is popular for exercising dogs and for the term of this management plan, dogs will continue to be permitted. To ensure the enjoyment of other park users and to ensure the preservation of wildlife, dogs will only permitted provided that they are on a leash and under the effective control of their owner. To facilitate visitor compliance, sign-posting and provision of information will be used.

Commercial Tour Operations

While there are no commercial tours operating in the park, any future tours organised for the benefit of fee or reward would require the tour operator to obtain the mandatory Commercial Users Licence, consistent with regulation 37 of the *National Parks and Wildlife (National Parks) Regulations 2001.*

Objective

Provide appropriate access and visitor facilities for park visitors to participate in a range of recreation opportunities, without adversely impacting ecologically or culturally sensitive areas.

- Limit access by motor vehicles to lessees and for management and emergency purposes, with internal access tracks maintained to a suitable level consistent with Government standards.
- Liaise with the City of Marion, other relevant agencies and the community to address future use and maintenance of tracks and trails and to ensure that they link with those that are proposed as part of the Great Southern Urban Forest.
- Monitor the need for visitor parking and if required investigate ways of making improved provisions.
- Continue to provide opportunities for walking, cycling and horse riding on designated tracks and trails.
- Establish a track and trail rationalisation/maintenance program to provide clearly defined routes for visitors, assessing suitability of existing trails for various recreational pursuits, while eliminating duplication and reducing impacts on park values.
- Provide access for dogs on a lead consistent with the National Parks and Wildlife (National Parks) Regulations 2001.
- Monitor visitor use patterns and interests and undertake assessments for future strategic planning.
- Liaise with Horse SA to develop a code of conduct for horse riders on park.

9 MANAGING RESOURCE USE

9.1 Exploration and Mining

O'Halloran Hill Recreation Park was proclaimed on 7 September 1989 subject to exploration and mining under the *Mining Act 1971* over a 2.8 hectare area of the park containing an old bluestone quarry. The old bluestone quarry is a source of Tapley Hill bluestone, which is a building material used for conservation work on old buildings in Adelaide. Tapley Hill bluestone is quite distinct from other bluestones due to its characteristic texture and it is not possible to properly conserve heritage buildings constructed of Tapley Hill bluestone from alternative sources.

The proclamation imposes specific conditions of mining and states that 'a mining tenement holder must not prospect for, or mine, within the recreation park, any mineral other than stone required for the restoration of a building or other structure'.

It should be noted that while access to the quarry has not been sought to date, it may be required in the future. Given the special qualities of the bluestone from this site, the current arrangement will continue and controlled access to the quarry will be permitted strictly for the mining of stone to be used for repairing and restoring recognised heritage buildings. As this activity will probably be intermittent and of localised impact, it is unlikely to be detrimental to park values.

Objective

Ensure access remains available to the old bluestone quarry for extracting stone to be used for conservation work on heritage buildings.

Strategy

• Liaise with PIRSA and mining operators, and set appropriate conditions, regarding access to and use of the old bluestone quarry.

10 MANAGING RESERVE TENURE

10.1 Leases and Licences

The 1990 management plan anticipated the leasing of portions of the park for recreation purposes and some pre-existing tenures were continued. There are currently six leases on the park (Figure 2):

- Starline Golf driving range (7 hectares) fenced area on the corner of Majors and Main South Roads:
- Sturt Pistol Club (4 hectares) internal fenced area north of Majors Road;
- Southern Field Archery Club (10 hectares) internal fenced area north of Majors Road;
- Holdfast Model Aircraft Club (6 hectares) fenced area on the corner of Majors Road and Ocean Boulevard:
- Radio Tower (20 square metres) fenced area to the south of Majors Road; and
- Bluestone cottage residence and adjoining horse agistment fenced area (11 hectares) on Majors Road.

The above leases all have individual terms and conditions. During the term of any of the current lease agreements, DEH will encourage lessees to maintain and upgrade facilities, as and when required, in an aesthetic manner that is sympathetic to the local environment and heritage values.

There may be future proposals for additional leases over land either covered by an existing lease or over other land in the park. It is recognised that leasing may be the best way to ensure maintenance and management of other parts of the park. Depending on the type of activity, DEH may enter into leasing negotiations with parties interested in assuming control of land, provided that such leasing does not permanently alienate the land and buildings from community benefit and enjoyment.

Any developments, buildings or infrastructure on leases must comply with this management plan and relevant Development Plan Zoning Principles. This requirement applies to all new built developments on the park. Any current or future leasing and licensing arrangements entered into should be reviewed at appropriate intervals after the adoption of this management plan.

Objective

Manage leases and licences for park land in accordance with this management plan and under terms and conditions that are mutually beneficial to all parties and do not detract from park values.

Strategy

• Set lease conditions, periodically review and monitor compliance as required, ensuring lease operations are consistent with protecting park values and community interests.

10.2 Public Utilities

Large, high voltage powerlines traverse the park in the vicinity of the old Morphett Road corridor. There are also water mains located along the same route. Although visually intrusive, the power pylons pose no known threat to park values and ETSA Utilities only require periodic access for inspection and routine maintenance. The water supply company requires similar rights of access to the pipeline.

Infrastructure supplying electricity, telecommunications, gas and water is also located on the roads around the park boundaries and in residential areas immediately adjacent. There is a large water tank located on the corner of Majors Road and Ocean Boulevard (external to the park). Power and water are supplied to leased facilities on park and are the responsibility of the lessees.

While there is the possibility that careless park maintenance work could damage utility services, there is equally the potential for park assets to be degraded by insensitive maintenance work undertaken by utility companies. It is important that the ongoing operation of any utility easement does not detract from park values. To avoid these problems, DEH needs to maintain liaison with utility managers (eg ETSA Utilities, SA Water and commercial affiliates) to ensure that maintenance or development work neither interferes with utility services nor impacts on park values.

There is a possibility too, that in the future, requests may be made to locate additional utility services on the park. It is impossible to canvass the range of possibilities in this management plan, but current DEH policy discourages the location of utility infrastructure on parks except under very special circumstances where proponents can demonstrate that:

- alternative locations have received full consideration; and
- the utility will not compromise the conservation or recreation values of the park.

Protection of park values is a priority, and parks should not be considered to be a convenient option for the location of utilities due to their status as public land. Although a variety of public utilities (as described above) are already located within O'Halloran Recreation Park, any future proposal for additional utilities will not be a forgone conclusion and must be consistent with DEH policy and the provisions of this management plan.

All proposals for new utility infrastructure should be reviewed in conjunction with the prevailing DEH policy. A community and environmental cost-benefit analysis should be mandatory before a decision is taken to locate infrastructure on park land. Provided that on balance a proposal is of positive community benefit and complies with DEH policy, a grant of approval may be deemed to accord with this management plan.

Objective

Ensure the location, operation and maintenance of utility services within and adjacent to the park do not compromise park values.

Strategies

- Maintain accurate records of utility services, particularly underground facilities, to minimise the potential for damage through park maintenance and future development works.
- Maintain liaison with other agencies and utility companies and periodically review access requirements and maintenance programs.
- Review any proposal for the location of additional utilities on or over the park against the current DEH policy and the cost-benefit to the community and the environment.

10.3 Boundary Rationalisation

The land accommodating the Southern Expressway, which currently traverses the park, is in the process of being excised in an arrangement between DEH and the Department of Transport Energy and Infrastructure (DTEI). When the formal boundary adjustments have been finalised, 26 hectares of land will be abolished from the park. To compensate for this loss, 70 hectares of land will be added to the park, increasing the area of O'Halloran Hill Recreation Park to approximately 334 hectares (Figure 3).

The land in the process of being excised includes land identified for future requirements for the Southern Expressway. To accommodate this, the boundary fence on the western side of the freeway will need to be relocated a further 20 metres west to align with the legal boundary.

As part of these arrangements with DTEI, DEH was funded to manage the additional land and produce documents including this management plan, a revegetation action plan, landscape vegetation management plan and fire management plan for the entire park.

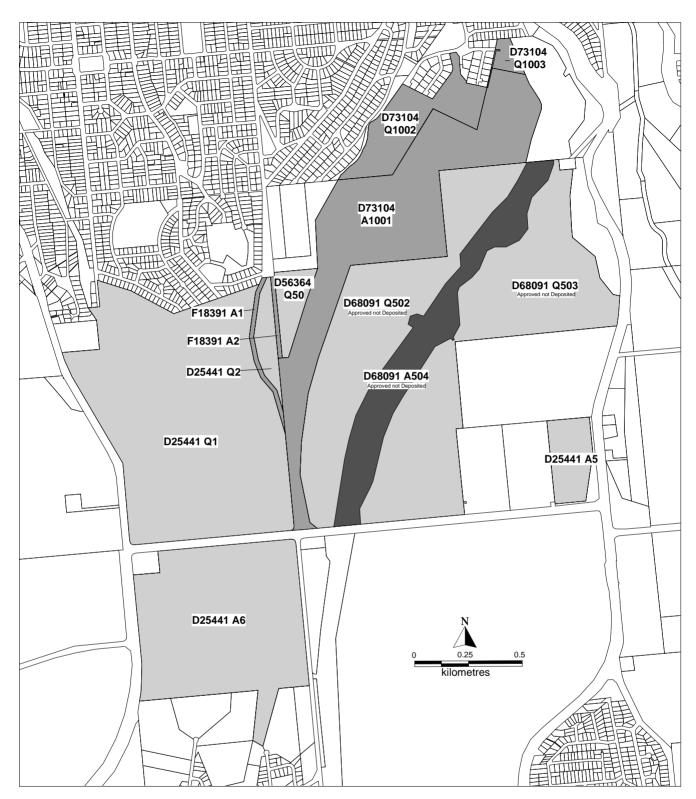
Other proposals may arise during the term of this management plan. The addition or abolition of land will be considered favourably where it can be demonstrated that it provides significant management, nature conservation, recreation or community benefit. Opportunities that are in accordance with the development of the proposed Great Southern Urban Forest will also be considered favourably.

Objective

Achieve maximum biodiversity conservation and optimal park boundaries for management purposes and recreation outcomes.

- Progress the boundary alterations associated with the Southern Expressway.
- Investigate any further opportunities to conserve land to improve park values and consolidate park boundaries.

- Manage all land additions to the park according to the principles outlined in this management plan.
- Relocate the existing fence along the western side of the freeway to align with the legal boundary.



LEGEND

O'Halloran Hill Recreation Park Additional land (70 hectares) Southern Expressway land to be removed (26 hectares) Figure 3

O'Halloran Hill Recreation Park

Boundary Rationalisation

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

Date: April, 2008

SUMMARY OF MANAGEMENT STRATEGIES

ZONING

- Designate and adopt the management zones prescribed in this plan and shown in Figure 2.
- Liaise with the City of Marion, other agencies, relevant authorities and neighbouring property owners in relation to any regional programs and nearby land uses.

MANAGING NATURAL HERITAGE

Geology, Soils and Landform

- Assess soil type and properties, including erosion potential, when planning and undertaking visitor access, management activities or development works.
- Ensure pest plant removal projects are complemented by natural regeneration or revegetation to maintain soil integrity.
- Manage visitor activities in the park to prevent erosion, providing updated information to encourage visitors to use existing walking trails and to avoid erosion prone areas.
- Maintain, improve, repair, re-route (or close temporarily or permanently) access tracks and walking trails as required to take account of soil characteristics.
- Identify any existing areas of erosion and undertake remedial works that may include storm water management and re-direction, or public exclusion.

Hydrology

- Take precautions to minimise excess storm water both entering and leaving the park and take all steps necessary to reduce the potential for soil erosion and other damage.
- Liaise with local government and housing developers regarding the management of storm water run-off and maintenance of cut-off drains.

Native Vegetation

- Prepare and implement a vegetation management program against identified priorities, encourage natural regeneration, and undertake integrated revegetation and pest plant control according to any recommendations embodied in that plan.
- Develop and maintain partnership arrangements with other agencies, authorities, community
 groups and the managers of nearby open space land to integrate native vegetation
 management and revegetation activities on a regional basis where feasible.
- Support and encourage the Friends of O'Halloran Hill Recreation Park and other volunteer organisations and individuals to continue regeneration/revegetation programs and to assist with monitoring species of conservation significance in collaboration with DEH.
- Consider the threat of *Phytophthora* and take steps to prevent its introduction whenever practicable, report and investigate suspected infestations, and treat whenever possible.

Native Fauna

- Take fauna habitat requirements into account when planning for and undertaking native vegetation regeneration and revegetation, and introduced plant control programs.
- Encourage volunteer groups and individuals to conduct fauna surveys and undertake population monitoring. Investigate opportunistic sightings to verify species identification.

Introduced Plants and Animals

- Implement a vegetation management program against long-term, achievable and measurable goals and include programs for coordinated pest plant control, land rehabilitation, and revegetation with native species of local provenance.
- Continue to encourage and support partnerships with lessees, volunteers, the local community and other land managers in integrated, regional weed control programs that meet pest plant control priorities and strategies, and where feasible, combine weed control efforts with habitat regeneration/revegetation projects on the park and on neighbouring open space land.
- Monitor introduced/pest animal populations and devise control programs in accordance with priorities, taking into account the benefits versus the costs of possible adverse impacts to native wildlife and any other off-target impacts.
- If and when pest animal control is needed, work cooperatively with lessees, adjoining landowners, the AMLR NRM Board, the City of Marion, the Friends of O'Halloran Hill Recreation Park and the local community generally to achieve effective and acceptable control.

MANAGING FIRE

- Implement and review the *Draft Reserves of the Southern Foothills, Mount Lofty Ranges Fire Management Plan* (2007) in association with CFS and other stakeholders.
- Continue to work with the relevant fire management authorities to minimise risk to life and property within and surrounding the park.
- Suppress fires as soon as possible.

MANAGING CULTURAL HERITAGE

Aboriginal Heritage

- Consult with traditional owners, the relevant regional Aboriginal heritage committees and relevant Government Aboriginal heritage authorities in decisions regarding the management of Aboriginal heritage.
- Identify and protect any Aboriginal sites, objects and remains in cooperation with traditional owners, the relevant regional Aboriginal heritage committees, AARD and other relevant authorities.
- In consultation with traditional owners and the relevant regional Aboriginal heritage committees, submit cultural sites and stories that relate to the park for inclusion on the AARD Central Archive and where appropriate provide interpretation for visitors.

Non-Aboriginal Heritage

- Support the ongoing survey of historic sites and stories that relate to the history of the park area and liaise with relevant authorities.
- Consider interpreting heritage sites that highlight the history of the park. Where appropriate, make this information available to visitors by preparing, displaying, maintaining and upgrading interpretive information that increases public awareness.

MANAGING TOURISM AND RECREATION

Visitor Access and Use

- Limit access by motor vehicles to lessees and for management and emergency purposes, with internal access tracks maintained to a suitable level consistent with Government standards.
- Liaise with the City of Marion, other relevant agencies and the community to address future use and maintenance of tracks and trails and to ensure they link with those that are proposed as part of the Great Southern Urban Forest.
- Monitor the need for visitor parking and if required investigate ways of making improved provisions.
- Continue to provide opportunities for walking, cycling and horse riding on designated tracks and trails.
- Establish a track and trail rationalisation/maintenance program to provide clearly defined routes for visitors, assessing suitability of existing trails for various recreational pursuits, while eliminating duplication and reducing impacts on park values.
- Provide access for dogs on a lead consistent with the National Parks and Wildlife (National Parks) Regulations 2001.
- Monitor visitor use patterns and interests and undertake assessments for future strategic planning.
- Liaise with Horse SA to develop a code of conduct for horse riders on park.

MANAGING RESOURCE USE

Exploration and Mining

• Liaise with PIRSA and mining operators, and set appropriate conditions, regarding access to and use of the old bluestone quarry.

MANAGING RESERVE TENURE

Leases and Licences

• Set lease conditions, periodically review and monitor compliance as required, ensuring lease operations are consistent with protecting park values and community interests.

Public Utilities

- Maintain accurate records of utility services, particularly underground facilities, to minimise the potential for damage through park maintenance and future development works.
- Maintain liaison with other agencies and utility companies and periodically review access requirements and maintenance programs.
- Review any proposal for the location of additional utilities on or over the park against the current DEH policy and the cost-benefit to the community and the environment.

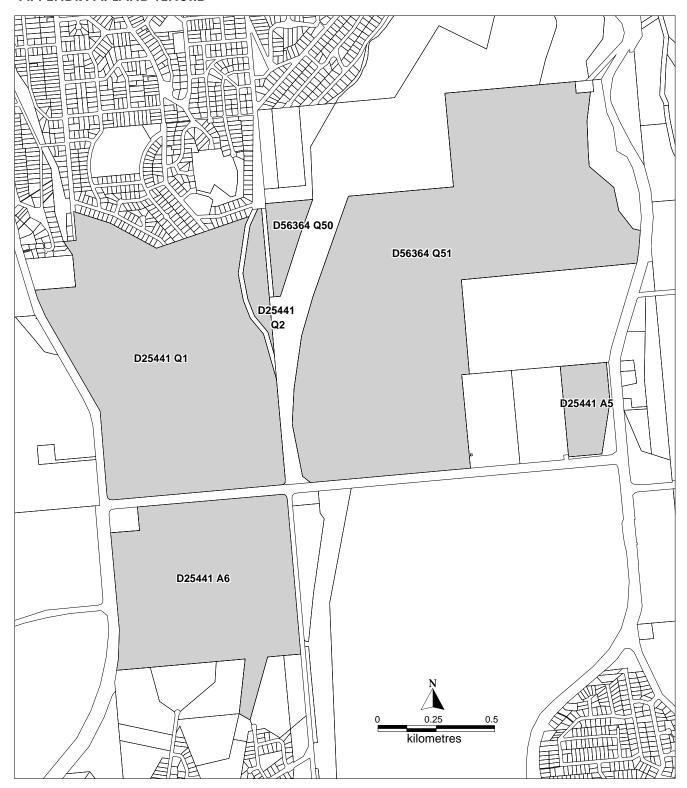
Boundary Rationalisation

- Progress the boundary alterations associated with the Southern Expressway.
- Investigate any further opportunities to conserve land to improve park values and consolidate park boundaries.
- Manage all land additions to the park according to the principles outlined in this management plan.
- Relocate the existing fence along the western side of the freeway to align with the legal boundary.

REFERENCES AND BIBLIOGRAPHY

- Adelaide and Mount Lofty Ranges Natural Resources Management Board (AMLR NRM Board) (2008) Creating a Sustainable Future: An Integrated Natural Resources Management Plan for the Adelaide and Mount Lofty Ranges Region. AMLR NRM Board, Adelaide, South Australia.
- Department for Environment and Heritage (DEH) (2007) *Draft Reserves of the Southern Foothills, Mount Lofty Ranges Fire Management Plan*, Adelaide, South Australia.
- Environment Australia (2001) *National Threat Abatement Plan for Dieback caused by the root-rot fungus* Phytophthora cinnamomi. Commonwealth of Australia, Canberra.
- National Parks and Wildlife Service (1990) *O'Halloran Hill Recreation Park Management Plan.*Department of Environment and Planning, Adelaide.
- Planning SA, Department for Environment and Heritage and City of Marion (2005) A Proposal for the establishment of: The Great Southern Urban Forest, a major open space and biodiversity link in southern Adelaide.
- Tindale, NB (1974) *Aboriginal Tribes of Australia*. Australian National University Press, Australian Capital Territory, Canberra.
- Turner, M S (2001) Conserving Adelaide's Biodiversity Resources. Urban Forest Biodiversity Program, Adelaide.

APPENDIX A: LAND TENURE



LEGEND

O'Halloran Hill Recreation Park Land Parcels D48888

Figure 4

O'Halloran Hill Recreation Park

Current Land Tenure

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

Date: August, 2008