

# Department for Environment and Heritage

## Management Plan



### Cape Torrens and Western River Wilderness Protection Areas

2006



Government  
of South Australia

This plan of management was adopted on 20 July 2006 and was prepared pursuant to section 31 of the *Wilderness Protection Act 1992*.



**Government of South Australia**

Department for Environment  
and Heritage

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

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ISBN: 1 921238 66 6

Front cover photograph of Glossy Black-Cockatoos feeding in *Allocasuarina verticillata* courtesy of Nicholas Birks

This document may be cited as "Department for Environment and Heritage (2006) *Cape Torrens and Western River Wilderness Protection Areas Management Plan*, Adelaide, South Australia"

## FOREWORD

Cape Torrens and Western River Wilderness Protection Areas were proclaimed in 1992 and together conserve 3,126 hectares of valuable Sheoak communities. Located on Kangaroo Island, they were two of the first five wilderness protection areas to be proclaimed in South Australia.

The wilderness protection areas provide valuable examples of remnant native wildlife habitat on the western end of Kangaroo Island. The wilderness protection areas protect an abundance of native flora and fauna, including several species of conservation significance at state or national levels.

The wilderness protection areas provide important habitat for the nationally endangered Glossy Black-Cockatoo, which is the most endangered vertebrate on Kangaroo Island. The wilderness protection areas also provide key breeding sites for Ospreys and White-bellied Sea-eagles, which nest on inaccessible, rugged cliffs.

I now formally adopt the plan of management for Cape Torrens and Western River Wilderness Protection Areas under the provisions of section 31 of the *Wilderness Protection Act 1992*.



**HON GAIL GAGO MLC**

**MINISTER FOR ENVIRONMENT AND CONSERVATION**



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## 1 PARK LOCATION AND FEATURES

Cape Torrens and Western River Wilderness Protection Areas were proclaimed in 1993 under the *Wilderness Protection Act 1992* to protect their wilderness quality, remoteness and natural attributes. They were formerly conservation parks under the *National Parks and Wildlife Act 1972*, and were first proclaimed in 1971, to protect Sheoak communities for Glossy Black-Cockatoos and to protect outstanding cliff and coastal scenery.

The reserves are located on the north coast of Western Kangaroo Island (Figure 1). Western River Wilderness Protection Area is 65 km west of Kingscote, and Cape Torrens Wilderness Protection Area is a further 12 km west. Western River Wilderness Protection Area (2,374 hectares) and Cape Torrens Wilderness Protection Area (751.5 hectares) are surrounded by agricultural and forestry properties and privately owned properties where vegetation has been protected as Heritage Agreements under the *Native Vegetation Act 1991*.

Reserves in the vicinity of Western River Wilderness Protection Area and Cape Torrens Wilderness Protection Area include Cape Torrens Conservation Park, Western River Conservation Park, Lathami Conservation Park, Parndana Conservation Park, Flinders Chase National Park and Ravine des Casoars Wilderness Protection Area.

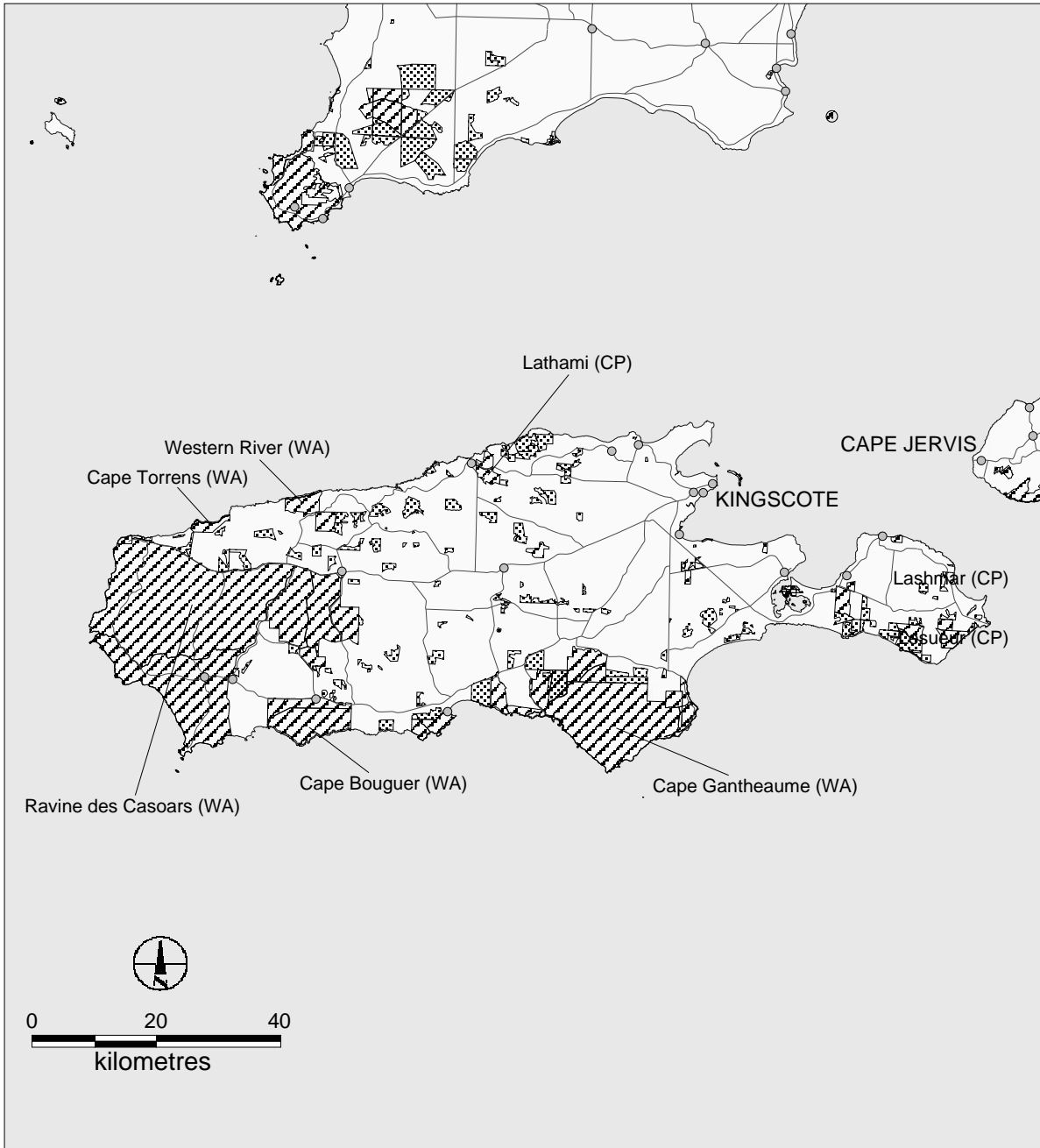
Other *Wilderness Protection Act 1992* reserves on the island include Ravine des Casoars Wilderness Protection Area, Cape Gantheaume Wilderness Protection Area and Cape Bouguer Wilderness Protection Area.

Few exotic plants occur in Cape Torrens and Western River Wilderness Protection Areas, and those that do are largely confined to the perimeter and internal access tracks. Management policies under the Act require that exotic plants and animals are controlled or eradicated, and that management is directed towards enhancement of wilderness quality.

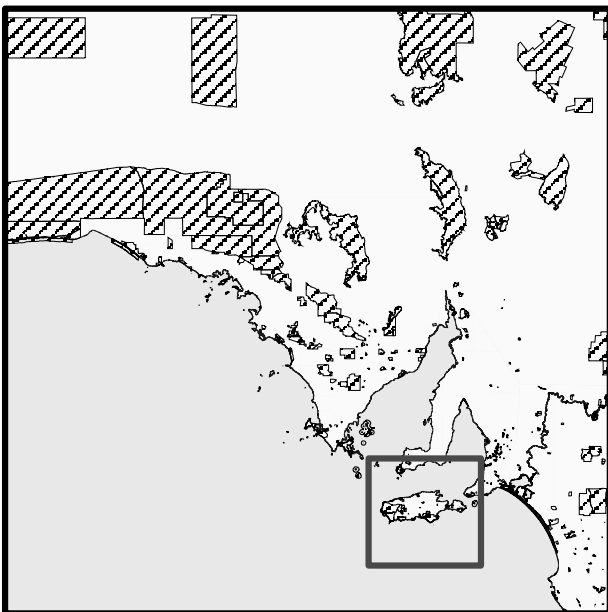
Aboriginal artefacts have been found at both Western River Wilderness Protection Area and Cape Torrens Wilderness Protection Area. While specific sites have not been located, the knowledge that Aboriginal people once used the area contributes to its cultural values.

In Western River Wilderness Protection Area the main recreational activity is bushwalking. Recreational use in Cape Torrens Wilderness Protection Area is limited, due to the limited access to the reserve.




Both areas will be managed in accordance with the *Wilderness Protection Act 1992* and the Wilderness Code of Management. Major management goals are the responsible management of wildfire, eradication of pest plants and animals, closure and restoration of inappropriate access tracks, and the improved documentation of flora, fauna and cultural aspects of the areas.



### Location Map



### Legend

-  DEH Reserve
-  Heritage Agreement
-  Road

### Figure 1

### Cape Torrens and Western River Wilderness Protection Areas

### Location

Map Produced from PAMS  
 Projection: MGA Zone 53 (GDA 94)  
 Date: 1 April, 2005

## 2 LEGISLATIVE FRAMEWORK

### 2.1 Wilderness Protection Act 1992

The *Wilderness Protection Act 1992* provides for the protection of wilderness and the restoration of land to its condition before European colonisation.

The Act describes the following attributes for land to be considered as wilderness:

- land and its ecosystems that have not been affected, or have been affected to only a minor extent, by modern technology, and
- land and its ecosystems that have not been seriously affected by exotic animals or plants or other exotic organisms.

Wilderness protection areas 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).

Section 31 of the Act states that a management plan is required for each wilderness protection area. A management plan must as far as practicable implement the policies set out in the Wilderness Code of Management so far as they are relevant to the wilderness protection area. The management plan must also set forth proposals in relation to the management and improvement of the wilderness protection area and any other proposals to accomplish the objectives of the Act in relation to the wilderness protection area.

DEH is responsible for preparing management plans and undertaking the prescribed community consultation process. 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.

Before preparing a management plan, the Act requires a process in which a call for submissions must be made for matters that should be addressed by the plan. For the Cape Torrens and Western River Wilderness Protection Areas, an invitation for submissions was made in May 2004 and two submissions were received.

The draft plan for Cape Torrens and Western River Wilderness Protection Areas was released for public exhibition in September 2005. At the close of the comment period, two submissions were received, raising issues including park fencing, feral animal and plant control and visitor access. All comments and concerns were considered by the Wilderness Advisory Committee 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 Wilderness Code of Management

DEH is required under section 12(2) of the *Wilderness Protection Act 1992* to manage wilderness protection areas consistent with the Wilderness Code of Management (Appendix A). A management plan for a wilderness protection area must, as far as practicable, implement the policies set out in the Wilderness Code of Management so far as they are relevant to the wilderness protection area.

### **2.3 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**

To maintain the wilderness quality of Cape Torrens Wilderness Protection Area and Western River Wilderness Protection Area by effectively managing their history, visual amenity, biodiversity, and wilderness values.

## **4 WILDERNESS PROTECTION**

The management activities detailed within this management plan have been prescribed in accordance with the Wilderness Code of Management, to preserve the wilderness values and biodiversity of the reserves.



## 5 MANAGING NATURAL HERITAGE

### 5.1 Geology, Soils and Landform

Cape Torrens Wilderness Protection Area and Western River Wilderness Protection Area fall within the Stokes Bay Environmental Association, which includes the dissected margin of the lateritic plateau. The terrain comprises steep-sided gullies and narrow ridges formed by Western River, De Mole River and other streams, and is an excellent representation of the rugged, hilly country at the western end of the Island.

Maximum relief of both areas is approximately 200 metres. Coastal cliffs and creek walls are almost sheer. The coastal cliffs of both Western River Wilderness Protection Area and Cape Torrens Wilderness Protection Area are the highest in South Australia.

The soils that compose Kangaroo Island are a major underlying factor of the biodiversity present in the areas. There are ten broad soil-landscapes on Kangaroo Island, with Seddon and Gosse plateau dominating, composing a coverage of two thirds of the Island.

Western River Wilderness Protection Area and Cape Torrens Wilderness Protection Area both consist of predominantly shallow grey-brown sands. Deeper soils are found along rivers and drainage lines (Willoughby et al., 2001).

Feral goats have been recorded within both wilderness protection areas. They are known to cause erosion, particularly in Cape Torrens Wilderness Protection Area, through trampling which breaks up the soil crust.

#### *Objective*

Limit soil erosion in the wilderness protection areas.

#### *Strategy*

- Control the population of feral goats to reduce disturbance, such as trampling and erosion.

### 5.2 Hydrology

The southern section of Western River Wilderness Protection Area forms part of the catchment of Western River which flows into the sea to the east of the wilderness protection area. The two main branches of the river dissect the southern block. In the northern coastal section, Waterfall Creek and associated streams flow to the coast through the wilderness protection area.

The tributaries of the De Mole River flow through Cape Torrens Wilderness Protection Area to the sea on the north coast immediately east of the wilderness protection area.

Poorly placed tracks and drains on neighbouring properties are causing excessive silt to flow into Western River, in the southern portion of Western River Wilderness Protection Area.

#### *Objective*

Maintain the water quality and flows of Western River.

#### *Strategy*

- Liaise with neighbouring landowners to reduce impacts on the river systems of Western River.

### 5.3 Native Vegetation

The native vegetation of both Cape Torrens Wilderness Protection Area and Western River Wilderness Protection Area provide valuable examples of remnant native wildlife habitat on the western end of the Island.

Cape Torrens Wilderness Protection Area is dominated by *Eucalyptus remota* open low mallee, *Eucalyptus obliqua* very low open woodland, and *Eucalyptus cladocalyx* woodland dominate Western River Wilderness Protection Area (Willoughby et al., 2001). Whilst 90% of the *Eucalyptus obliqua* community is conserved within DEH reserves or Heritage Agreements, this community only accounts for 1% of the Island's native vegetation (Willoughby et al., 2001).

Western River Wilderness Protection Area supports the largest surviving remnant of the Rough Barked Manna Gum, (*Eucalyptus viminalis cygnetensis*) on public land. Rough Barked Manna Gum is listed as rare on Kangaroo Island and provides important habitat for a number of native bird and bee species, as well as contributing to the functioning of riparian systems. Several areas of Manna Gum have been lost on Kangaroo Island due to an overabundance of Koalas. Whilst Koalas are indigenous to Australia, they are not native to Kangaroo Island, being introduced to the Island during the 1920s. The population was released in Flinders Chase National Park and has since spread across the entire Island. The last estimates indicate that this population has reached 27,000 ( $\pm$  3000) (Masters et al., 2004). The koala population in Western River Wilderness Protection Area is one of the highest densities on Kangaroo Island. Koalas have caused damage to the native vegetation across the Island, particularly the Manna Gums in the river valleys, including Western River.

DEH has previously undertaken sterilisation work in the Western River Wilderness Protection Area in an effort to reduce the Koala population within this reserve. DEH will monitor the Koala population within both reserves, and as part of an Island wide control program, undertake appropriate measures to control the Koala population numbers.

The wilderness protection areas conserve Drooping Sheoak (*Allocasuarina verticillata*) and Sugar Gum (*Eucalyptus cladocalyx*) woodland, which is important habitat and food source for the endangered Glossy Black-Cockatoo (*Calyptorhynchus lathami halmaturinus*) and other bird species. Drooping Sheoak and Sugar Gum woodland largely occurs outside of the wilderness protection areas, and to date various programs have been implemented to encourage their revegetation on private land. Sugar Gums and Drooping Sheoaks occur mainly along steep gullies and creeklines on the north coast and inland rivers of Kangaroo Island.

On higher ground Brown Stringybark (*Eucalyptus baxteri*) and Cup Gum (*Eucalyptus cosmophylla*) low open forest, with sclerophyllous heath understorey occurs. This forest covers approximately half of both areas. Other minor vegetation associations such as sedgeland and tussock grassland occur in small patches at the mouths of the creeks and rivers.

Western River Wilderness Protection Area contains the Splendid Bush-pea (*Pultenaea villifera* var. *glabrescens*) which is listed as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

No flora species listed under the EPBC Act have been recorded within Cape Torrens Wilderness Protection Area.

#### Phytophthora

Cinnamon Fungus (*Phytophthora cinnamomi*), or PC, is an introduced soil-borne pathogen that kills a wide range of native Australian plant species by attacking their root system and reducing or stopping the movement of water and nutrients within the plant.

The disease spreads quickly downhill with the movement of water through the soil. It can also spread slowly in any direction through root to root contact. The spread of *Phytophthora* has been dramatically increased by human activities, particularly by moving soil, gravel and plant material on vehicles, footwear and camping equipment.

The discovery of the presence of *Phytophthora* within nearby Flinders Chase National Park and Ravine des Casoars Wilderness Protection Area poses a serious threat to susceptible vegetation within both wilderness protection areas. Recent surveys indicate that both Cape Torrens Wilderness Protection Area and Western River Wilderness Protection Area are free of the disease, but steps need to be taken to prevent it from entering these areas. *Phytophthora* occurs along

Jump off Road, which terminates before the boundary of Cape Torrens Wilderness Protection Area. Threats to these reserves include vehicles that are not properly cleaned, and visitors that do not properly clean their shoes, entering the reserves and carrying the disease in.

*Phytophthora* management has been incorporated into the fire management practices of Cape Torrens Wilderness Protection Area and Western River Wilderness Protection Area.

There is a PC hygiene station located on Jump Off Road adjacent to Cape Torrens Wilderness Protection Area. This station is on council land, and management will need to be in liaison with the local council. Possible management approaches that may be discussed with the local council for managing potential spread of the PC from Jump Off Road could include grading away from the park. There is also a PC hygiene station located at the commencement of the walking trail to Waterfall Creek Falls within Western River Wilderness Protection Area.

### **Objective**

Conserve native vegetation, especially species of conservation significance, and prevent the spread of *Phytophthora* into the wilderness protection areas.

### **Strategies**

- Monitor populations of conservation significance and implement management actions, if required, for their conservation, consistent with the maintenance of wilderness quality.
- Map the distribution and condition of the remaining Manna Gum to allow for future monitoring and management as required.
- Monitor the Koala population within the reserves and undertake suitable management strategies; this may include sterilisation within Western River Wilderness Protection Area, and translocation programs, to reduce the impacts on the wilderness and biodiversity values.
- Promote awareness amongst DEH staff and park users of the potential for introduction and establishment of PC, the plant species susceptible to it and indicators of its presence.
- Comply with PC hygiene protocols in undertaking management operations within the reserves.
- Monitor for the existence of PC within the reserves, and take appropriate steps to limit its spread, including the restriction of visitors in the reserves.
- Maintain the existing PC hygiene station at the commencement of the walking trail to Waterfall Creek Falls in Western River Wilderness Protection Area.
- Work in liaison with the local council to maintain the PC hygiene station on Jump Off Road, and minimise the spread of PC along Jump Off Road, for example by grading away from the reserve.

## 5.4 Native Fauna

There are approximately 92 fauna species recorded in Western River Wilderness Protection Area and 32 fauna species recorded in Cape Torrens Wilderness Protection Area.

In 2001 a biological survey was conducted on Kangaroo Island (Willoughby et al., 2001). This survey indicated that there are three nationally threatened mammal species and one nationally threatened bird species on Kangaroo Island. These are the:

- Heath Rat, *Pseudomys shortridgei*,
- Kangaroo Island Dunnart, *Sminthopsis aitkeni*,
- Southern Brown Bandicoot, *Isodon obesulus*, and
- South Australian Glossy Black-Cockatoo, *Calyptorhynchus lathami halmaturinus*

### Mammals

There has been only a single record of Heath Rats on Kangaroo Island, which came from the Rocky River precinct of Flinders Chase National Park. There are no known records of Heath Rats within either of the wilderness protection areas.

The Kangaroo Island Dunnart is known to be present at five locations on Kangaroo Island, based on South Australian Museum records (Robinson et al., 1999, page 193). More recent research reports that since 1990, all records of the Kangaroo Island Dunnart are found within Flinders Chase National Park, and that extensive survey work failed to locate them elsewhere (Gates, 2001). While the Kangaroo Island Dunnart shows no obvious preference for any vegetation or habitat type, the six sites where it is currently known to occur consist of *Eucalyptus remota* (low mallee) and *Eucalyptus baxteri* (low woodland) (Gates, 2001). *Eucalyptus remota* is found in Western River Wilderness Protection Area and Cape Torrens Wilderness Protection Area, and *Eucalyptus baxteri* is found within Western River Wilderness Protection Area.

The Southern Brown Bandicoot is known to be present within Flinders Chase National Park. It is found within a variety of habitats, including coastal and mallee communities, but is most commonly found within Stringy Bark (*Eucalyptus baxteri*) and Sugar Gum (*Eucalyptus cladocalyx*) communities. The *E. baxteri* and *E. cladocalyx* vegetation communities are present within Western River Wilderness Protection Area. *E. cladocalyx* is also recorded within Cape Torrens Wilderness Protection Area (Willoughby et al., 2001; Robinson et al., 1999).

While there has been no records of the Heath Rat, Kangaroo Island Dunnart or the Southern Brown Bandicoot in either of the wilderness protection areas, the broad vegetation communities present could support populations of these species. More intensive surveys of both reserves would be required to confirm the presence or absence of these species within the reserves.

The Tamar Wallaby (*Macropus eugenii*) and the Kangaroo Island Western Grey Kangaroo (*Macropus fuliginosus fuliginosus*) are also present in the wilderness protection areas.

### Birds

The South Australian subspecies of Glossy Black-Cockatoo is the most endangered vertebrate on Kangaroo Island, and is listed as endangered under the EPBC Act. The total Kangaroo Island population, in 2004, was estimated at approximately 300 individuals (Mooney pers. comm., 2003). The cockatoos feed principally on the seed of the Drooping Sheoak, and nest in large tree hollows, usually in Sugar Gums. The major threats to Glossy Black-Cockatoo survival on Kangaroo Island are loss and degradation of habitat, including forage and nesting sites, predation at nests by Common Brushtail Possums, competition for nesting sites with other cockatoo species and feral bees, and a shortage of trees with hollows suitable for nesting (Mooney et al., 2004).

Measures currently being undertaken by the Glossy Black-Cockatoo Recovery Program to address these threats include collaring and pruning of nests trees to prevent possum access and the erection of artificial hollows in key nesting areas.

Other significant bird species present in the wilderness protection areas include Ospreys (*Pandion haliaetus*) and White-bellied Sea-eagles (*Haliaeetus leucogaster*) which nest on inaccessible, rugged cliffs. Cape Torrens and Western River Wilderness Protection Areas are key breeding sites for these species in South Australia. These birds are known to be susceptible to human

disturbance, such as the use of firearms during feral animal control programs, visitors to the park and fire protection works.

Human disturbance, whilst mostly innocent (for example, people bushwalking along cliff tops), is the major cause of the decline of the White Bellied Sea-eagle, which prefers to nest on cliffs in South Australia instead of in trees as in other states. This provides a unique situation for management purposes. The disturbance of bushwalkers causes the White Bellied Sea-eagles to leave their nests during the breeding season, resulting in their eggs cooling and their young being susceptible to predation. Breeding season for these species begins in June, with courtship between the birds, and continues until early December, when the last of the young leave the nests. The incubation and early nesting stages are their most vulnerable periods. Access (both management and visitor use) to these areas will need to be restricted to reduce disturbance during breeding season. Fire protection works will not be carried out during breeding season.

Sheoak grassy woodlands are also an important habitat for the Beautiful Firetail (*Stagonopleura bella*) listed as rare under the *National Parks and Wildlife Act 1972*, populations of which have declined markedly on the South Australian mainland as a result of habitat loss and fragmentation.

The Bush Stone-curlew (*Burhinus grallarius*) frequents bushland adjacent to cleared pasture. This species is endangered under the *National Parks and Wildlife Act 1972* and numbers have been greatly reduced on the mainland because of predation by cats and foxes.

### **Objective**

Conserve native fauna, especially species of conservation significance.

### **Strategies**

- Manage the habitat of the South Australian Glossy Black-Cockatoo in accordance with the Glossy Black-Cockatoo recovery plan.
- Minimise the disturbance of nests of the White-bellied Sea-eagle and Osprey, for example by restricting all access along the cliff tops during the breeding season (from June until early December).
- Undertake more intensive surveys to confirm the presence or absence of threatened species (for example, the Kangaroo Island Dunnart, the Heath Rat and the Southern Brown Bandicoot) within the wilderness protection areas.

## **5.5 Introduced Plants**

The natural vegetation of the wilderness protection areas is highly intact, however some invasion of exotic plants has occurred. The Wilderness Code of Management requires that non-indigenous species which significantly affect the wilderness quality of a wilderness area be controlled or eradicated, and that actions be taken to prevent the establishment of non-indigenous species.

Few exotic plant species occur within the wilderness protection areas. Thistles are the main concern, occurring on the cliff edge and coast of Cape Torrens Wilderness Protection Area and neighbouring properties. Such occurrences are largely confined to perimeter and internal access tracks and are thought to have been transported into the area by goats. Isolated pockets of thistles occur at Waterfall Creek Falls and downstream of the waterfall in Western River Wilderness Protection Area.

As part of a regional weed management program, minimum impact methods will be used to control and, if possible, eradicate weeds from along tracks and trails. Closure of internal tracks to public vehicles should help prevent further spread, as will the control of the feral goat population.

Pine plantations occur adjacent to Western River Wilderness Protection Area, and monitoring undertaken by DEH staff has indicated that pines have not been established within the reserve, as it appears that conditions in the reserve are not conducive to seedlings becoming established.

There are a number of introduced species occurring outside the reserves, which have not yet spread within the reserves. Monitoring will need to be undertaken to maintain control of this situation.

### **Objective**

Control and eliminate, where possible, the spread of weed species, in accordance with the Wilderness Code of Management.

### **Strategies**

- Develop a regional weed management plan, including Cape Torrens and Western River Wilderness Protection Areas.
- Develop strategies with neighbouring landowners to control weeds.
- Implement targeted control programs for priority weed species and infestations, particularly thistles.
- Monitor for the presence of pine within Western River Wilderness Protection Area and remove as required.
- Work with Forestry SA to develop protocols to ensure forest managers are accountable for the monitoring and removal of escaped pine seedlings along common boundaries.

## **5.6 Introduced Animals**

Feral goats, deer, cats and pigs occur in the reserves and, if allowed to increase in number, have the potential to degrade wilderness quality. Currently an integrated pest management plan is being prepared for the reserves to control these introduced species.

Pigs, deer and feral goats have the potential to spread *Phytophthora cinnamomi* infestations and impact on the intact riverine ecosystems, particularly in the southern section of Cape Torrens Wilderness Protection Area.

Feral goats occur within both reserves; their population on Kangaroo Island is continually expanding. Goats impact on the wilderness quality by trampling and grazing the vegetation, and breaking up the soil crust which is increasing erosion within the reserves and around the cliffs, particularly within Cape Torrens Wilderness Protection Area. Feral goats preferentially eat Splendid Bush-pea (*Pultenaea villifera* var. *glabrescens*) which is a nationally threatened species (Willoughby et al., 2001).

Deer are extremely mobile but by their nature prefer wooded areas adjacent to cleared land. Deer impact on wilderness quality by creating paths in the native vegetation that they move through, and by ringbarking shrubs (Willoughby et al., 2001, page 128). It has only been in recent times, in the past two years or so, that deer have been released from deer farms and have entered into the reserves. While their populations are small they will be easier for DEH to manage.

The absence on the Island of two major pests, the rabbit and the fox, has probably contributed to the survival of some species which are either extinct or threatened on mainland South Australia.

Marron (*Cherax tenuimanus*) has escaped from aquaculture farms and now infests most streams on the western end of Kangaroo Island. The impact of Marron on the biodiversity of Kangaroo Island is unknown (Willoughby et al., 2001, page 130).

### **Objective**

Control and eradicate, where possible, all introduced fauna established within the reserves that significantly impacts on the wilderness and biodiversity values.

### **Strategies**

- Continue regional programs for the control of pest animal species, particularly deer and feral goats.
- Investigate options for the control and eradication of Marron populations within the reserves.

## 6 MANAGING FIRE

Historically, fires within these reserves have been low frequency and high intensity, and have been caused by lightning strikes or by burning-off on neighbouring properties. Once established, fires are hard to control because of the vegetation types and the inaccessible terrain. Although there have been some relatively large fires in the past, none have burnt the whole of either area.

The protection of the Sheoak and Sugar Gum habitat of the Glossy Black-Cockatoo is an important consideration in fire management, as too frequent fires, or the absence of fire, would be deleterious to these ecosystems.

DEH will use planned burns to maintain and enhance the ecology and habitat diversity within these reserves. It is therefore desirable to maintain current fire tracks within Western River Wilderness Protection Area to help prevent fires from damaging all of the Drooping Sheoak and Sugar Gum stands from the wilderness area. The ongoing requirement for fire access tracks within Cape Torrens will be considered as part of the fire management plan, given the nature of the terrain.

A PC station is located at the carpark outside of Western River Wilderness Protection Area, and would be used to control the spread of PC within the park during the management and control of a fire.

A fire management plan will be prepared for the reserves, in consultation with adjoining Country Fire Service Groups 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 reserves.

A fire break has been constructed parallel to Colemans Road (see Figure 3) by hydroaxing. The native vegetation in the Western River Wilderness Protection Area, between the fire access break and Colemans Road, will be fuel-reduced using fire on a frequent basis. The purpose of this prescription burn is to ensure that a wildfire of moderate or better intensity does not burn from the northern portion of the wilderness protection area to the southern portion or vice versa.

An annual fire management works program will be implemented to ensure existing fire breaks and fire access tracks are maintained to a high prescribed standard. Management strategies used within the wilderness protection area will be restricted to those that minimise the disturbance to soil including hydroaxing and rolling. The impacts of these measures on the wilderness values of the area will be monitored. If considered necessary, rehabilitation will be undertaken.

Fire management planning will:

- be consistent with the Wilderness Code of Management;
- 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 ecological management and fuel reduction purposes;
- identify an appropriate fire regime to protect the integrity of mature Drooping Sheoak and aged Sugar Gum for the protection of Glossy Black-Cockatoo habitat; and
- identify performance indicators.

### ***Objective***

Maintain the wilderness and biodiversity values in the reserves through effective fire management.

### ***Strategies***

- Develop, implement and review a fire management plan for Cape Torrens Wilderness Protection Area and Western River Wilderness Protection Area in association with the CFS and other stakeholders.
- Engage adjacent landowners in a landscape scale fire management planning process.

- Continue to work with the relevant District Bushfire Prevention Committee and the CFS to minimise risk to life and property within and surrounding the reserves.
- Undertake prescribed burning between the fire access break and Colemans Road on a frequent basis.
- Monitor the impacts on wilderness values of fire break construction, rehabilitating any areas where necessary.

## 7 MANAGING CULTURAL HERITAGE

### Indigenous Heritage

Aboriginal artefacts have been reported in Western River Wilderness Protection Area and Cape Torrens Wilderness Protection Area but to date specific sites have not been identified. The identification and protection of significant sites are important management objectives for both areas.

Kangaroo Island is known to be of extreme importance to the Kurna, Ngarrindjeri, Narungga and Ramindjeri people, as they maintain a spiritual connection with the wilderness protection areas.

Archaeological, anthropological and historical evidence shows that there may have been some Aboriginal occupation on Kangaroo Island between 4,000 and 16,000 years ago. This could be explained by the belief that the island separated from the mainland roughly 10,000 years ago. Between the mid-1800s and mid-1900s, since European settlement, it is believed that the island had between seven and 33 Aboriginal people living on it. Initially, female members of the mainland Aboriginal groups were taken from the mainland to the island to be sealers' wives. Later, some Aboriginal men came to the island to work as shearers. Therefore, certain landforms at Western River Wilderness Protection Area and Cape Torrens Wilderness Protection Area are likely to contain evidence of Aboriginal pre-historic occupation.

### 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."

To ensure the protection of sites, DEH shall consult with DAARE and the appropriate Heritage Committee, before planning any significant development works.

### Non-Indigenous Heritage

The north coast of Kangaroo Island has been the site of several disastrous shipwrecks in South Australia's history. There are no relics of non-indigenous occupation known from within the boundaries of either area.

### **Objective**

Conserve and protect significant Indigenous and non-indigenous cultural heritage sites.

### **Strategies**

- Identify and protect any Aboriginal sites, objects and remains in cooperation with the traditional owners, DAARE, and relevant authorities.
- Consult the Ngarrindjeri, Kurna and Narungga people who have a traditional association with the land, potential Native Title Claimants and relevant State and Federal Aboriginal Heritage authorities, in decisions regarding the management of Aboriginal cultural heritage.
- Promote discussion with Aboriginal people who have a traditional association with the land comprising the reserves to better understand and appreciate their culture, lifestyle and knowledge of the reserves.



## 8 MANAGING TOURISM AND RECREATION

This section provides the visitor management strategy for Western River and Cape Torrens Wilderness Protection Areas as required by the Wilderness Code of Management.

The **Visitor Management Strategy** for Cape Torrens Wilderness Protection Area identifies that visitor use will not be encouraged due to the inaccessibility of the area, and its harsh terrain.

The **Visitor Management Strategy** for Western River Wilderness Protection Area identifies that future use will be:

- restricted to pedestrian access; and
- conducted in a way which minimises impacts on the environment.

### 8.1 Visitor Access

#### Walking Trails

At Western River Wilderness Protection Area a walking trail, Waterfall Creek Hike, passes Waterfall Creek Falls on Waterfall Creek and ends at a scenic lookout. This trail provides opportunities for recreation and solitude in a natural environment. This track has been degraded by past four-wheel drive use. The track condition will be regularly monitored for degradation, and should the wilderness values be sufficiently threatened, the track will be either restabilised and maintained or re-routed and the existing track rehabilitated.

There are no constructed walking tracks within Cape Torrens Wilderness Protection Area. Visitor access to this area requires advanced skills in navigation and bushwalking.

#### Vehicle Access

Access to the Cape Torrens Wilderness Protection Area boundary is by Jump Off Road, which terminates 100 metres from the boundary, and is illustrated in Figure 2. There are no maintained internal or boundary tracks, or any formal walking trails. This situation will be maintained.

Access to Western River Wilderness Protection Area is by Colmans Road, a medium grade unsealed public road, which dissects the area into northern and southern portions along the public road reserve, as illustrated in Figure 3. The public road reserve continues through the area and terminates at Western River Cove, but its quality beyond the wilderness protection area deteriorates considerably. An alternative route to Western River Cove exists further to the east.

In the northern section of Western River Wilderness Protection Area there are rough, in some places discontinuous, perimeter tracks, and two internal tracks. The perimeter tracks are low grade four-wheel drive tracks established and maintained for fire management purposes only. However, some are currently used intermittently by adjacent landowners.

Internal management tracks lead to Castle Hill and to Waterfall Creek Falls. The Waterfall Creek track finishes at a small car park, at the entrance to the wilderness protection area, at the start of the Waterfall Creek Hike. The track in the Castle Hill area is a low grade four-wheel drive track established for fire management purposes. The rocky, rough track to Waterfall Creek Falls is used as part of a walking trail and is approximately two kilometres long.

There is no vehicle access to the southern section of Western River Wilderness Protection Area from Colmans Road. In the southern section of Western River Wilderness Protection Area there are rough, in some places discontinuous, perimeter tracks. The western boundary track is on Forestry SA land and is maintained through a joint arrangement.

#### ***Objectives***

Minimise the impact of vehicle use on wilderness quality.

Maintain existing trails to provide safe walking access to the reserves consistent with maintaining wilderness quality.

### ***Strategies***

- The track to Waterfall Creek Falls, in Western River Wilderness Protection Area, will be retained for public use as a walking trail. Vehicle use will be restricted to infrequent management purposes such as emergency or fire management and introduced plant and animal control operations.
- Monitor the Waterfall Creek Hike track condition for degradation, and should the wilderness values be sufficiently threatened, restabilise and maintain or re-route and rehabilitate the existing track.
- Maintain the small car park at the start of the Waterfall Creek Hike trail head adjacent to the boundary of Western River Wilderness Protection Area.
- Maintain partnerships with Forestry SA to maintain the track on the western boundary of Western River Wilderness Protection Area.
- Restrict vehicle access to both reserves for management and emergency purposes only.
- Maintain low frequency, low impact and self reliant visitor access to the wilderness protection areas.
- Maintain the Waterfall Creek Hike and lookout to Australian Standard Class 4, consistent with the wilderness setting.
- Provide opportunities for visitors to enjoy the solitude, scenic and natural values of Western River Wilderness Protection Area, consistent with maintaining wilderness values.
- Erect signs and/or barriers to control the use of perimeter tracks in Western River Wilderness Protection Area for purposes other than reserve management.

## **8.2 Commercial Tourism**

Tour operators operating within Western River Wilderness Protection Area must comply with the Wilderness Code of Management.

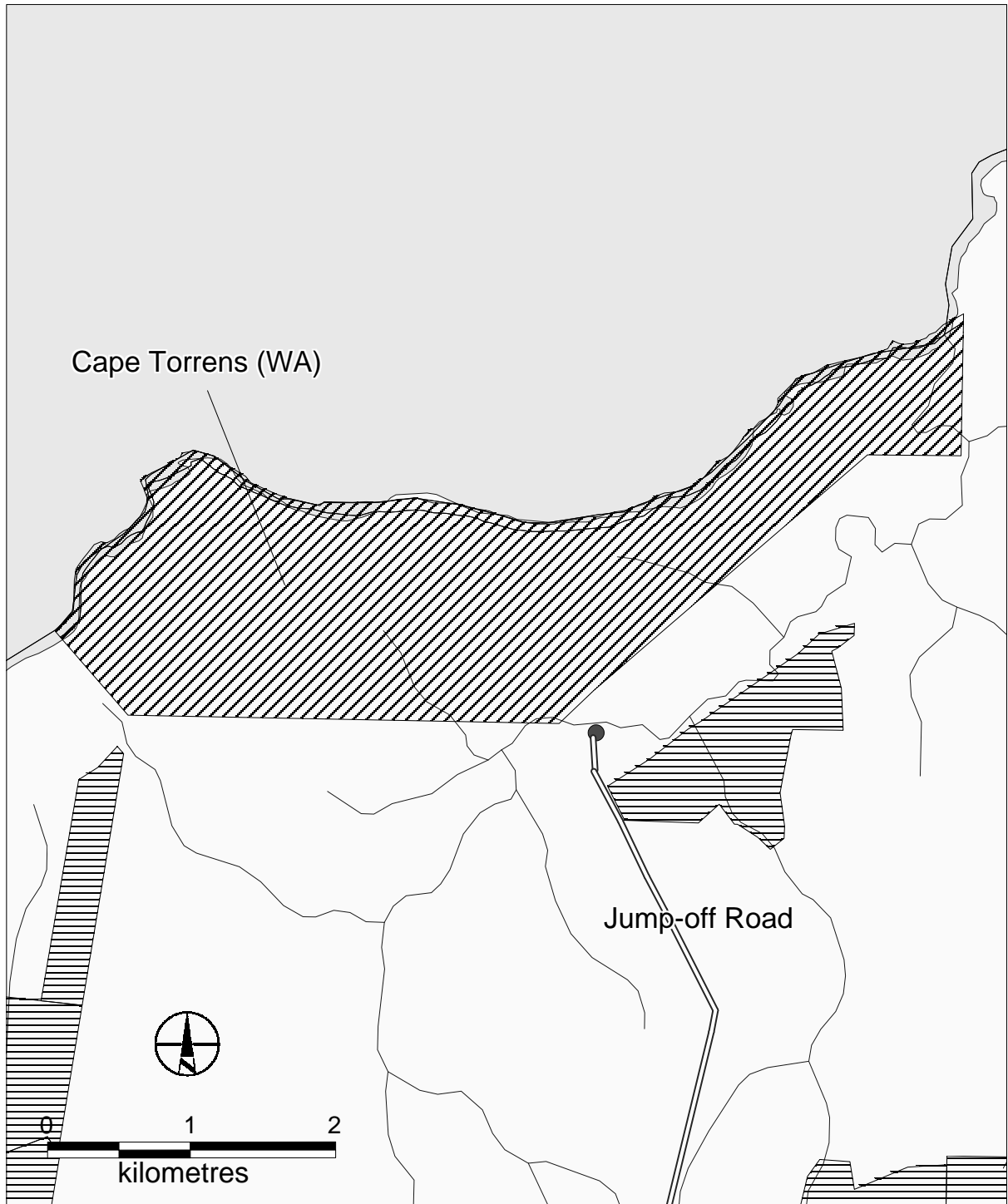
Tour operators may operate within Western River Wilderness Protection Area, but frequency and size of groups may be restricted to protect wilderness values. Tour operators must be licensed prior to entering the reserves, and these permits will be granted subject to conditions.

### ***Objective***






Minimise the impact of tour operators on the wilderness values of the wilderness protection areas.

### ***Strategies***

- Ensure licence conditions of commercial tour operators accessing Western River Wilderness Protection Area include a maximum number per group, and a maximum frequency consistent with the wilderness setting, and the provision that they must comply with the Minimum Impact Code for visitors to wilderness areas.
- Limit commercial tour operator use of the Waterfall Creek Hike and lookout to one group with a maximum of five clients at any one time, consistent with the wilderness setting and the physical capacity of the lookout.
- Monitor and review annually the impact on wilderness values of the commercial use by tourism operators and their customers.



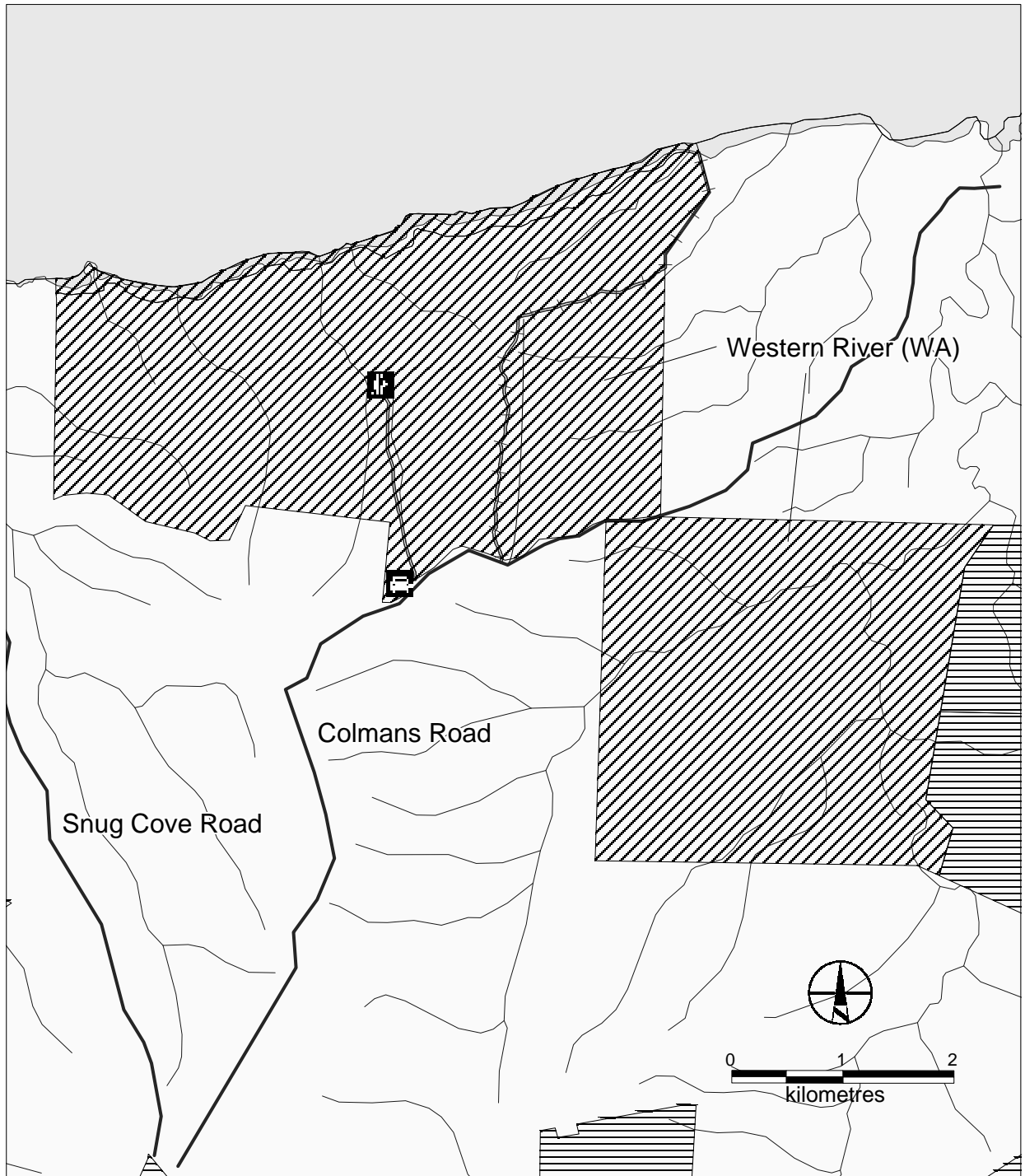
**LEGEND**

-  Wilderness Area
-  Heritage Agreement
-  Road
-  River
-  PC Station


**Figure 2**

**Cape Torrens Wilderness Protection Area  
Access**

Map designed and created by  
Reserve Planning using PAMS  
Projection: MGA Zone 53 (GDA 94)  
Date: 1 April, 2005



**LEGEND**

-  Wilderness Area
-  Heritage Agreement
-  Viewing Platform
-  PC Station and Carpark
-  Road
-  Waterfall Creek Hike
-  Castle Hill Track
-  River

**Figure 3**

Western River  
Wilderness Protection Area  
**Access**

Map designed and created by  
Reserve Planning using PAMS  
Projection: MGA Zone 53 (GDA 94)  
Date: 4 November, 2004

## 9 MANAGING RESOURCE USE

### 9.1 Management Infrastructure

Approximately 90% (27 kilometres) of the perimeter of Western River Wilderness Protection Area is fenced (owned and maintained by park neighbours). There are three information signs, including one at the entrance within the area. There are also PC hygiene boot cleaning stations and vehicle access barriers set up within the reserve. Vehicle access barriers have also been installed at the beginning of all fire access tracks, as well as the Waterfall Creek Falls lookout in Western River Wilderness Protection Area. The design of the vehicle access barriers is inadequate, as it does not prevent vehicles entering the reserves. These barriers are easily broken and this causes a possible threat in regards to the spread of *Phytophthora* within the reserves.

Within Cape Torrens Wilderness Protection Area there are remnant fences along a small portion of the boundary. There is also a PC hygiene station located at the end of Jump Off Road at the entrance to Cape Torrens Wilderness Protection Area.

#### *Objective*

Maintain current infrastructure necessary for essential reserve management, ensuring minimal impact on the wilderness values of the reserves in keeping with the Wilderness Code of Management.

#### *Strategies*

- Where fences are to be maintained negotiation should occur with neighbouring land owners to exclude stock and to reduce the movement of feral animals.
- Maintain signs, barriers and PC hygiene stations while minimising their impact on wilderness values.

### 9.2 Managing External Influences

The impact of external influences on the wilderness quality of the reserves is currently low, however surrounding land uses have the potential to cause a high impact on the wilderness quality of the reserves as the reserves are small and isolated.

Western River Wilderness Protection Area is surrounded by neighbouring landowners, pine plantations and Heritage Agreements. Cape Torrens Wilderness Protection Area is surrounded by neighbouring landowners and Heritage Agreements.

The main influences will be managing pest plants (including pine) and wildfires that may enter the reserves from neighbouring properties. Rural residential subdivision adjacent to Cape Torrens Wilderness Protection Area increases risk such as fires and weed infestation to park values.

The Wilderness Code of Management indicates that where possible, management operations should be carried out on land outside of the wilderness protection area. In particular, the placement of fire access tracks adjacent to the boundary of the reserve should be reviewed and where possible located on land outside of the reserve.

#### *Objective*

Ensure that external influences do not negatively impact on the biodiversity values of the wilderness protection area.

#### *Strategy*

- Liaise with neighbouring land owners with a view to establish cooperative management arrangements that contribute to the maintenance of wilderness values of the reserves.

### 9.3 Research

Effective ecosystem management depends upon contemporary scientific information and research.

In accordance with the Wilderness Code of Management, only research which enhances the management of biological diversity, and which does not diminish wilderness quality will be permitted. An example of this research includes, but is not limited to:

- the distribution of Cinnamon Fungus (*Phytophthora cinnamomi*);
- the distribution, condition and extent of existing fauna and flora populations and a determination of management requirements;
- appropriate fire regimes, including frequency, intensity, measurability of fire events, and flora and fauna vital attributes; and
- the location of Indigenous and Non-Indigenous heritage sites.

#### **Objective**

Ensure management is based on the best information, including scientific information.

#### **Strategy**

- Encourage research that improves wilderness and conservation management while not detracting from wilderness quality.

## 10 INVOLVING THE COMMUNITY

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, including Landcare groups, the Kangaroo Island NRM Board, and Local Government. DEH also recognises the importance of developing partnerships with regional tourism authorities and the South Australian Tourism Commission.

Effective management of Western River Wilderness Protection Area and Cape Torrens Wilderness Protection Area involves developing working relationships with neighbours, local land managers, Heritage Agreement owners and the representative Aboriginal Heritage Committee.

The Kangaroo Island Consultative Committee, the Friends of Parks Kangaroo Island Western Districts and the cooperation of neighbouring landowners are important to the maintenance of biodiversity values within the reserves.

#### **Objectives**

Encourage and maintain neighbouring land owner and local council input in reserve management and biodiversity conservation.

Support partnerships with organisations and statutory bodies to assist with the management of the reserves.

#### **Strategies**

- Liaise with neighbouring landowners and the local council to encourage their input.
- Encourage the development of partnership arrangements to integrate biodiversity conservation management in the region.

## 11 MANAGING RESERVE TENURE

### Additional Land

At the time of proclamation it was the intention of the Wilderness Advisory Committee to proclaim “the entire Cape Torrens Conservation Park” and “the entire Western River Conservation Park” as Wilderness Protection Areas (Department of Environment and Land Management, 1993). However, the 1993 Wilderness Advisory Committee report inadvertently omitted to name the coastal sections (Allotment 1 Hundred of Gosse from Western River Conservation Park and Allotment 100 Hundred of Borda from Cape Torrens Conservation Park). These omitted sections are all that remain of the conservation parks and consist largely of high cliffs between low and high water mark.

The *Wilderness Protection Act 1992* has no expedient provision for adding land to an existing wilderness protection area. Section 22(6) of the *Wilderness Protection Act 1992* requires that a report on the wilderness quality and the recommendations of the Wilderness Advisory Committee need to be published and displayed for community comment for a period of three months.

In its original report on the wilderness quality of these two parks, the Wilderness Advisory Committee described the coastal sections of both parks as containing the highest coastal cliffs in South Australia and the highest quality wilderness in both parks (Department of Environment and Land Management, 1993).

A proposal was released for consultation simultaneously with this management plan to add coastal sections to the wilderness protection areas.

### ***Objective***

Improve the long term integrity of Cape Torrens and Western River Wilderness Protection Areas, and ensure the wilderness protection areas protect all land with high quality wilderness.

### ***Strategies***

- Incorporate Allotment 1 Hundred of Gosse (Western River Conservation Park) into Western River Wilderness Protection Area.
- Incorporate Allotment 100 Hundred of Borda (Cape Torrens Conservation Park) into Cape Torrens Wilderness Protection Area.





## SUMMARY OF MANAGEMENT STRATEGIES

<b>STRATEGY</b>
<b>Managing Natural Heritage</b>
<p><b>Geology, Soils and Landform</b></p> <ul style="list-style-type: none"> <li>Control the population of feral goats to reduce disturbance, such as trampling and erosion.</li> </ul>
<p><b>Hydrology</b></p> <ul style="list-style-type: none"> <li>Liaise with neighbouring landowners to reduce impacts on the river systems of Western River.</li> </ul>
<p><b>Native Vegetation</b></p> <ul style="list-style-type: none"> <li>Monitor populations of conservation significance and implement management actions, if required, for their conservation, consistent with the maintenance of wilderness quality.</li> <li>Map the distribution and condition of the remaining Manna Gum to allow for future monitoring and management as required.</li> <li>Monitor the Koala population within the reserves and take suitable management strategies; this may include sterilisation within Western River Wilderness Protection Area, and translocation programs out of reserves, to reduce the impacts on the wilderness and biodiversity values.</li> <li>Promote awareness amongst DEH staff and park users of the potential for introduction and establishment of PC, the plant species susceptible to it and indicators of its presence.</li> <li>Comply with PC hygiene protocols in undertaking management operations within the reserves.</li> <li>Monitor for the existence of PC within the reserves, and take appropriate steps to limit its spread, including the restriction of visitors in the reserves.</li> <li>Maintain the existing PC hygiene station at the commencement of the walking trail to Waterfall Creek Falls in Western River Wilderness Protection Area.</li> <li>Work in liaison with the local council to maintain the PC hygiene station on Jump Off Road, and minimise the spread of PC along Jump Off Road, for example by grading away from the reserve.</li> </ul>
<p><b>Native Fauna</b></p> <ul style="list-style-type: none"> <li>Manage the habitat of the South Australian Glossy Black-Cockatoo in accordance with the Glossy Black-Cockatoo recovery plan.</li> <li>Minimise the disturbance of nests of the White-bellied Sea-eagle and Osprey, for example by restricting all access along the cliff tops during the breeding season (from June until early December).</li> <li>Undertake more intensive surveys to confirm the presence or absence of threatened species (for example, the Kangaroo Island Dunnart, the Heath Rat and the Southern Brown Bandicoot) within the wilderness protection areas.</li> </ul>

<b>STRATEGY</b>
<p><b>Introduced Plants</b></p> <ul style="list-style-type: none"> <li>• Develop a regional weed management plan, including Cape Torrens and Western River Wilderness Protection Areas.</li> <li>• Develop strategies with neighbouring landowners to control weeds.</li> <li>• Implement targeted control programs for priority weed species and infestations, particularly thistles.</li> <li>• Monitor for the presence of pine within Western River Wilderness Protection Area and remove as required.</li> <li>• Work with Forestry SA to develop protocol to ensure forest managers are accountable for the monitoring and removal of escaped pine seedlings along common boundaries.</li> </ul>
<p><b>Introduced Animals</b></p> <ul style="list-style-type: none"> <li>• Continue regional programs for the control of pest animal species, particularly deer and feral goats.</li> <li>• Investigate options for the control and eradication of Marron populations within the reserves.</li> </ul>
<p><b>Managing Fire</b></p> <ul style="list-style-type: none"> <li>• Develop, implement and review a fire management plan for Cape Torrens Wilderness Protection Area and Western River Wilderness Protection Area in association with the CFS and other stakeholders.</li> <li>• Engage adjacent landowners in a landscape scale fire management planning process.</li> <li>• Continue to work with the relevant District Bushfire Prevention Committee and the CFS to minimise risk to life and property within and surrounding the reserves.</li> <li>• Construct a fire access break parallel to Colemans Road, and undertake prescribed burning between the fire access break and Colemans Road on a frequent basis.</li> </ul>
<p><b>Managing Cultural Heritage</b></p> <ul style="list-style-type: none"> <li>• Identify and protect and Aboriginal sites, objects and remains in cooperation with the traditional owners, DAARE, and relevant authorities.</li> <li>• Consult with Ngarrindjeri, Kurna and Narungga people who have a traditional association with the land, potential Native Title Claimants and relevant State and Federal Aboriginal Heritage authorities, in decisions regarding the management of Aboriginal cultural heritage.</li> <li>• Promote discussion with Aboriginal people who have a traditional association with the land comprising the reserves to better understand and appreciate their culture, lifestyle and knowledge of the reserves.</li> </ul>

<b>STRATEGY</b>
<b>Managing Tourism and Recreation</b>
<p><b>Visitor Access</b></p> <ul style="list-style-type: none"> <li>• The track to Waterfall Creek Falls, in Western River Wilderness Protection Area, will be retained for public use as a walking trail. Vehicle use will be restricted to infrequent management purposes such as emergency or fire management and introduced plant and animal control operations.</li> <li>• Maintain the small car park at the start of the Waterfall Creek Hike trail head adjacent to the boundary of Western River Wilderness Protection Area.</li> <li>• Maintain partnerships with Forestry SA to maintain the track on the western boundary of Western River Wilderness Protection Area.</li> <li>• Restrict vehicle access to both reserves for management and emergency purposes only.</li> <li>• Maintain low frequency, low impact and self reliant visitor access to the wilderness protection areas.</li> <li>• Maintain the Waterfall Creek Hike and lookout to Australian Standard Class 4, consistent with the wilderness setting.</li> <li>• Provide opportunities for visitors to enjoy the solitude, scenic and natural values of Western River Wilderness Protection Area, consistent with maintaining wilderness values.</li> <li>• Erect signs and/or barriers to control the use of perimeter tracks in Western River Wilderness Protection Area for purposes other than reserve management.</li> </ul>
<p><b>Commercial Tourism</b></p> <ul style="list-style-type: none"> <li>• Ensure licence conditions of commercial tour operators accessing Western River Wilderness Protection Area will include a maximum number per group, and a maximum frequency consistent with the wilderness setting, and the provision that they must comply with the Minimum Impact Code for visitors to wilderness areas.</li> <li>• Limit commercial tour operator use of the Waterfall Creek Hike and lookout to one group with a maximum of five clients at any one time, consistent with the wilderness setting and the physical capacity of the lookout.</li> <li>• Monitor and review annually the impact on wilderness values of the commercial use by tourism operators and their customers.</li> </ul>
<b>Managing Resource Use</b>
<p><b>Management Infrastructure</b></p> <ul style="list-style-type: none"> <li>• Where fences are to be maintained negotiation should occur with neighbouring land owners to exclude stock and to reduce the movement of feral animals.</li> <li>• Maintain signs, barriers and PC hygiene stations while minimising their impact on wilderness values.</li> </ul>
<p><b>Managing External Influences</b></p> <ul style="list-style-type: none"> <li>• Liaise with neighbouring land owners with a view to establish cooperative management arrangements that contribute to the maintenance of wilderness values of the reserves.</li> </ul>
<p><b>Research</b></p> <ul style="list-style-type: none"> <li>• Encourage research that improves wilderness and conservation management while not detracting from wilderness quality.</li> </ul>

<b>STRATEGY</b>
<b>Involving the Community</b>
<ul style="list-style-type: none"> <li>• Liaise with neighbouring land owners and the local council to encourage their input.</li> <li>• Encourage the development of partnership arrangements to integrate biodiversity conservation management in the region.</li> </ul>
<b>Managing Reserve Tenure</b>
<ul style="list-style-type: none"> <li>• Incorporate Allotment 1 Hundred of Gosse (Western River Conservation Park) into Western River Wilderness Protection Area.</li> <li>• Incorporate Allotment 100 Hundred of Borda (Cape Torrens Conservation Park) into Cape Torrens Wilderness Protection Area.</li> </ul>

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## APPENDIX A: WILDERNESS CODE OF MANAGEMENT

### 1. INTRODUCTION

- 1.1 This Code is the Wilderness Code of Management prescribed in the Wilderness Protection Act 1992.
- 1.2 Any terms used in this Code have the same meaning as those used in the Wilderness Protection Act and the National Parks and Wildlife Act 1972.
- 1.3 A wilderness area means land constituted under the Wilderness Protection Act, 1992 as a Wilderness Protection Area or Wilderness Protection Zone.

### 2. OBJECTIVES OF WILDERNESS MANAGEMENT

- 2.1 To maximise the naturalness and remoteness, ie. the wilderness quality, of wilderness areas, and in particular:
  - (i) protect and, where practicable, enhance wilderness quality;
  - (ii) protect wildlife and ecological processes;
  - (iii) control and, where practicable, eradicate non-indigenous plants and animals;
  - (iv) protect geographical features;
  - (v) protect sites of scientific significance;
  - (vi) protect sites of historical significance;
  - (vii) protect sites of Aboriginal cultural significance;
  - (viii) provide for public use and enjoyment where compatible with maximising wilderness quality; and
  - (ix) promote public awareness of, and education in, the natural features of and proper use of wilderness protection areas and wilderness protection zones.

### 3. MANAGEMENT PRINCIPLES

#### 3.1 General Principles

- (i) All management operations will be carried out in a manner consistent with maximisation of wilderness quality except where provided for in this Code (see 3.10).
- (ii) A Plan of Management will be prepared for a designated wilderness area as soon as practicable after the area's constitution. The Plan will provide clear direction for the protection and management of the wilderness area, in particular:
  - (a) proposals to achieve the management objectives (2 above);
  - (b) priorities for actions, including:
    - the removal of existing incompatible uses and/or structures except those permitted under this Code; and
    - appropriate rehabilitation to be undertaken following the removal of structures and incompatible uses;
  - (c) recognition of the need to review management if indicated by results of monitoring and research;
- (iii) No additional incompatible uses and/or structures will be permitted except those provided for in this Code.
- (iv) Nothing in this Code derogates from any rights exercised in mining tenements in wilderness protection zones. In relation to mining operations in wilderness protection zones, environmental protection policies in section 5 of this Code will apply.

#### 3.2 Access and Transport

- (i) The use of vessels, motorised or wheeled transport will be permitted only on prescribed access routes, and for emergency and essential management operations (see 3.10) when alternative measures which do not degrade the wilderness quality of an area are unavailable.

- (ii) Access routes may be prescribed in a plan of management for use by vessels, motorised or wheeled transport in circumstances where this type of transport is essential for effective management.
- (iii) Construction of vehicle or walking tracks will be permitted only where re-direction of existing access requires construction of alternative tracks or for management works to achieve objectives identified in a plan of management. The construction of vehicle tracks for specific operations as provided for under 3.6(vi), 3.10 and 5.0 may be permitted on the basis that they will be rehabilitated as soon as possible.
- (iv) Vehicle and walking tracks that are not essential for management purposes as specified in 3.10, or for mining operations in wilderness protection zones (see 5.0) will be closed and rehabilitated as prescribed in a plan of management.
- (v) Over-flying for recreational purposes under an altitude of 1500m above ground level will be prohibited.
- (vi) The landing of aircraft will be prohibited, except by permission of the Director and for emergency and essential management operations. Helipads and airstrips that are identified as essential for emergencies and management operations will be maintained. All other strips or helipads will be rehabilitated as soon as possible or allowed to regenerate naturally.

### **3.3 Tourism**

- (i) Commercial tours may be accommodated where their size and planned activities are compatible with maintenance of wilderness quality. Those permitted will have obtained a licence and will be conducted in accordance with licence conditions, the Visitor Management Strategy for the wilderness area (see 3.4), and the Minimum Impact Code (see 6.0). Tour groups will be monitored and regulated where necessary to prevent significant adverse impacts on wilderness quality and opportunities for solitude.

### **3.4 Recreation**

- (i) The level and type of visitor use and visitor conduct will be managed in accordance with the objectives stated in section 2.0 of this Code.
- (ii) A visitor management strategy that specifies an acceptable level and type of visitor use and visitor conduct will be included in the management plan for each wilderness area.
- (iii) Visitor management strategies will include the promotion of the Minimum Impact Code and the distribution of any information about the wilderness values of particular wilderness areas.

The following information should be used as a basis for monitoring the effectiveness of each strategy:

- (a) the long-term limits of acceptable change for environmental (wilderness quality) and social (opportunities for wilderness dependent experiences) conditions within the wilderness area; and
- (b) change in environmental and social conditions within the wilderness area.
- (iv) Constructed walking tracks, signs, track markers and other management devices or structures will be used only for essential management operations (see 3.2(ii) and 3.10).
- (v) Recreation will be in accordance with the Wilderness Regulations and the Minimum Impact Code.

### **3.5 Cultural Heritage**

- (i) Places, sites and objects of significance to Aboriginal people are protected under State and Commonwealth Aboriginal heritage legislation.
- (ii) Access by Aboriginal people to their sites of significance and protection of these sites will, as far as possible, be by methods compatible with the maintenance of wilderness quality.
- (iii) Nothing in this Code prevents Aboriginal people from doing anything in relation to Aboriginal sites, objects or remains in accordance with Aboriginal tradition. Furthermore, this Code does not prevent the taking, by Aboriginal people, of



- native plants, protected animals, or the eggs of protected animals, in accordance with the relevant provisions in the National Parks and Wildlife Act.
- (iv) Sites of historic significance will be conserved, using access and methods compatible with maintenance of wilderness quality in the long-term.
- (v) Non-Aboriginal structures and artefacts that are of no historic significance, as determined by the relevant authority, will be removed or allowed to deteriorate naturally. Removal will not be undertaken if the only method of removal significantly reduces wilderness quality in the long-term.

### **3.6 Fire**

- (i) Fire management will be based on continuing research into the fire history of the area, the relationships between fire and the natural communities occurring within the area, and on the maintenance of wilderness quality.
- (ii) Deliberately lit fires will be used only in emergency situations, and in essential management operations as listed in 3.10 and subject to (i) above.
- (iii) Other human caused fires should, where practicable, be extinguished consistent with maintenance of wilderness quality.
- (iv) Naturally caused fires will be extinguished when, in view of the direction, intensity and extent of the fire and the fire suppression techniques available, they pose a threat to human life and property, and to habitats requiring protection.
- (v) Where fire suppression action is required, the methods utilised will be, wherever possible, those which will have the least long-term impact on wilderness quality.
- (vi) The use of heavy machinery for fire suppression within a wilderness area will be prohibited except:
  - (a) where it is considered to be the only way of preventing greater long-term loss of wilderness quality;
  - (b) where specific machinery use techniques, that do not result in significant disturbance to the landscape or create a new access network, are considered the only feasible method of preventing long-term loss of wilderness quality; or
  - (c) to mitigate hazard to human life, where alternative measures which do not impact on the wilderness quality of the area are unavailable.
- (vii) Wherever possible, fire management practices designed to protect land adjacent to or within a wilderness area will be conducted outside the wilderness area.

### **3.7 Research**

- (i) Research that will contribute to the implementation of the objectives of wilderness management will be encouraged.
- (ii) Research that will not affect wilderness quality and cannot be carried out elsewhere may be permitted.
- (iii) Research not covered under (i) and (ii) will not be permitted.

### **3.8 Biological Conservation**

- (i) Management of threatened species, communities and habitats will, as far as possible, be consistent with maintenance of wilderness quality.
- (ii) Action will be taken to maintain and, where possible, restore natural processes, communities and habitats.

### **3.9 Non-indigenous Species**

- (i) Non-indigenous species which significantly affect the wilderness quality of a wilderness area will be controlled or eradicated.
- (ii) Action will be taken to prevent the establishment of non-indigenous species.

### **3.10 Emergency and Essential Management Operations**

- (i) All emergency and essential management operations will be carried out with the least possible impact on wilderness quality.
- (ii) Actions that cause short-term degradation of wilderness quality but are necessary for emergency and/or essential management operations will be

permitted. The only specific situations acknowledged in this Code as possibly requiring such actions are:

- control or eradication of non-indigenous species;
- conservation of threatened species, communities and habitats;
- protection of fire-sensitive species and communities;
- management of visitor use;
- management action or use of devices to mitigate hazard to human life;
- restoration of natural processes, communities and habitats; and
- research

Where degradation has occurred as a result of these activities, rehabilitation will be undertaken as soon as practicable.

### **3.11 Wilderness Protection Zones**

Protection of wilderness quality in wilderness protection zones will be negotiated with tenement holders on the basis of the environmental protection policies in section 5. Management undertakings will be incorporated in a plan of management.

## **4. EXTERNAL INFLUENCES**

4.1 Close liaison with adjoining landholders and managers will be established to ensure that adverse impacts on the wilderness quality of an area resulting from activities outside that area are minimised or prevented.

4.2 Where a wilderness area does not comprise a whole catchment, close liaison with upstream landholders and relevant authorities will be established to encourage the maintenance of water quality and flow regimes as close as practicable to their natural state.

4.3 Wherever possible management activities essential to the maintenance of the wilderness quality of a wilderness area to be on land outside the wilderness area.

## **5.0 EXERCISE OF MINING RIGHTS IN WILDERNESS PROTECTION ZONES**

The holder of a mining tenement shall:

5.1 have regard to the provisions of the plan of management under section 31 of the Wilderness Protection Act; and

5.2 in undertaking any operations:

- (i) protect native flora and fauna;
- (ii) avoid the pollution of land, water and air;
- (iii) avoid disturbance to known sites of natural, scientific, Aboriginal and non-Aboriginal cultural significance;
- (iv) minimise the potential for wind and water erosion;
- (v) avoid unnecessary track creation;
- (vi) avoid introduction of non-indigenous species;
- (vii) establish environmental monitoring and rehabilitation programs; and
- (viii) upon completion of the operation remove or obliterate all structures and materials used in the carrying out of mining operations.

## APPENDIX B: MINIMUM IMPACT CODE

### MINIMUM IMPACT CODE FOR VISITORS TO WILDERNESS PROTECTION AREAS AND ZONES IN SOUTH AUSTRALIA

#### **Introduction:**

The rise in popularity of outdoor recreation has led to a great increase in the number of people visiting National Parks and wilderness areas. With this rise in use has come increasing damage to the natural environment. Degradation of popular areas through proliferation of unnecessary tracks, trampling of native vegetation, collection of fallen and live timber for firewood, and rubbish dumping is a significant environmental problem.

Fortunately, along with the increasing number of visitors to wilderness, a new user ethic has developed. The 'minimal impact' philosophy is now widely adopted. This Code covers the major minimal impact techniques for visitors to wilderness protection areas and zones.

While this Code serves as a handy guide for wilderness users, visitors are reminded that detailed requirements are set out in the Wilderness Protection Regulations 1992.

#### *Planning and getting there*

##### **Equipment and Permits**

To visit a wilderness area with the least impact you need the right equipment.

Apart from normal bushwalking gear, walkers staying overnight will need:

- a fuel stove and fuel
- a hand trowel or spade
- a container for collecting water
- strong rubbish bags
- up to date maps and access information
- relevant permits or licences.

Desert travellers should refer to the National Parks and Wildlife Desert Parks Handbook for helpful advice on trip preparation and travel. As well as the items listed above desert travellers should ensure they have adequate water, food, fuel and vehicle spare parts.

Commercial tours and scientific expeditions require a licence to take groups into a wilderness area. Group leaders must:

- adhere to the conditions of the licence and the Minimum Impact Code; and
- supply each member with a copy of the Code.

##### **Timing and Numbers**

Be constantly aware of the effect your presence is likely to have on the wilderness area and on other visitors.

- Go with a small number of people. Large groups have more impact, affect the wilderness experience of others and are more socially unwieldy.
- Where possible avoid the peak times of the year and the more popular areas. You will miss the multitudes and by spreading the impact you give the environment a chance to recover.
- Plan your travelling times so that you can camp at recognised campsites rather than creating a new site.

##### **Things to leave behind**

There are some things you cannot take into a wilderness area.

- Please arrange for your pets to be cared for while you are away.
- Firearms, fishing equipment, nets and any other trapping devices are prohibited unless you have a permit.

## *Protecting the wilderness area*

### **Flora, fauna and natural features**

All plants, animals and natural features in wilderness areas are protected.

- Wildlife and habitats should not be disturbed. Observe and enjoy them quietly. Take particular care near breeding birds and other known wildlife colonies.
- Do not pick flowers, take or disturb other specimens, including rocks and fossils. If you have a permit, take care not to spoil the environment and other people's enjoyment of it.

### **Cultural Heritage**

Sites and objects of Aboriginal and non-Aboriginal cultural significance are protected by law.

- **Do not remove objects, or disturb or deface anything. Access to some sites may require the permission of Aboriginal traditional owners.**
- Recognised places are likely to have defined access. Stay on the tracks and do not create new ones.

### **No Trace Camping**

Modern camping equipment helps you to leave a campsite looking as if you had never been there.

- Look for low impact campsites. Sandy or hard surfaces are better than vegetated areas. Reduce your impact by spending only one or two nights in one place. Aim to leave the area as if no-one had been there.
- Avoid making vehicle tracks around campsites. Parking under trees compacts the soil and reduces the ability of water to penetrate.
- If it looks like rain, pitch your tent on ground that will drain naturally. Do not dig channels around your tent.
- Water supplies are vital for most animals and birds. Make your campsite sufficiently far from any water sources so that animals may have undisturbed access.
- A significant part of the wilderness experience is the enjoyment of the sounds of the bush. Do yourself and other visitors a favour by keeping noise to a minimum.

### **Campfires**

Trees are precious. Trees and vegetative litter provide habitats for many animals, birds and insects. Collection of dead wood and the cutting of live timber for firewood have had a serious impact on woodland and individual trees in some popular outback areas.

- Areas which are ecologically fragile or depleted of timber may be designated **Fuel Stove Only Areas**. Check on campfire restrictions before leaving and always carry the appropriate equipment and fuel. Fuel stoves are faster and cleaner than campfires and do not cause visual scarring and debris.
- Where campfires are permitted, only one small campfire should be made. Timber should be obtained from designated sites or supply depots.
- Campfire remains should be as unobtrusive as possible. Constructing campfires from piled stones or in holes creates a visual scar. A fire that has burnt to ashes is less obtrusive than one extinguished with soil or water. Remove any non-combustible material from the ashes and take it with you.
- Be absolutely sure that the fire is out. A fire is not really out until the soil is cool.
- Do not light a fire if in doubt about the safety of lighting it. Always carry a fuel stove and fuel just in case.
- Observe all fire bans.

### **Rubbish - Carry it in, carry it out**

- Pack to minimise rubbish. Avoid carrying too many bottles, cans and wrappings.
- Do not bury rubbish as it disturbs the soil and is likely to be dug up by animals and scattered by birds and the wind.
- If fires are permitted, you may burn combustible material, but carry out the rest.

- If you come across other people's rubbish, you'll do the wilderness a favour by carrying that out too.

### **Washing and hygiene**

**If water is required for washing it should be collected in a container.**

- Wash 50 metres away from rivers, creeks, springs, lakes and other water bodies. Detergents, toothpaste and soap (even biodegradable types) pollute the water and harm fish and other water life.
- Only swim where permitted.
- Bury all faecal waste and paper. Choose a spot at least 100 metres from campsites and watercourses. If fires are permitted, use extreme care to burn rather than bury paper.
- Many sanitary items and 'disposable' nappies have plastic liners that do not burn well. Please carry them out.

### **Tracks and Trails**

Vehicle access to wilderness areas is generally not permitted. In South Australia, some vehicle access may exist where necessary for effective management. Where this access is made available to drivers or walkers, the privilege should not be abused.

- Stay on prescribed tracks and trails to confine impacts to a planned route.
- Do not create new tracks and trails by cutting corners or skirting around obstacles such as fallen trees or dead animals. Creating new tracks increases environmental impacts, creates visual scarring and causes confusion. Where possible, remove the obstacle.
- Avoid vehicle travel when wet as this can cause extensive damage to the track surface.
- Leave gates open or closed as found. Do not force or go around locked gates.

Where there is no walking trail:

- Avoid sensitive vegetation that is easily destroyed by trampling.
- Follow an animal pad.
- Spread out where the terrain allows, as this will help disperse impacts. A plant has more chance of survival if only one walker steps on it.

### **Thank you for helping to protect our precious wilderness.**

By adopting the techniques in this Code, you will help protect our wilderness. Without a conscious effort, we run the risk of 'loving our wilderness areas to death'.

## APPENDIX C: CONSERVATION STATUS CODES

### Australian Conservation Status Codes

The following codes are based on the current listing of species under Section 179 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

- EX Extinct:** there is no reasonable doubt that the last member of the species has died.
- EW Extinct in the Wild:** known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or it has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
- CE Critically Endangered:** facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
- E Endangered:** facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
- V Vulnerable:** facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
- CD Conservation Dependent:** the species is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.

**Note:** Prescribed criteria as defined under the IUCN Red List of Threatened Species.

### South Australian Conservation Status Codes

The following codes are based on the current listing of species under Schedules of the *National Parks and Wildlife Act 1972*, as amended in 2000. To align with other States, Territories and the Commonwealth (EPBC Act) listing categories and ratings, the IUCN criteria were used as a basis for determining threatened species status under the *National Parks and Wildlife Act 1972*. For IUCN criteria see:

IUCN (1994) *IUCN Red List Categories*. Prepared by the IUCN Species Survival Commission. IUCN, Gland, Switzerland ([www.redlist.org](http://www.redlist.org)).

IUCN (2001) *IUCN Red List Categories and Criteria: Version 3.1*. IUCN Species Survival Commission. IUCN, Gland, Switzerland and Cambridge, United Kingdom ([www.redlist.org](http://www.redlist.org)).

- E Endangered:** (Schedule 7) in danger of becoming extinct in the wild.
- V Vulnerable:** (Schedule 8) at risk from potential or long term threats which could cause the species to become endangered in the future.
- R Rare:** (Schedule 9) low overall frequency of occurrence (may be locally common with a very restricted distribution or may be scattered sparsely over a wider area). Not currently exposed to significant threats, but warrants monitoring and protective measures to prevent reduction of population sizes.

### Regional Status Codes

The categories below apply to the species distribution at a regional level. There are no regional conservation status categories developed for mammals, reptiles or amphibians to date.

#### Birds

Regional conservation status for birds follow:

Carpenter and Reid (1998) *The Status of Native Birds in the Agricultural Areas of South Australia*. Unpublished and regularly updated database.

The regions are defined as follows:

<b>ML</b>	Mount Lofty	<b>MN</b>	Mid-North	<b>SE</b>	South-Eastern	<b>KI</b>	Kangaroo Island
<b>MM</b>	Murray Mallee	<b>EP</b>	Eyre Peninsula	<b>YP</b>	Yorke Peninsula		

## Plants

Regional conservation ratings for plants follow:

Lang, PJ & Kraehenbuehl, DN (2001) *Plants of Particular Conservation Significance in South Australia's Agricultural Regions*.

Department for Environment and Heritage (undated) *Florlist*. Unpublished and regularly updated database.

The regions are as defined by the State Herbarium (Plant Biodiversity Centre), illustrated in the front cover of:

Barker, WR, Barker, RM, Jessop, JP and Vonow, HP (Eds) (2005) *Census of South Australian Vascular Plants. Fifth Edition. J. Adelaide Bot. Gard. Supplement 1*. Botanic Gardens of Adelaide and State Herbarium, Adelaide.

<b>NW</b>	North-Western	<b>FR</b>	Flinders Ranges	<b>NL</b>	Northern Lofty	<b>SL</b>	Southern Lofty
<b>LE</b>	Lake Eyre	<b>EA</b>	Eastern	<b>MU</b>	Murray	<b>KI</b>	Kangaroo Island
<b>NU</b>	Nullarbor	<b>EP</b>	Eyre Peninsula	<b>YP</b>	Yorke Peninsula	<b>SE</b>	South-Eastern
<b>GT</b>	Gairdner-Torrens						

In order of decreasing conservation significance:

- X Extinct/Presumed extinct:** not located despite thorough searching of all known and likely habitats; known to have been eliminated by the loss of localised population(s); or not recorded for more than 50 years from an area where substantial habitat modification has occurred.
- E Endangered:** rare and in danger of becoming extinct in the wild.
- T Threatened:** (*Plants only*) likely to be either Endangered or Vulnerable but insufficient data available for more precise assessment.
- V Vulnerable:** rare and at risk from potential threats or long term threats that could cause the species to become endangered in the future.
- K Uncertain:** likely to be either Threatened or Rare but insufficient data available for a more precise assessment.
- R Rare:** has a low overall frequency of occurrence (may be locally common with a very restricted distribution or may be scattered sparsely over a wider area). Not currently exposed to significant or widespread threats, but warrants monitoring and protective measures to prevent reduction of population sizes.
- U Uncommon:** less common species of interest but not rare enough to warrant special protective measures.
- Q Not yet assessed:** but flagged as being of possible significance.
- N Not of particular significance:** (*Plants only*) also indicated by a blank entry.
- C Common:** (*Birds only*) also indicated by a blank entry.
- O Occasional Visitor Only:** (*Birds only*) not considered of conservational status.