

# WHYALLA CONSERVATION PARK MANAGEMENT PLAN

North-East Eyre Peninsula

SOUTH AUSTRALIA



DEPARTMENT FOR ENVIRONMENT, HERITAGE AND ABORIGINAL AFFAIRS

Heritage and Biodiversity Division



GOVERNMENT OF SOUTH AUSTRALIA

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Wild Dog Hill  
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## FOREWORD

Whyalla Conservation Park provides an excellent example of community support and involvement making a significant contribution to the conservation of South Australia's biodiversity. Not only have the Friends of Whyalla Conservation Park made a substantial voluntary commitment of time, money and materials over many years in protecting and maintaining the park, but they have also been instrumental in researching and preparing this plan of management.

The plan of management was released in draft form for public review in February 1996 with a closing date for public submissions of 17 May 1996. At the close of the public exhibition period, three written representations had been received. Thanks are extended to those who took the time to make a submission. In December 1996, a reserve planning and management sub-committee of the SA National Parks and Wildlife Council considered the draft plan and public submissions in detail.

In its review, the sub-committee made one correction (to a map scale) and proposed one amendment (regarding reference to a vulnerable species, the peninsula dragon). These recommendations were endorsed at the subsequent Council meeting on 11 December 1996 and the plan was approved for adoption in January 1997. The intervening time period has been taken up with final editing and preparations for printing.

The plan sets the future direction for the park. It reinforces the need for strong community involvement in planning and management, and prevention of vandalism and activities deleterious to the park environment. Low-impact visitor use is encouraged, long term conservation and rehabilitation strategies are proposed and a commitment is made to providing facilities and services that meet best practice standards.

The future of this and other parks in South Australia will continue to depend to a very large extent on the dedication shown by local communities. The plan of management for Whyalla Conservation Park is now formally adopted under the provisions of section 38 of the National Parks and Wildlife Act 1972.



**HON. DOROTHY KOTZ MP**  
**MINISTER FOR ENVIRONMENT AND HERITAGE**



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# INTRODUCTION

## SYNOPSIS

This plan sets the future direction for the management of Whyalla Conservation Park. The Friends of Whyalla Conservation Park have been active since the group's formation in 1987 and are largely responsible for a decrease in the level of vandalism in the Park. This vandalism was a problem even before the Park's dedication in 1971.

It is fitting that the Friends have sought to prepare this plan and to promote and maintain the Park as a community asset.

The plan highlights the need for:

- commitment to strong community involvement in park planning, management and activities
- commitment to park management strategies which ensure that vandalism and inappropriate visitor activity are minimised
- commitment to a resource management regime which ensures rehabilitation and long term conservation of the Park's natural systems
- commitment to the provision for appropriate low impact visitor activity
- commitment to the provision of park facilities and services which conforms with best practice standards

## PLAN STRUCTURE

This plan is divided into four main sections.

The first contains the background information relating to the location, natural features, history and visitor use of the area. This section will be supplemented by a separately published document which will give detailed information about the bio-geography of the Whyalla Conservation Park (THE NATURAL AND CULTURAL HISTORY OF THE WHYALLA CONSERVATION PARK).

The second outlines the management philosophies and objectives which act as a guide for future management actions.

Proposals for implementing the objectives are discussed in the third part.

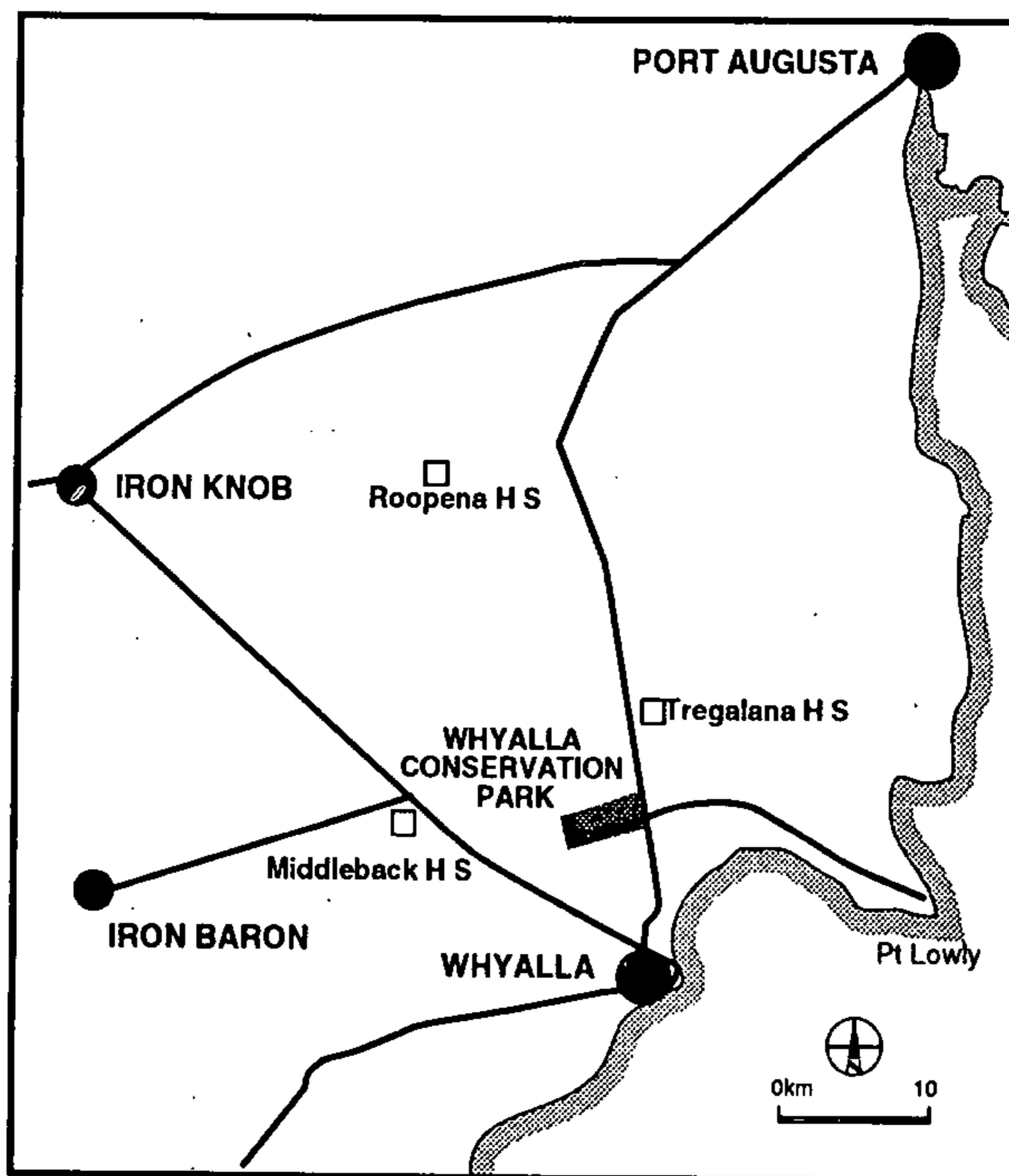
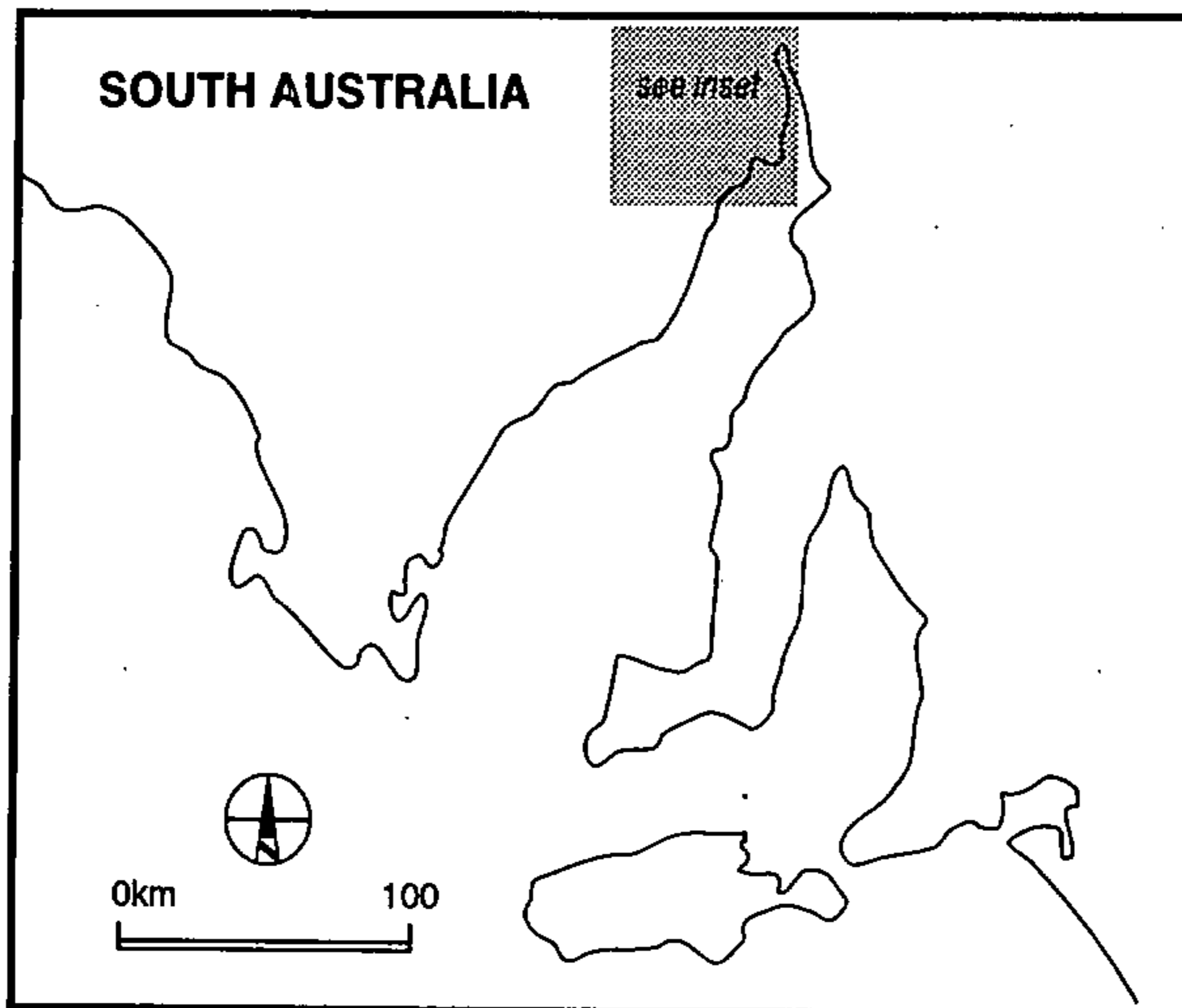
The fourth and final part provides a summary of management proposals which will enable the reader to obtain a concise overview of the implications of this plan.

## WHYALLA CONSERVATION PARK

Whyalla Conservation Park is a park of 1 011 hectares. Although small in comparison with other arid area parks, it is acknowledged as a fine example of the Western myall/chenopod (*Acacia papyrocarpa/chenopod*) woodland so characteristic of north-eastern Eyre Peninsula. It was conserved both for the conservation value of this woodland and for its position only 10 km north of the City of Whyalla. It was intended to serve a recreational purpose for Whyalla as a picnic site (See Map 1, p x).

The Park was proclaimed as a National Park on 4th November 1971. In 1972, following the passage of the National Parks and Wildlife Act, it was reclassified as **Whyalla Conservation Park**.

Since its proclamation, it has also been recognised as part of an Australian Heritage area of significance for ground lichens and as a centre of distribution of ant species.



**Map 1: Site of Whyalla Conservation Park in the region**

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**PART 1**  
**BACKGROUND INFORMATION**

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# BACKGROUND INFORMATION

The following is a brief summary of the natural and cultural heritage of the Whyalla Conservation Park. Additional and more detailed information can be found in the separately published document, THE NATURAL AND CULTURAL HISTORY OF THE WHYALLA CONSERVATION PARK.

## 1.1 LOCATION AND PHYSICAL FEATURES

### 1.1.1 Location and access

Whyalla Conservation Park is located in the Hundred of Cultana, north-eastern Eyre Peninsula, 10 km north of Whyalla and approximately 70 km south-south-west of Port Augusta, adjacent to the Lincoln Highway (Map 1, p x).

The Park is a long sided rectangle, 1 011 hectares in area, comprising Section 14 of the Hundred of Cultana and is fenced on all boundaries.

The Park is roughly divisible into two sections, an eastern plain vegetated with Western myall, Bluebush (*Maireana sedifolia*), Bladder saltbush (*Atriplex vesicaria*) woodland, and a western portion dissected by a series of low lying hills supporting Narrow-leaved fuchsia bush (*Eremophila alternifolia*), Lobed-leaved hop-bush (*Dodonaea lobulata*) and Tall or Rock sida (*Sida calyxhymenia*).

The most outstanding topographic feature of the Park is Wild Dog Hill, in the north-west corner, a sandstone outcrop rising abruptly from the surrounding plain, and exhibiting interesting rock structure and flora (Lewis, 1974 p 20-21).

Main access to the Park is from the Lincoln Highway 10 km north of Whyalla, just south of the Port Bonython turn off.

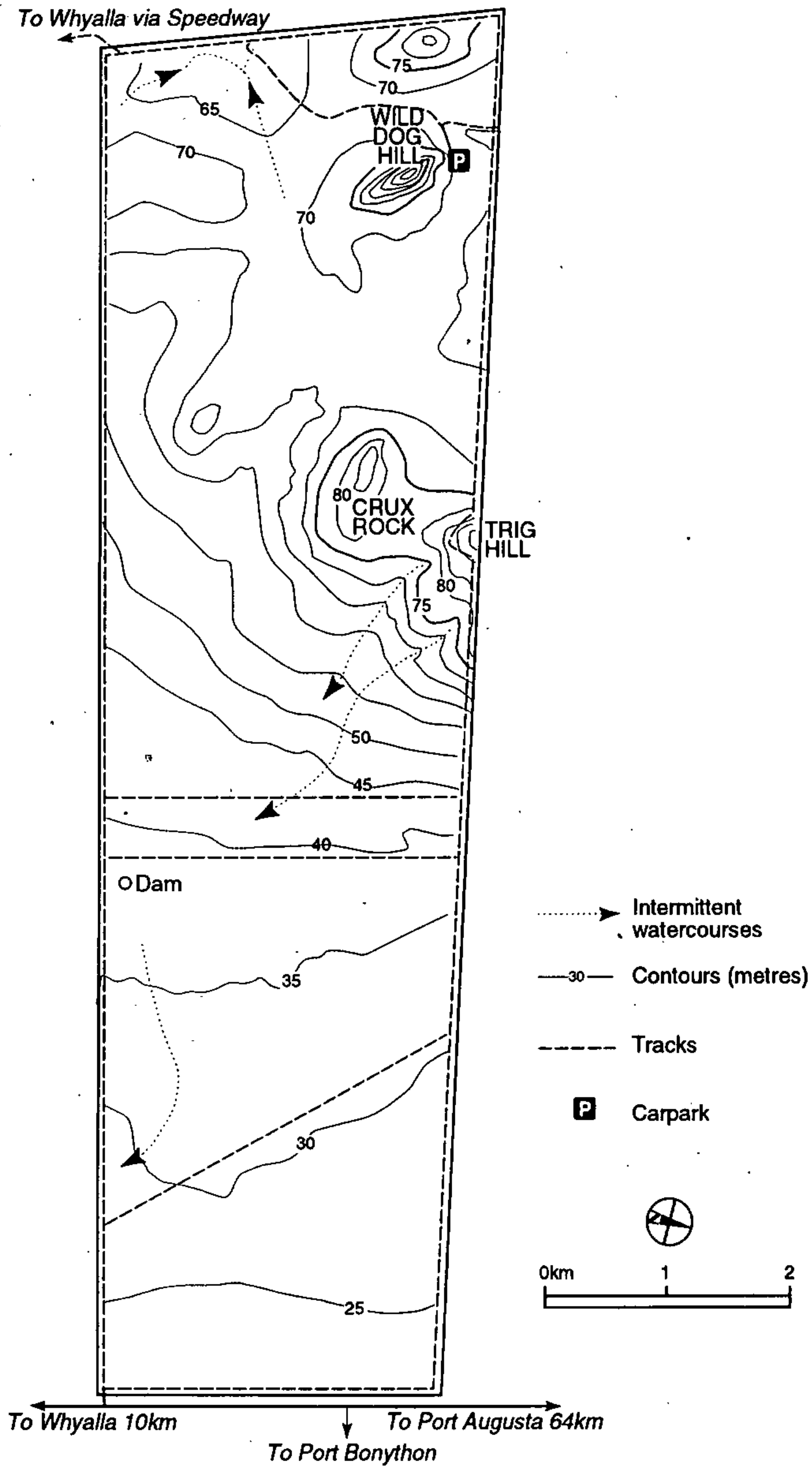
Alternatively, access can be gained via Iron Knob road - turn off at the Speedway and follow the road to south-west corner of the Park and onto the western boundary road.

Signs on the Lincoln Highway on both the southern and northern approaches to the Park are placed 400 metres before the entrance to give notification of the entrance onto the southern boundary road.

Internal roads are unsurfaced. There is no access for caravans. Use of roads following heavy rain causes considerable damage and is discouraged. The Park may be closed to vehicle access following heavy rain.

Other tracks cross the Park at:

- 1) the dam site and ETSA power lines from the southern boundary to the northern boundary road.
- 2) from Wild Dog Hill to the northern boundary road.
- 3) from the south-western corner, along the western boundary and then to Wild Dog Hill. This road follows part of the fire break cut in 1975.



**Map 2: Topographic features of Whyalla Conservation Park**

### 1.1.2 Surrounding land use

The land surrounding the Conservation Park is pastoral lease, used for sheep grazing to the north, east and west. Immediately south of the Park is an area of land controlled by BHP. Large areas of it are currently not used for any purpose. Beyond this area steelworks and other associated industries are located just north of Whyalla, 8 to 10 km south of the Park. In 1982, SANTOS established a gas fractionation plant at Port Bonython near Point Lowly. While this plant is approximately 10 km from the Park, the turn-off from the main highway to this plant is opposite the mid-point of the eastern boundary of the Park.

Recently, a new electricity sub-station has been installed immediately outside the Park on the northern side. This sub-station feeds power to both the Point Lowly area and to the City of Whyalla.

Urban development is confined within the limits of Whyalla. A small quarrying operation takes place at Mt Laura. The Whyalla waste disposal landfill has been recently relocated to one of the used quarry sites in this area.

An area, opposite the eastern boundary of the Park, is set aside for a variety of industrial purposes and is known as *Cultana Industrial Estate* (Lewis, 1974 p 20). A recreation area adjoins the western boundary of this area. This is owned and managed by the Left Hand Club of Whyalla and is known as Tregalana Park.

### 1.1.3 Climate

The climate of the Whyalla region is dominated by the Sub-tropical High Pressure system. In summer, this system exists as a series of cells, which progress from west to east at about latitude 38°S to 40°S in the Great Australian Bight. In winter, this system moves northward, and centres at about the latitude of Marree (29°S). This seasonal movement of the Sub-tropical high causes dry continental air to blow over the area for most of the year.

This pattern is varied by monsoonal lows in summer which can bring heavy rain. These tropical lows are most commonly from north-west Western Australia, with lows from Queensland being less common. These tropical lows are responsible for the heaviest rainfall events in the region. In winter, frontal depressions from the Southern Ocean bring showers.

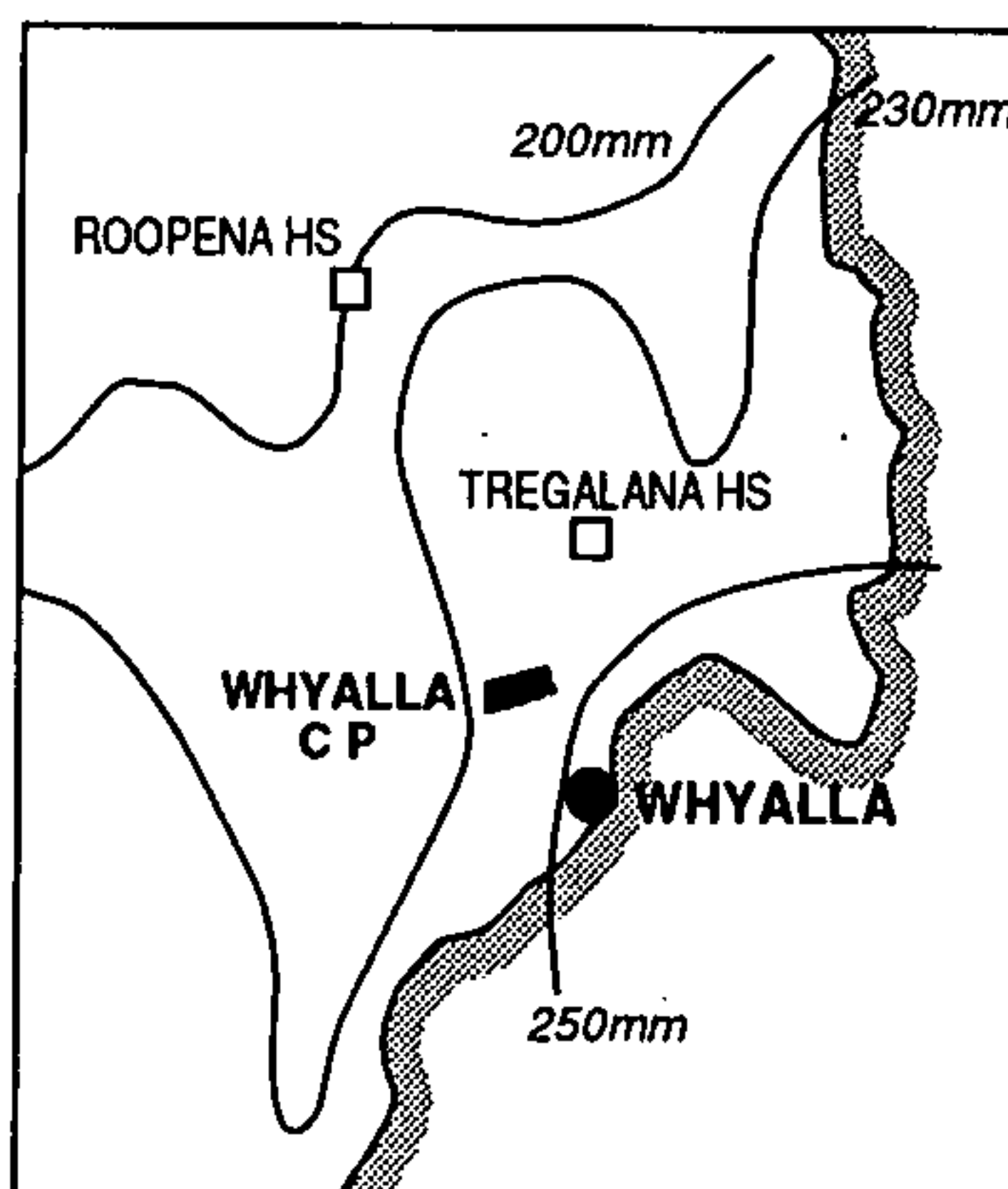
It is a dry area, with an annual average rainfall at Whyalla of 271 mm (1906 to 1990) and an estimated annual potential evaporation of 2400 mm (Laut et al., 1977). Whyalla averages 65 rainy days per year. The remaining 300 days are, on average, clear and sunny and this contributes to high evaporation rates. There are no recorded figures for evaporation at Whyalla, the figures for nearby Minnipa are included as indicative values.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Temperature Mean Max °C	28.8	28.5	26.7	23.8	20.2	17.5	16.8	18.2	20.6	23.4	25.7	27.3	23.1
Temperature Mean Min °C	18.6	18.9	17.2	14.1	10.8	8.3	7.3	8.1	10.0	12.5	15.0	16.8	13.1
Rainfall Mean mm	18	24	18	19	28	25	23	24	25	26	22	19	271
Rainfall Median mm	8	11	11	15	21	16	18	23	19	20	18	14	256
Humidity 3pm Mean	45	47	48	46	53	55	54	49	46	42	43	40	48
Minnipa Evaporation mm	350	293	250	165	109	69	76	100	142	211	274	324	2363
Rain Days	3	3	3	5	7	7	8	8	7	6	4	4	65

**Table 1: Climate data for Whyalla**  
(Source: Dames and Moore, 1991)

Temperatures increase as one goes inland, and those experienced in the Park are probably 2 or 3 degrees above those experienced in Whyalla. On the coast, summer temperatures are typically in the high 20s with some days in the mid to high 30s. Days over 40°C are infrequent. Winter temperatures are generally mild, with daily maxima in the mid to high teens.

Wind direction is predominantly southerly due to the sea-breeze effect generated by the warmth of inland South Australia and the contrast with the cool waters of Spencer Gulf. This sea-breeze effect extends up to 20 kilometres inland.



Map 3: Average rainfall isohyets for the Whyalla region

#### 1.1.4 Landscape

Whyalla Conservation Park is located within the Western myall plains country of north-east Eyre Peninsula. While geomorphologically similar to much of central Eyre Peninsula, the region is distinguished by its particularly well developed Western myall/chenopod communities.

The region is defined to the south by the distinct zone of transition from Western myall to Mallee and by an associated change in land use from extensive livestock grazing to cereal cultivation. Laut et al. (1977), identify it as one of the four major environmental regions of South Australia.

Although generally of low, undulating relief, the Park itself has been classified as a part of the North Whyalla Hills (Crawford and Forbes, 1969). This geomorphic unit extends from False Bay and the City of Whyalla in a north-north-westerly direction for approximately 35 kilometres. The highest peaks in these hills are Mt Laura (176 metres) and Mt Whyalla (233 metres).

The western parts of these mounded hills rise to 70 - 100 metres, the western aspect of some being marked by sandstone outcrops. Wild Dog Hill, isolated in the north west corner of the Park, is by far the most prominent feature of the landscape. Rising sharply from the surrounding plain to a height of 90 metres, its northerly aspect features a series of spectacular sandstone faces.

The eastern portion of the Park slopes gently away from the hills in a north-easterly direction. The area is relatively low lying and flat, at 20 to 40 metres above sea level, merging into an extensive plain which is known as Long Sleep Plain.

##### Drainage channels

Natural drainage channels are poorly defined, generally being marked by regions of heavier native vegetation and pest plant growth. However, they have been accentuated in some areas by the construction of artificial drains. Drainage from the hills in the Park is in two main directions, south east along constructed drains towards a dam located on the southern boundary of the Park and westward into neighbouring Middleback Station.

##### Regional landscape

From the higher elevations of the Park, extensive views of the regional landscape well beyond the Park boundary can be obtained. To the north and south, the scene is dominated by the more prominent peaks of the North Whyalla Hills as previously described.





**Photo 2: View from Trig Hill to Wild Dog Hill**

To the west, across an extensive plain of Western myall woodland, can be seen, in the distance, the prominent escarpments and steep strike ridges of the Middleback Ranges.

A complex of features dominate the landscape to the east of the Park. Spencer Gulf, with False Bay arching away to the east towards Point Lowly can be observed beyond the northern edge of the Whyalla Steel Works with the Flinders Ranges on the eastern side of Spencer Gulf in the background. The first of the two major upland areas can also be observed in this direction. The prominent face of the Simmens Plateau which extends from Point Lowly to beyond Lincoln Gap is clearly visible, rising to a height of 300 metres. The Plateau is bounded to the east and west by faults which are largely obscured by scree. It is the remnant of a much older more extensive tableland. Yet further to the east, bordering Upper Spencer Gulf in the region of Backy Point is an irregular hilly area, the Douglas Upland and Cultana Group.

### **1.1.5 Geology**

The hills of the Park are formed from the Pandurra formation and have an age of between 1 600 and 1 000 million years. The major rock formation of the Park is Wild Dog Hill (90 m), which consists of red or purple medium grade sandstones with some conglomerate.

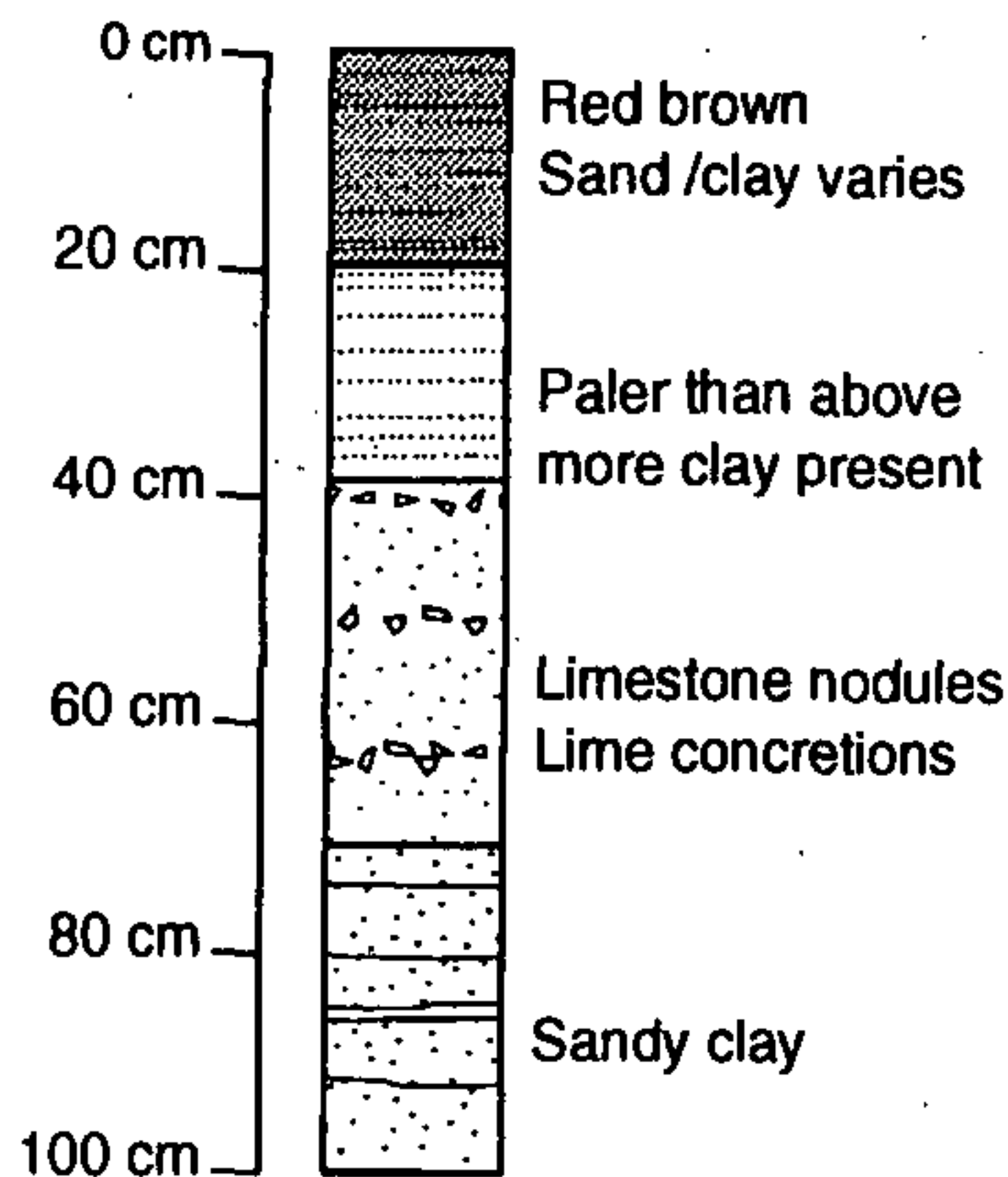
The formation dips in a shallow way towards the north east. Trig Hill (95 m) which is the highest part of the Park is in this same formation. The remainder of the Park is covered by alluvial material which consists of sands and clays.

### **1.1.6 Soils**

The soils of the Whyalla Conservation Park result from the interaction of parent material, slope and climate. The work of Megan Lewis (1972) and the Environmental Impact Statement for the adjacent Tioxide site (Dames and Moore, 1990) confirm that the soils of the Park are typical of the semi-arid regions of Australia.

LEFT:

Figure 1: Idealised soil profile of the Whyalla region



The presence of lime nodules in the subsoil is due to the re-deposition of these salts following leaching from the surface layers.

Soils in the area are alkaline due to the low rate of leaching which is possible under a regime of low rainfall and high evaporation. Typical pH values found by Lewis (1974 p 39) were 6.5 -9.0.

There is a close association between soil type and vegetation. The soils map on the following page is based on Lewis's vegetation map and indicates that four major soil types can be recognised in the Park.

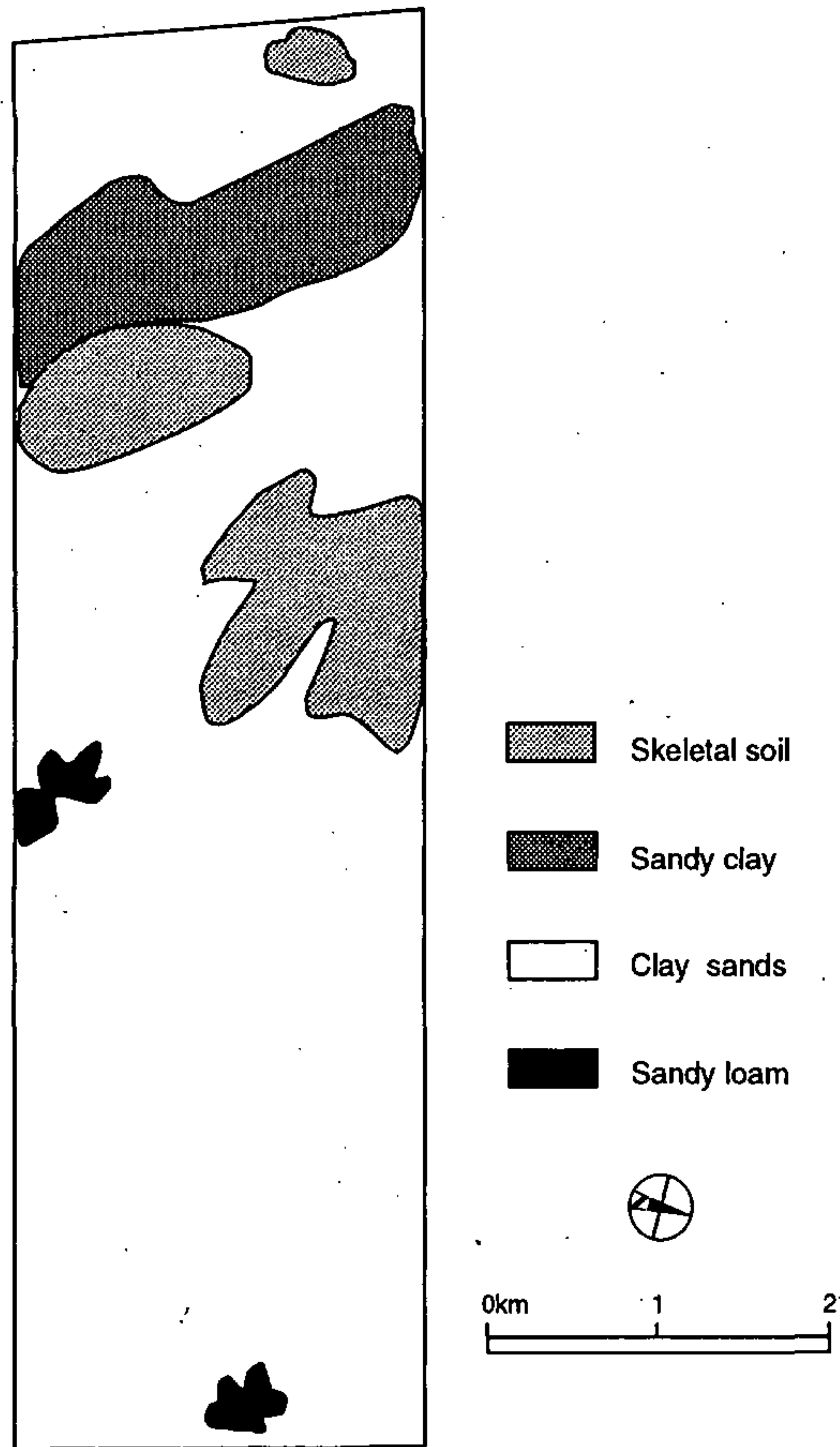
- i Skeletal soils on the upper slopes of hills.
- ii Sandy clay where Bladder saltbush is the dominant under-shrub.
- iii Clay sands where Bluebush is the dominant under-shrub.
- iv Sandy loam where Black oak (*Casuarina cristata*) groves occur.

There is a good coverage of soil lichens especially in soil types 2 and 3. These soil lichens have important functions.

- i They fix atmospheric nitrogen and thereby increase the soil fertility.
- ii They absorb rainfall and decrease run-off.
- iii They bind the soil surface and thereby reduce erosion.

### 1.1.7 Ground water

Laut et al. (1977) indicated that ground water in this area is very rare because of the underlying geology.



**Map 4: Soil types of the Whyalla Conservation Park**

### 1.1.8 Fire

#### Fire History

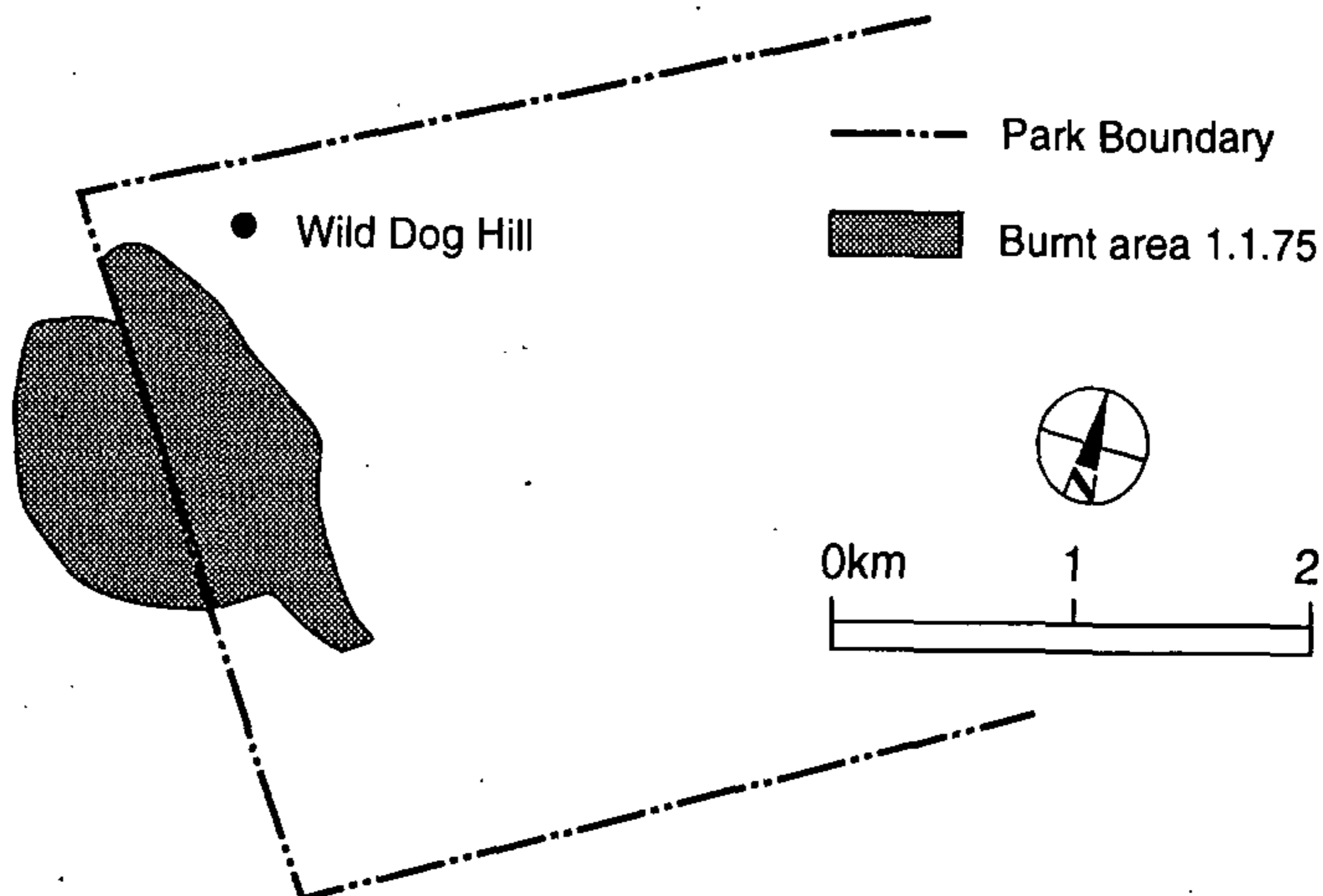
The Whyalla Conservation Park had no known recent fire history up until 1974 (Lewis, 1974 p 23). NPWSA have records of a small fire of approximately 40 hectares on the western boundary in January 1975 (Map 5 overleaf). The source of the fire is unknown. A fire break was constructed to contain this fire. The size and age of the Western myalls in the rest of the Park indicate there may not have been a fire in the area for at least 350 years.

### Fire Hazards

Fire is not a particular problem in the Park most of the time because of the fire-resistant nature of much of the vegetation, relatively simple topography and low fuel loads.

The dominant Western myall, although occurring in association with a fire resistant understorey of bluebush and saltbush, is itself killed by fire. The Park contains significant stands of this species which are a valuable natural asset which should be protected from fire where possible. Highly flammable annual grass (*Stipa* spp.) and herb (mainly Wards weed (*Carrichtera annua*)) growth following good seasons could well pose a threat to mature Western myall trees. There is potential for cured annual grass to be ignited by lightning or human activity.

A brief fire prevention plan should be prepared for the Park outlining a mechanism whereby fuel loads and conditions are assessed at the beginning of each fire season and protection and suppression measures put in place. This will be carried out in association with SAMFS and NPWSA as is the normal procedure.



**Map 5: Site of the 1975 fire in Whyalla Conservation Park and adjacent land**

## 1.2 NATURAL HISTORY

### 1.2.1 Flora

(Please note all plant names are as per Jessop and Toelken, 1986)

Whyalla Conservation Park is one relatively small part of the State reserves network. One of its main roles is to conserve a representative sample of the native flora and fauna of the eastern upper Eyre Peninsula. The natural habitats found within this Park are very poorly conserved within the State's Park system. Whyalla Conservation Park and its larger neighbour to the west, Lake Gilles Conservation Park, are the only two parks that conserve substantial tracts of largely undisturbed Western myall woodland. As such, this Park's importance in the conservation of the native flora and fauna of the north-eastern Eyre Peninsula, is quite significant.

According to Lewis (1974, p 43), there are seven distinct vegetation types within the Whyalla Conservation Park. These vary in structure and composition and their distribution is influenced by variations in topography and soil type and depth. These are as follows:

#### Low Woodland

##### **Western myall with under-storey of Bladder saltbush and Bluebush**

This is the predominant vegetation type over most of the north-east Eyre Peninsula region. The Whyalla Conservation Park is one of few reserves containing this particular vegetation association.

The Western myall is the predominant tree species, however other tree species are also present. In particular there are isolated individuals of Sugarwood (*Myoporum platycarpum*), dense clonal groves of Bullock-bush (*Heterodendrum oleifolium* syn. *Alectryon oleifolium*), occasional individuals of Native peach (*Santalum acuminatum*) and open groves of Black oak.

The shrub under-storey also includes species such as Spiny saltbush (*Rhagodia spinescens*), Goosefoot (*Chenopodium gaudichaudianum*), Bitter saltbush (*Atriplex stipitata*) and Buckbush (*Salsola kali*).

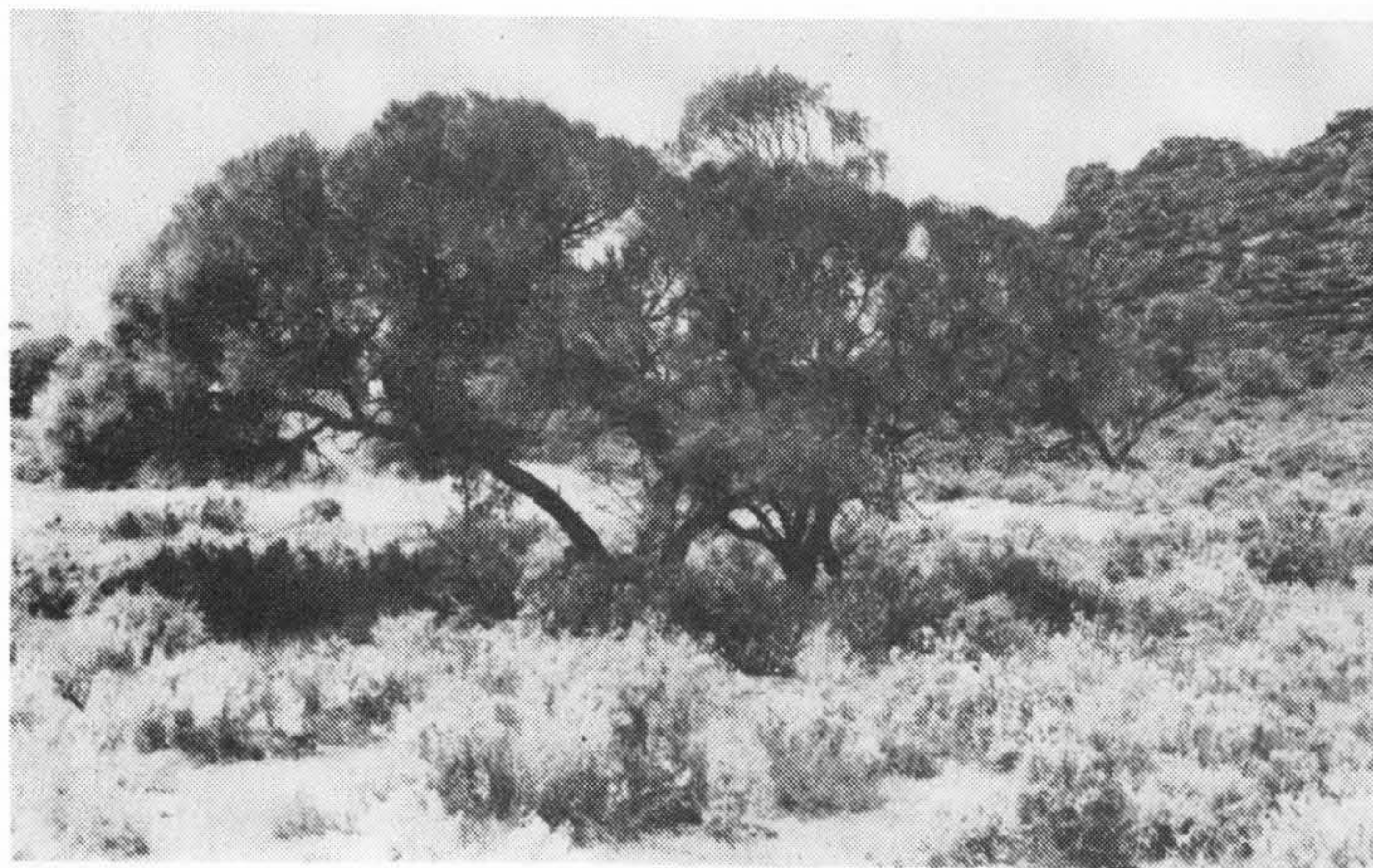


Photo 3: Western myall/chenopod shrubland dominates Whyalla Conservation Park



**Photo 4: Black oak occurs in isolated groves throughout the Park**

In those areas which were less heavily grazed and trampled when the area carried stock, a well developed ground surface crust of lichen and moss species is noticeable (Lewis, 1991). These areas are away from areas of disturbance from both humans and, in the past, sheep.

Other shrub species in this vegetation type are Tall or Rock sida and Australian boxthorn (*Lycium australe*).

ii Low Open Woodland

**Western myall with Bladder saltbush under-storey.**

This vegetation type is essentially the same as the Low Woodland described above except that Bluebush is absent or very rare and that Bristly sea-heath (*Frankenia serpyllifolia*), and Bindyi (*Dissocarpus biflorus*) are present. Total foliage cover of the dominant species is less than 10%.

iii Low Woodland

**Black oak groves**

Distinct closed groves of Black oak with a unique structure and composition occur infrequently in the Park, however they are common outside the reserve in the north-east Eyre Peninsula region.

The groves can be very dense, with trunks only 1 - 2 m apart. Other trees, particularly Western myall, Sugarwood and Bullock-bush are sometimes also present in those stands that are less dense. Bladder saltbush and Bluebush are the predominant species in the under-storey and there is characteristically a heavy lichen and moss crust.

iv Shrubland

**Rock sida**

Rock sida shrublands intergrade with low open woodlands on the lower more gradual slopes of the hills. The dense growth of this shrub gives the appearance of a mono-specific community, however, Bladder saltbush, Bluebush, Spiny saltbush, Ruby Saltbush (*Enchylaena tomentosa*), Spiny goosefoot (*Rhagodia ulicina*), Desert goosefoot (*Chenopodium desertorum*) and Thorny lawrenciana (*Lawrenciana squamata* syn. *Plagianthus microphyllus*) are present as an under-storey.

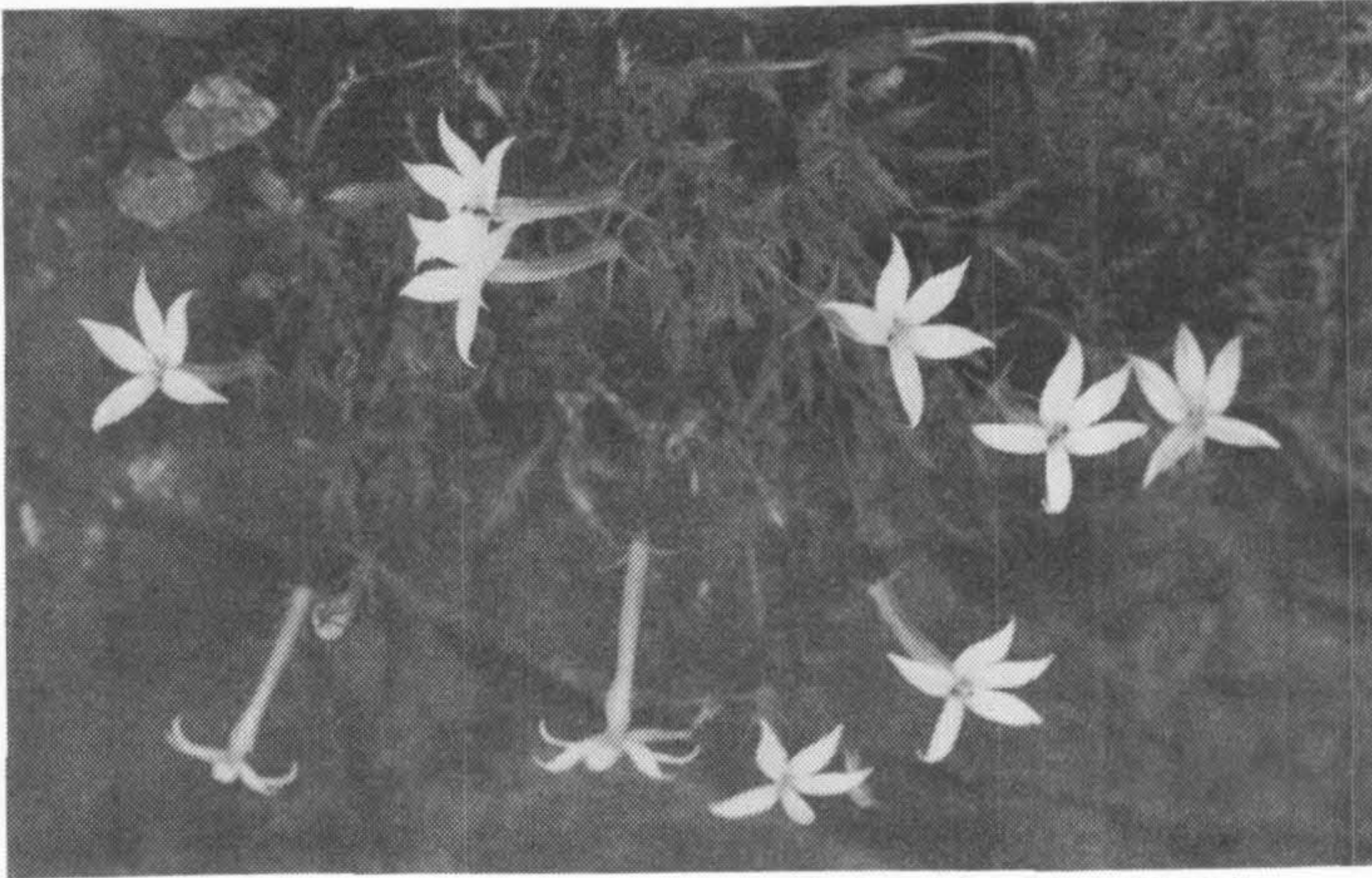


Photo 5: Rock isotome - a species commonly found on rocky outcrops

v Shrubland

**Lobed-leaved hop-bush**

On the higher, more exposed slopes *Sida* shrubland gives way to a more open community in which Lobed-leaved hop-bush is the most characteristic component. On the southern hills of the Park these shrublands may be more varied in composition including Narrow-leaved fuchsia bush and Silver mulla mulla (*Ptilotus obovatus*).

vi Low shrubland

**Thorny lawrencia and Twiggy sida (*Sida intricata*)**

These low shrublands are restricted to the hill-tops. The character of the vegetation is largely determined by the small shrub Thorny lawrencia and the spreading prostrate Twiggy sida.

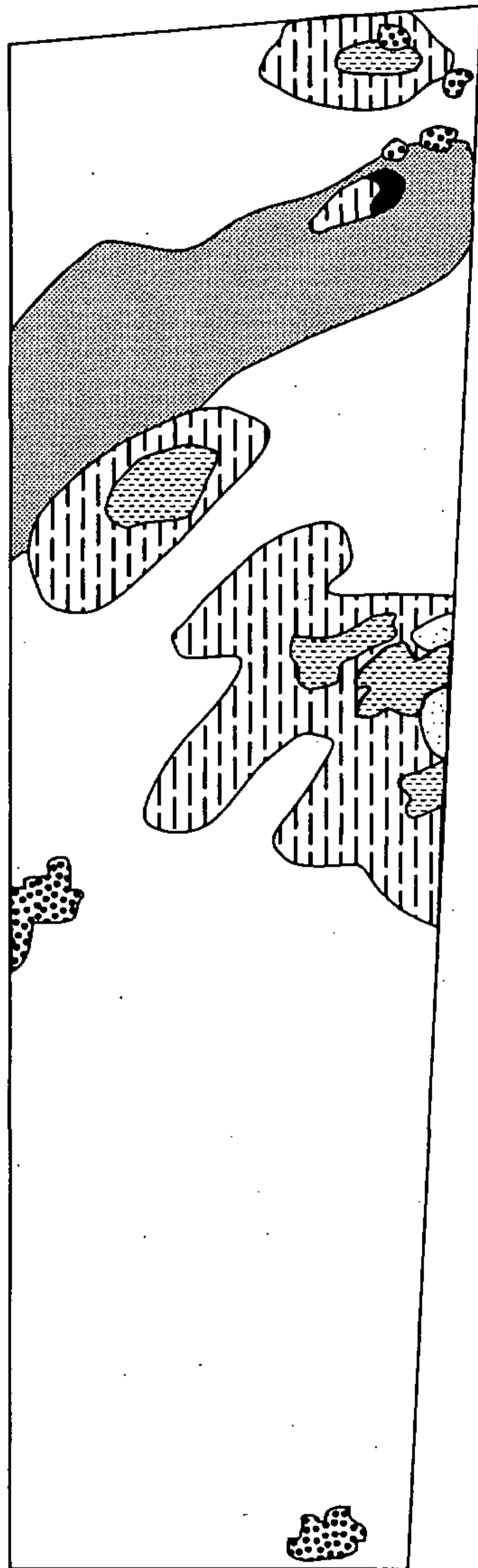
vii Shrubland





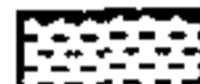


**Rock Community**

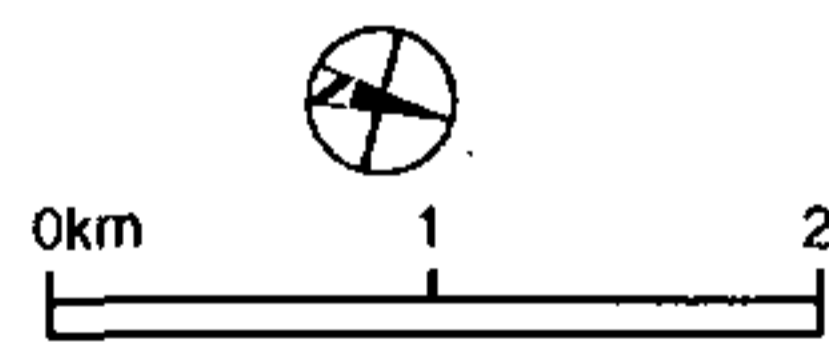
A unique community of shrubs occurs on the northern rock faces of Wild Dog Hill. A number of species occur here and not elsewhere in the Park, no doubt reflecting the unique micro-habitat afforded by the rock substrate (Lewis, 1991). Although the community is limited, it is quite distinct, containing such species as Cough bush (*Cassinia laevis*), Rock isotome (*Isotoma petraea*), Rock ferns or Cloak-ferns (*Cheilanthes* spp.) and Narrow-leaved hop-bush (*Dodonaea viscosa* subsp. *angustissima*) thus giving added significance to this locality.

**1.2.2 Lichens**

There has been no detailed study of the lichens of the Whyalla Conservation Park at this stage. The Australian Heritage Commission, in its nomination of the area immediately south of the Park, noted: "This area is also an Australian centre of richness for soil lichens..." Future studies are required to determine the diversity of the Park's lichen flora.



-  Low open woodland  
*A. papyrocarpa* - mixed shrubs
-  Low open woodland  
*A. papyrocarpa* - *A. vesicaria*
-  *C. cristata* groves
-  Shrubland *S. calyxhymeria*
-  Shrubland *D. lobulata*
-  Low shrubland  
*P. microphyllus* - *S. intricata*
-  Rock shrubs



Map 6: Vegetation types of the Whyalla Conservation Park



### 1.2.3 Mammals

(Please note all names of mammals are as per Strahan, 1983)

The mammal fauna of Whyalla Conservation Park is typical of the species found throughout the dryland Acacia scrubs and woodlands of the semi-arid zone. The predominantly open Western myall woodland of this Park, with patches of open chenopod shrubland, supports a small variety of native mammal fauna of which the larger kangaroo species are the most obvious.

The Western Grey Kangaroo (*Macropus fuliginosus*) is well suited to this Park's open woodland habitat and is the most common macropod seen. Also present, mostly in the rocky hillside habitat, is the Euro or Common Wallaroo (*Macropus robustus*). Red Kangaroo (*Macropus rufous* syn. *Megaliea rufa*) is typically an arid adapted species which are close to the southern edge of their range in Whyalla Conservation Park.

Much of the smaller mammalian fauna of the semi-arid zone has been decimated since European settlement. However, small carnivorous marsupials still occur quite widely and at least one species is known to occur in Whyalla Conservation Park. The Fat-tailed (*Sminthopsis crassicaudata*), Stripe-faced (*Sminthopsis macroura*) and Common Dunnart (*Sminthopsis murina*) occur either within or just outside the Park.

Other species present include several species of Bat.

For a comprehensive list of the mammal fauna, refer to THE NATURAL AND CULTURAL HISTORY OF THE WHYALLA CONSERVATION PARK, which will be published separately.

### 1.2.4 Birds

(Please note all bird names are as per Blakers et al., 1984)

Whyalla Conservation Park has a typically semi-arid assemblage of birds. There are a variety of habitats as outlined previously.

Species typical to this Park's open woodland habitat are Emu (*Dromaius novaehollandiae*), Kestrel (*Falco cenchroides*), Brown Falcon (*Falco berigora*), Blue Bonnet (*Northiella haematogaster*),



Photo 6: Tawny Frogmouth (*Podargus strigoides*) - this well-camouflaged nocturnal bird is resident in the Park

Spiny-cheeked Honeyeater (*Acanthagenys rufogularis*), Singing Honeyeater (*Lichenostomus virescens*), Grey Butcherbird (*Cracticus torquatus*), Thick-billed Grasswren (*Amytornis textilis*), White-winged Fairy-wren (*Malurus leucopterus*), Redthroat (*Sericornis brunneus*), Rufous Calamanthus (*Sericornis campestris*), Chestnut-rumped Thornbill (*Acanthiza uropygialis*), Black-faced Woodswallow (*Artamus cinereus*) and Australian Raven (*Corvus coronoides*).

There is a small dam on the central southern boundary, which sometimes holds water for extended periods. This attracts small numbers of waterbirds eg Australasian Grebe (*Tachybaptus novaehollandiae*), White-faced Heron (*Ardea novaehollandiae*).

To date over 80 species of birds have been recorded. For full details, see a complete bird list in THE NATURAL AND CULTURAL HISTORY OF THE WHYALLA CONSERVATION PARK, which will be published separately.

### 1.2.5 Reptiles and amphibians

Most of the reptiles found in the Park are also found in the surrounding area. The Park is an important refuge for reptiles.

Control of rabbits in the Park should provide and enhance reptile habitat. Frequent Park visitation and monitoring by the Friends of the Whyalla Conservation Park should discourage illegal collecting.

While 29 species of reptiles and amphibians have now been identified in the Park, species commonly found include the Bearded Dragon (*Pogona vitticeps*), Western Brown Snake (*Pseudonaja nuchalis*), Sleepy Lizard (*Tiliqua rugosa*), Gidgee Skink (*Egernia stokesii*) and the Striped Skink (*Ctenotus robustus*).

Two species of frog, the Spotted Grass Frog (*Limnodynastes tasmaniensis*) and a species of *Neobatrachus* have been found in the Park. Both of these were located at the dam after heavy summer rain.

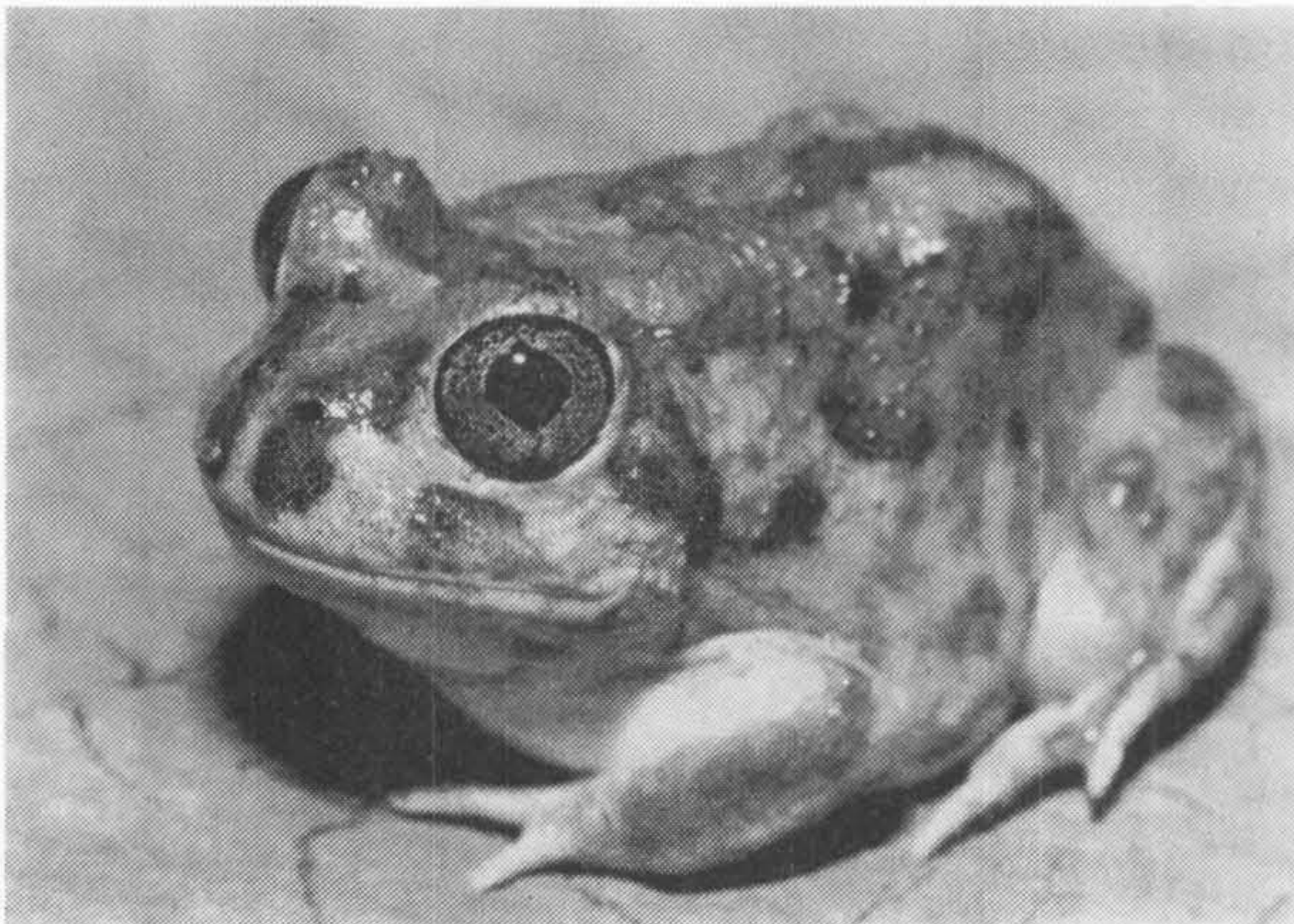


Photo 7: One of the two species of frogs in the Park - *Neobatrachus* sp.

## 1.2.6 Invertebrates

The Australian Heritage Commission has recognised the Park as part of an area which is an Australian "centre of distribution of ant species". To date no detailed investigation of invertebrates in the Park has occurred.

## 1.2.7 Pest plants

The present pest plants in the Park were introduced and spread with the advent of sheep grazing. Attempts to eradicate those that were noxious to sheep and detrimental to wool quality, particularly Horehound (*Marrubium vulgare*), were concentrated around the dam on the southern boundary of the paddock. Rubbish dumping has also introduced pest plants into the Park.

There are a significant number of pest plant species in the Park which have been introduced since grazing began. There are two pest plant species that are considered environmentally significant. These are African boxthorn (*Lycium ferocissimum*) and Wards weed. (Kraehenbuehl in Walton, 1992).

## 1.2.8 Pest animals

In some areas of the Park, the impact of pest animals such as rabbits is obvious. The impact of carnivores such as foxes and cats has not been assessed but has almost certainly affected the small mammal and lizard populations.

### Rabbits

These are the Conservation Park's biggest pest animal problem. They damage established plants and seedlings and cause erosion. They also may attract foxes and cats.

### Foxes

Foxes have been found in nearby areas but not in large numbers. Their numbers will need to be monitored as numbers could build up in good seasons.

### Cats

There have been four sightings of cats in the Park, including one set of kittens and female which were dumped in the Park. Cats may be coming into the Park more regularly either as feral animals or as domestic animals from nearby Tregalana Park. Their presence needs to be monitored.

### Sheep

A few sheep (*Ovis aries*) have been found in the Park. They are not a serious problem as long as fences are kept in good repair and the sheep are removed as soon as they are found.

### Mice

House Mice (*Mus musculus*) have been found in the Park. Unless in plague numbers, they should not pose a significant problem.

### Starlings

Starlings (*Sturnus vulgaris*) have been seen in the Conservation Park occasionally. As starlings spread disease and parasites as well as take over nesting sites, they are a potential problem which needs to be monitored.

## 1.3 HISTORY

### 1.3.1 Aboriginal significance

*(Adapted from pp G2-3 of the Tioxide Draft Environmental Statement, 1991)*

#### Tribal area, extent and surrounding tribes

The area in which the Whyalla Conservation Park is situated was traditionally Pangkala land (Tindale, 1974). Their territory extended from Franklin Harbour in the south, north-west to the Gawler Ranges, north-east to Lake Torrens and east to Edeowie. The Pangkala's northern neighbours were the Kokatha.

Tindale (1974) believes that pressure from the Kokatha, possibly for food resources, resulted in modifications to the Pangkala's northern boundary, which gradually moved southwards. This movement southward was accelerated by drought, closer European settlements and the development of the Woomera Restricted area. During this time the numbers of Pangkala people declined.

A number of Pangkala families lived at the Poonindie mission which was set up near Port Lincoln in 1850. Their numbers gradually declined however and, when the mission was disbanded in 1896, the remaining Pangkala were transferred to an Aboriginal settlement established at Point Pearce, on Yorke Peninsula.

A small number of Pangkala continued to live in the Gawler Ranges where they worked on stations. They were joined by groups of Kokatha and the two groups have since become closely linked through marriage. Other Pangkala lived at the ration depot established at Iron Knob as well as at the tiny settlement of Hummock Hill (later to become Whyalla) and on the outskirts of Port Augusta.

Tribal ceremonies and traditional lifestyles were gradually abandoned as the land was no longer available to them and the last initiations among Pangkala men took place in 1938-39 (Potter & Jacobs, 1981).

Pangkala people are now few in number with most of the remaining individuals of Pangkala descent living in Whyalla. The Kokatha population is more numerous.

For the Pangkala, the most important sites are those associated with the travel myths of the Dreamtime figures, ie. the Moon, the Seven Sisters and the Rainbow Serpent (Potter & Jacobs, 1981). Often the sites are associated with resource-rich areas. For instance, a site may be the location of a water-hole, providing a reliable water source, or alternatively, it may be a source of ochre, which was widely used for decoration and in ceremonies.

Other important sites are associated with unusual natural features: 'in this basically flat country, hills stand out very prominently; most hills and major topographical features ... have significance ....' (Potter & Jacobs, 1981).

While the presence of the Kokatha in the Whyalla/Port Augusta region is relatively recent, they, and the Adnamathanha people of the Flinders Ranges, also have traditional associations with the Whyalla area through their mythic song cycles.

One of the natural features which is believed to be of significance is Wild Dog Hill. It takes its name from a story told by the Adnamathanha people.

For further details about the Adnamathanha Dreaming story and other knowledge of traditional life, refer to the accompanying document, THE NATURAL AND CULTURAL HISTORY OF THE WHYALLA CONSERVATION PARK.

### 1.3.2 Previous land use

Before the purchase and dedication of the area, the land was Part Section 12 of Pastoral Lease 1337, held by North-West Holdings Ltd., under the management of Mr G W Nicolson. The present 1 011 hectares of the Park were separated from a larger paddock of the property.

The area had been stocked with sheep at the rate of 15.44/square kilometre continuously over the last 30 years, since the construction of the Morgan-Whyalla pipeline in 1943. Hence the original paddock usually supported 160 - 200 sheep. A few cattle (*Bos taurus*) grazed the paddock early during this period. Before 1943 the area had only received intermittent grazing, because of the lack of water. The present dams and drains were introduced with this stocking regime about 1930. The present western fence was erected in about 1900, and the eastern and southern fences in 1939 and 1940.

Western myall trees were cut for fence posts and dead wood removed to the Whyalla wood yard throughout the recorded period of use. The only recorded fire occurred in the Park in 1975 (see Fire section). A severe hailstorm in 1948 stripped all trees and shrubs in the western end of the Park of leaves, but the plants made a rapid recovery because of the associated heavy rains (G W Nicolson pers. comm. - from Lewis, 1974 p 23).

The remains of a track which crosses the Park diagonally from the Lincoln Highway opposite the Point Lowly turn-off to the power line is what remains of the survey line established early this century. This line was surveyed as the possible route of a railway line from Iron Knob to the proposed site for a town/port at Fitzgerald Bay (D Nicolson, 1995 pers. comm.).

Dumping of rubbish was common throughout the Park, particularly at the more readily accessible eastern and western ends.

Sheep grazing in the Park sector of the paddock ceased with its acquisition in 1971 (Lewis, 1974 pp 22-24).

### 1.3.3 Land acquisition and Park dedication

The circumstances which brought about initial moves to have Whyalla Conservation Park reserved are uncertain, although it appears that the reservation of this particular area may have been as much the result of coincidence and chance as good planning. It is known that the Northern Naturalists' Society and others had been seeking, for some time, to have an area of Western myall woodland in the Whyalla region reserved. It was also generally recognised by the Whyalla community that there was a need for a park in the area to satisfy the recreational demands of the city.

Proposed acquisition by the Department of Lands was not directed by any current reserve-acquisition policy, but was part of the provision for "open space" in the proposed development of the Whyalla region. The Development Plan states that the area was "intended for conservation of Myall, Saltbush and Bluebush" (South Australian State Planning Authority, 1970 p 30.) However, the previous lessees of the land have indicated that they understood the area was intended to serve a recreational purpose, a function much needed in view of the lack of such facilities in the region. This opinion may have been widespread amongst the Whyalla community at the time of acquisition (J Bouilly pers. comm. - from Lewis, 1974 p 22). Such a function was not recognised by the National Parks Commission, or after 1972, by the National Parks and Wildlife Service.

The level and type of public use which was occurring in the area was clearly incompatible with the effective use of the block for sheep grazing. The lessee, Mr G W Nicolson, saw a solution in offering the block (then part Section 12, Hundred of Cultana) to the then National Parks Commission in 1969 for acquisition for conservation purposes.

The purchase price of \$10,000 for the 1000 ha block was agreed upon. This price included all existing fencing as well as the cost of fencing the newly created northern boundary.

A boundary survey was completed, the block numbered as Section 14, Hundred of Cultana, easements defined and reserved for the Electricity Trust power lines which bisect the area and a number of other formalities and difficulties resolved. Section 14 of the Hundred of Cultana was dedicated as a National Park on the 4th November 1971 (South Australian Government Gazette, 1971 p 1817), under the National Parks Act, 1966.

Following the passage of the National Parks and Wildlife Act, 1972, the reserve was reclassified as a conservation park, and renamed Whyalla Conservation Park during that year (Lewis, 1974 pp 21-22).

#### **1.3.4 NPWSA Park management**

In the absence of specific management goals, a policy of preservation of the environment, in accordance with the NPW Act, was initially adopted by the Rangers responsible for management of the Park.

Management was primarily directed towards exclusion of vehicular traffic and grazing stock from the Park, and eradication of feral animals. Specifically this involved, after the initial removal of the grazing sheep, checking and continual repair of all boundaries of the Park, particularly the three older fences (south, east and west), locking of all gates, removal of roadside advertising hoardings, and of stray cattle entering from the adjacent dairy, eradication of rabbit warrens and feral goats, and, with the cooperation of nearby pastoralists, of stray domestic dogs (Lewis, 1974 pp 24-25).

Through the 1970s and 1980s the vandalism and associated problems that the previous lessee had experienced prior to the dedication of the Park continued unabated. Ranger staff based at Pt Augusta were unable to significantly change the behaviour of those causing these problems despite their continued efforts.

One attempt to control visitor movements in the area was undertaken as part of a Commonwealth Government Community Employment Program in 1985. As part of this program a car-park was defined and a walking trail to the top of Wild Dog Hill constructed. This whole development came under substantial attack by vandals both through the removal of logs from the fencing and damage to the walking trail.

#### **1.3.5 Formation of the Friends of Whyalla Conservation Park Group**

The Friends of Whyalla Conservation Park group was formed in June 1987 at a public meeting. The group was formed by concerned members of the Whyalla community in response to an invitation offered by the Western Consultative Committee which had Mr Peter Mirtschin as its Chairperson. The Government of the day was considering de-gazetting the Park as its conservation value was being steadily eroded by the continued abuse of the area particularly, but not exclusively, around Wild Dog Hill.

The Friends volunteer their time and skills to help the National Parks and Wildlife manage the Park effectively. The group is involved in research, revegetation, the repair of vandalism, maintenance, pest plant and animal control, interpretation and supervision of the Park. The Friends raise their own funds for these activities.

It is of note that through the work of the Friends group, vandalism to the area is now minor. The group has a policy of rapid repair of any vandalism so that vandals are deprived of the satisfaction of public exhibition of the damage caused.



Photo 8: Friends Group members and their Ranger at work in the Park

#### 1.4 VISITOR USE

Visitors use the Park for a variety of purposes. Some of the low impact uses of the Park include photography, bird and reptile watching and painting. Astronomy, walking, running/orienteering, education and picnicking are all current uses. 4Wheel Drives and trail bikes are used in the Park. There is no single pattern of use; individuals, families and larger groups use it.

Traffic counts indicate that 1 372 vehicles had visited Wild Dog Hill in the Park in the six months March to September 1994 inclusive. This approximates 4 116 visitors, assuming an average of three visitors per vehicle, or an annual rate of 8 200. It appears that just as many people use the Park during the week as on the week-end. The majority of visitors to the Park are people from Whyalla but there are also some visitors from interstate and overseas.

In 1991, the Park was declared closed at night from half an hour after sunset to half an hour before sunrise. There is no camping allowed. All wood fires are banned, although gas fires are permitted on all except complete fire-ban days. The Park is monitored regularly at night by members of the Friends group.

No formal rock-climbing or abseiling is allowed at Wild Dog Hill in line with NPWSA policy although the site has been used for this purpose until recently.

Information on the Park is provided through brochures, produced by the Friends group. These are available at the National Parks and Wildlife office in Pt Augusta, the Whyalla Tourist and Information Centre, Whyalla Information Centre and from the Friends group.

Facilities provided near Wild Dog Hill include several picnic tables and rubbish bins. These bins are cleared on a weekly basis by the Friends of the Whyalla Conservation Park group. There is also a Walking Trail with interpretive plaques to the top of Wild Dog Hill and returning to the car-park via the southern side of the hill.

## 1.5 RESOURCE MATERIALS

### MAPS

Cultana. 1:50,000. Map No. 6432. Department of Environment and Land Management.

Pt Augusta. 1:250,000. Map No. S153-4.

Pt Augusta. 1:1,000,000. Map No. S153. Department of National

### AERIAL PHOTOGRAPH

Survey No. 1:40,000. 4320-55. 14.3.1991.

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## 1.7 SCIENTIFIC AND COMMON NAMES REFERED TO IN THIS DOCUMENT

### FLORA

<i>Acacia aneura</i>	Mulga
<i>Acacia papyrocarpa</i>	Western myall
<i>Asphodelus fistulosus</i>	Onion weed
<i>Atriplex stipitata</i>	Bitter saltbush
<i>Atriplex vesicaria</i>	Bladder saltbush
<i>Carrichtera annua</i>	Wards weed
<i>Carthamus lanatus</i>	Saffron thistle
<i>Cassia nemophila</i>	Punty bush or Desert cassia
syn. <i>Senna artemisioides</i>	
<i>Cassinia laevis</i>	Cough bush
<i>Casuarina cristata</i>	Black oak
<i>Centaurea melitensis</i>	Maltese cockspur
<i>Cheilanthes</i> spp	Rock ferns or Cloak-ferns
<i>Chenopodium desertorum</i>	Desert goosefoot
<i>Chenopodium gaudichaudianum</i>	Goosefoot
<i>Dissocarpus biflorus</i>	Bindyi
<i>Dodonaea lobulata</i>	Lobed-leaved hop-bush
<i>Dodonaea viscosa</i>	Narrow-leaved hop-bush
subsp. <i>angustissima</i>	
<i>Emex australis</i>	Three-cornered Jack
<i>Enchylaena tomentosa</i>	Ruby saltbush
<i>Eremophila alternifolia</i>	Narrow-leaved fuchsia bush
<i>Eremophila longifolia</i>	Weeping emu bush
<i>Frankenia serpyllifolia</i>	Bristly sea-heath
<i>Gazania linearis</i>	Gazania
<i>Heterodendrum oleifolium</i>	Bullock-bush
syn. <i>Alectryon oleifolium</i>	
<i>Isotoma petraea</i>	Rock isotome
<i>Lawrencia squamata</i>	Thorny lawrencia
syn. <i>Plagianthus microphyllus</i>	
<i>Lycium australe</i>	Australian boxthorn
<i>Lycium ferocissimum</i>	African boxthorn
<i>Maireana sedifolia</i>	Bluebush
<i>Marrubium vulgare</i>	Horehound
<i>Myoporum platycarpum</i>	Sugarwood
<i>Opuntia ficus-indica</i>	Prickly-pear
<i>Opuntia imbricata</i>	Devils Rope
<i>Ptilotus obovatus</i>	Silver mulla mulla
<i>Pterostylis</i> sp.	Green-hood orchid
<i>Rhagodia spinescens</i>	Spiny saltbush
<i>Rhagodia ulicina</i>	Spiny goosefoot
<i>Salsola kali</i> var.	Buckbush
<i>Santalum acuminatum</i>	Native peach
<i>Sida calyxhymeria</i>	Tall or Rock sida
<i>Sida intricata</i>	Twiggy sida
<i>Stapelia variegata</i>	Carrion flower
<i>Thysanotus tuberosus</i>	Common fringe-lily
<i>Xanthium spinosum</i>	Bathurst burr

## BIRDS

*Acanthagenys rufogularis*  
*Acanthiza uropygialis*  
*Amytornis textilis*  
*Ardea novaehollandiae*  
*Artamus cinereus*  
*Corvus coronoides*  
*Cracticus torquatus*  
*Dromaius novaehollandiae*  
*Falco berigora*  
*Falco cenchroides*  
*Lichenostomus virescens*  
*Malurus leucopterus*  
*Northiella haematogaster*  
*Podargus strigoides*  
*Sericornis brunneus*  
*Sericornis campestris*  
*Sturnus vulgaris*  
*Tachybaptus novaehollandiae*

Spiny-cheeked Honeyeater  
Chestnut-rumped Thornbill  
Thick-billed Grasswren  
White-faced Heron  
Black-faced Woodswallow  
Australian Raven  
Grey Butcherbird  
Emu  
Brown Falcon  
Kestrel  
Singing Honeyeater  
White-winged Fairy-wren  
Blue Bonnet  
Tawny Frogmouth  
Redthroat  
Rufous Calamanthus  
Starling  
Australasian Grebe

## REPTILES AND AMPHIBIANS

*Ctenophorus fionni*  
*Ctenotus robustus*  
*Egernia stokesii*  
*Pogona vitticeps*  
*Pseudonaja nuchalis*  
*Tiliqua rugosa*  
*Limnodynastes tasmaniensis*  
*Neobatrachus* sp.

Peninsula Dragon  
Striped Skink  
Gidgee Skink  
Bearded Dragon  
Western Brown Snake  
Sleepy Lizard  
Spotted Grass Frog

## MAMMALS

*Bos taurus*  
*Capra hircus*  
*Felis catus*  
*Macropus fuliginosus*  
*Macropus robustus*  
*Megaleia rufa*  
syn. *Macropus rufous*  
*Mus musculus*  
*Oryctolagus cuniculus*  
*Ovis aries*  
*Sminthopsis crassicaudata*  
*Sminthopsis macroura*  
*Sminthopsis murina*  
*Vulpes vulpes*

Cattle  
Goat  
Cat  
Western Grey Kangaroo  
Euro or Common Wallaroo  
Red Kangaroo  
  
House Mouse  
Rabbit  
Sheep  
Fat-tailed Dunnart  
Stripe-faced Dunnart  
Common Dunnart  
Fox



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## **PART 2**

# **MANAGEMENT OBJECTIVES**

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# MANAGEMENT OBJECTIVES

## 2.1 OBJECTIVES OF NATIONAL PARKS AND WILDLIFE ACT (1972)

Section 37 of The National Parks and Wildlife Act 1972 states that the Minister, Permanent Head and the Director shall have regard to the following objectives in managing reserves:

The preservation and management of wildlife.

The preservation of historic sites, objects and structures of historic or scientific interest within reserves.

The preservation of features of geographical, natural or scenic interest.

The destruction of dangerous weeds and the eradication or control of noxious weeds and exotic plants.

The control of vermin and exotic animals.

The control and eradication of disease of animals and vegetation.

The prevention and suppression of bushfires and other hazards.

The 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

In relation to managing a regional reserve - to permit the utilisation of natural resources while conserving wildlife and the natural or historic features of the land.

These objectives provide the basis for management planning for all reserves in South Australia. The relevance and priority of each of these objectives will, however, vary within individual reserves.

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**PART 3  
MANAGEMENT OF  
WHYALLA CONSERVATION PARK**

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# MANAGEMENT OF WHYALLA CONSERVATION PARK

## 3.1 INTRODUCTION

The conservation park status of a reserve implies that it is managed primarily for conservation while simultaneously providing recreation opportunities. The Park's location near the second largest city in South Australia and adjacent to a major highway as well as its Western myall/chenopod vegetation association are the primary considerations for management.

Potential exists for a variety of passive activities in the form of bird-watching, photography, observation of nature, astronomy and bush rambling.

National Parks and Wildlife SA, together with the Friends of the Whyalla Conservation Park, endeavour to manage the Park in a manner which will permit such uses of the reserve without causing degradation of the habitat or excessive disturbance of its wildlife.

In order to maintain the integrity of the Park's natural assets, management activities will concentrate on the primary issues, that is control of vandalism and development of appropriate infrastructure and visitor facilities. Control of pest plants and animals are also important considerations and there are many smaller peripheral areas requiring attention.

Whyalla Conservation Park is relatively small and has traditionally been managed remotely, currently by the North Region of National Parks and Wildlife SA within the Department for Environment, Heritage and Aboriginal Affairs. The benefit of an active and motivated Friends group has been the salvation of the Park, and in its future management may well enjoy a level of activity and attention to detail not afforded other similar areas. The Friends group also contribute significant financial resources through fund-raising activities. This support is likely to be on-going for the duration of the existence of the Friends Group.

It is necessary, therefore, to define clearly the roles of National Parks and Wildlife SA and the Friends of Whyalla Conservation Park group and how these roles fit with management of the Park.

National Parks and Wildlife SA is ultimately responsible for the management of Whyalla Conservation Park and its integrity as a reserve. The role of the Department is to oversee and approve park programmes and activities in the Park in accordance with the plan of management. This will be done cooperatively with the Friends group.

The Friends group appoints a committee, which includes the NPWSA staff member nominated by the District. The committee attends to the everyday management and carrying out of programmes and activities within the Park. The committee plans activities twelve months ahead. Detailed planning of intended works is an integral part of this. The NPWSA staff representative is responsible for ensuring adherence to Department standards, objectives and policies (such as best practice, Occupational Health, Safety and Welfare).

The Friends members carry out most routine maintenance work. The group organises a regular presence in the Park as a check on visitor activities and facilities.

NPWSA staff have little input on a day-to-day basis due mainly to the presence and energy of the Friends group. District priorities and the location of the Park are also factors. NPWSA negotiates a minimum level of ranger involvement, which will include work planning and presence at a number of activities each year.

## 3.2 NATURAL RESOURCES

### 3.2.1 Native vegetation

#### Western myall/chenopod open scrub

This vegetation association is poorly conserved in the park system in this state. There is concern for the long term survival of Western myall and some other arid and semi-arid zone trees and shrubs. Many of these rely for recruitment on episodic rainfall events, which occur approximately five times a century. This may lead to large gaps in the age structure of plant populations and a possibility of extinction in areas where recruitment is suppressed.

Recruitment may fail or the rate be lowered in a number of ways, for example, seed-eating ants harvest, store and eat large numbers of seeds making them unavailable for germination (Ireland, 1992). A large proportion of seedlings may be eaten by the high population of rabbits in the area (Lange, pers. comm., 1991). Fire is also a significant threat as this group of plants is killed by fire. A survey carried out in 1993 (Lewis, 1993) revealed that some individuals of the 1974 recruitment of Western myall have survived in the Whyalla Conservation Park, but none have survived outside the southern boundary fence of the Park or at adjacent Tregalana station. These factors mean that conservation of these associations is especially important in reserves where harmful effects can be effectively minimised.

#### Colonisation by Puntly bush or Desert cassia (*Cassia nemophila* now *Senna artemisioides*)

Puntly bush or Desert cassia was virtually absent in the Park prior to 1974 but abundant in the land to the south. It appears to be spreading into the Whyalla Conservation Park from the land beyond the southern boundary fence and may become a woody weed if it continues to colonise at its present rate (Lewis, 1993). A re-survey of distribution and age structure in future years will reveal whether new recruitment has occurred as a result of the 1992 and 1993 rains (Lewis, 1993).

#### Monitoring

Photo-points were established throughout the Whyalla Conservation Park in 1974 by Lewis to monitor vegetation changes. The photographic records belong to the University of Adelaide, Botany Department.

#### Inventory

Plant species lists have been compiled (and need more work before they are complete). There are well over 100 plant species in the Whyalla Conservation Park. These include the Common fringe-lily (*Thysanotus tuberosus*) which appears in Schedule 8, Vulnerable Species of the National Parks and Wildlife Act, 1972-1981.

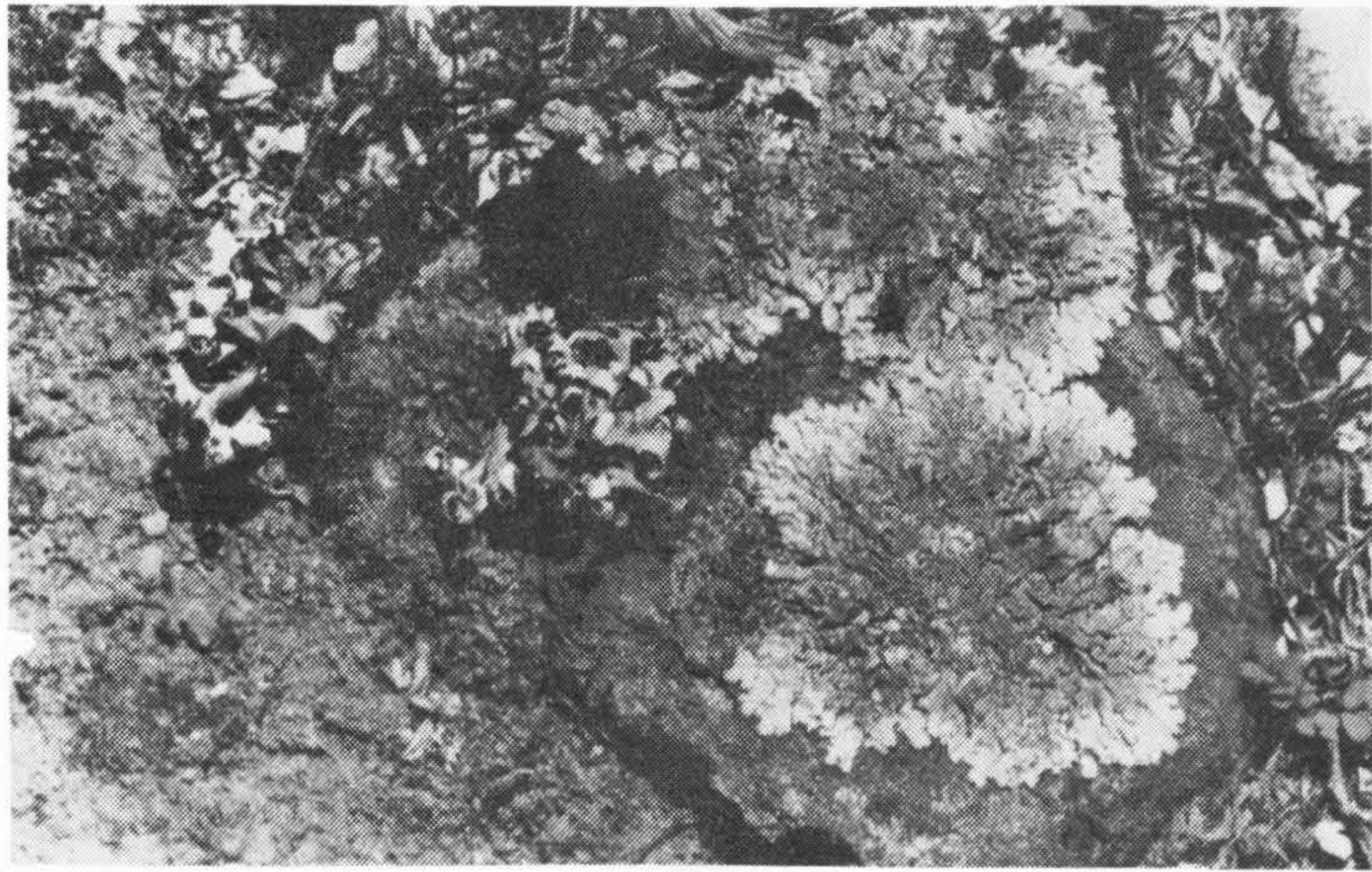
There is an herbarium collection of north-east Eyre Peninsula region plant species at Middleback Field Centre and another is being established at the University of South Australia, Whyalla Campus. The Friends of the Whyalla Conservation Park Group has begun a photographic herbarium.

#### Research

Research has been carried out on many aspects of the north-east Eyre Peninsula region plant species by the University of Adelaide, at the Middleback Field Centre, and the University of South Australia, at the Whyalla Campus. The records of both these institutions are a basis for further research in the Park.

#### Revegetation

The Friends of the Whyalla Conservation Park have carried out revegetation activities, including seed collection, propagation, seedling planting, direct seeding, closing of tracks, eradication of rabbits, excluding the public from certain areas and weed eradication over the past few years. The plant species used for seedling planting has been primarily Western myall.



**Photo 9: Lichens are formed by an association between an alga and a fungus - Whyalla Conservation Park is noted for the presence of lichens**

#### Lichens

The Park lies within the Australian Heritage Commission "area of significance" for ground lichens and mosses. This area is bounded by the Lincoln Highway on the east, the Whyalla to Iron Knob road on the south and a north-east diagonal road from Iron Knob to the Lincoln Highway.

The ground lichen and moss crust is delicate and easily damaged. The crust has an important role in stabilisation of the soil. Cyanobacteria which are also present in the crust are able to fix atmospheric nitrogen, making it available to other living organisms.

#### **Objective**

- *To conserve the Park's native vegetation in order to maintain biodiversity and the long term viability of the native species present.*

#### **Strategies**

- *Manage access and visitor activities to minimise disturbance and protect vegetation.*
- *Maintain the ban on wood fires in the Park to reduce the risk of potentially destructive fire.*
- *Research the distribution, status and biology of vegetation with an ecological focus, as resources permit.*
- *Monitor vegetation change over time using established photo-points.*
- *Revegetate disturbed sites using well-planned and appropriate techniques, both active and passive.*
- *Promote natural regeneration by the eradication and/or control of pest plants and animals.*

### 3.2.2 Fauna

The mammal fauna of the eastern Eyre Peninsula has been decimated since European settlement and many of the smaller mammals are now locally extinct. The fauna of Whyalla Conservation Park has not been surveyed, but interesting sightings have been made, and the Park provides important habitat/refuge for local native species, particularly reptiles.

Whyalla Conservation Park is relatively small (1 100 ha). It is surrounded by a large area of vegetation contiguous with that of the Park. Land use varies from pastoral activity on the north and west of the Park to industrial-zoned land currently vacant or used for recreation elsewhere.

#### Vulnerable species

There is some evidence that the population of the Peninsula Dragon (*Ctenophorus fionni*) has declined in the Park and is now uncommon on Wild Dog Hill where it has been sighted only once since 1984. There are no known populations of Peninsula Dragons closer than Mount Young, approximately 15 km to the south (Hilton, 1994, Whyalla Herpetology Group. pers. comm.).

The Thick-billed Grasswren appears on Schedule 8, Vulnerable Species, of the National Parks and Wildlife Act, 1972.

#### **Objectives**

- ***To maintain high quality habitat in order to conserve the Park's native fauna, particularly scheduled species.***
- ***To maintain or enhance bio-diversity and the long term viability of the native species present.***

#### **Strategies**

- *Record and monitor the fauna of the Park informally and formally as resources permit.*
- *Establish a Park data base.*
- *Manage fauna and habitats identified by research.*

### 3.2.3 Drainage and erosion

Intense rainfall in major episodic events are a part of the region's climate. Erosion resulting from such events is a problem, especially in the eastern end of the Park, around Wild Dog Hill and along the northern boundary road on the eastern slopes of Trig Hill.

The southern boundary road currently acts as a drainage channel for overflow from the dam situated in the Park. This dam remains from the Park's pastoral past. The dam has impacted significantly on the natural drainage within the Park.

Soils in the Park are vulnerable to erosion if the surface coating of lichens is disturbed or other ground cover removed.

#### **Objectives**

- ***To prevent, reduce and restore erosion damage in the Park.***
- ***Restore natural drainage within the Park, where appropriate.***

## **Strategies**

- *Establish a system to monitor erosion.*
- *Construct drains along the northern boundary to alleviate erosion problems.*
- *Minimise vehicle impact by phasing out public use of internal tracks to assist in erosion control.*
- *Restore natural drainage in the Park by breaching the dam wall, and installing diversion banks.*
- *Sheet and crown the southern boundary road to prevent it acting as a drainage channel (when resources permit and depending on future access arrangements).*
- *Ensure that adequate planning and measuring of sites are undertaken prior to work, including seeking of professional advice.*

### **3.2.4 Further research and monitoring**

Whyalla Conservation Park is utilised for research and monitoring. Schools, the University of Adelaide and the University of South Australia make use of the Park for education and research purposes, including Honours theses and the like. The Park's system of photo-points was established in 1972 by Megan Lewis of the University of Adelaide. It has provided an extended photographic record of vegetation change in the Park and is an example of studies being used for the benefit of the Park (Map 7 shows the location of these).

While student activities raise awareness and have benefits, they can also have adverse impacts, particularly where the Park is used on a regular basis by large groups. The proximity of the Whyalla campus of the University of SA makes this a possibility. Guidelines need to be set up to ensure that student activity in the Park is sustainable.

There is a requirement for groups to notify NPWSA of intention to use a reserve, including details of activities, participants and emergency contacts. A "Trip Intentions" form has been developed for this purpose.

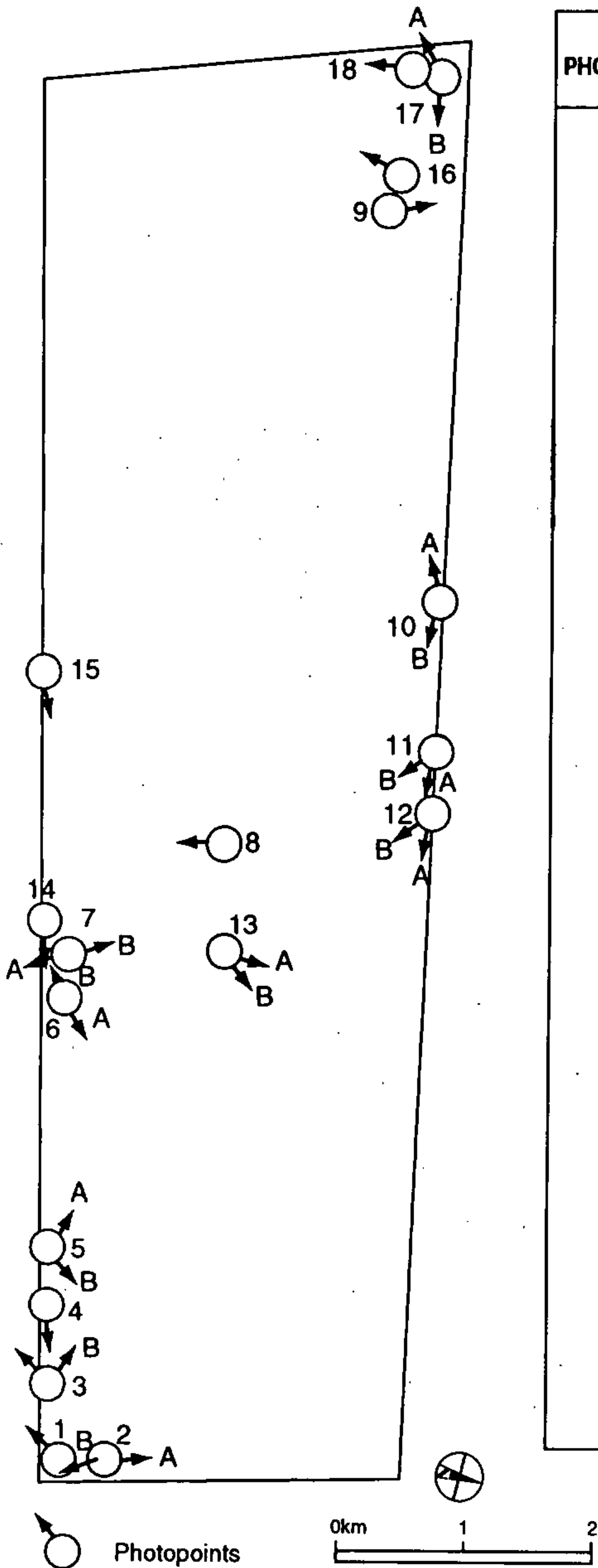
Permanent marking has been established for reference grids for research and Park protection work.

## **Objective**

- *To increase knowledge of the reserve, its natural and historic features, patterns of visitor use and other factors that have influence upon reserve management.*

## **Strategies**

- *Establish a Park record system or data base.*
- *Encourage the continued use of the Park by educational establishments for educational and research activities.*
- *Develop guidelines for group use of the Park to ensure that such use is sustainable.*
- *Require schools and other educational institutions to provide information regarding projects to DEH&AA, including methods, objectives and results.*



PHOTOPOINT	SUBJECT
1	Regenerating <i>Santalum acuminatum</i>
2A	<i>Cassia</i> adjacent main road
2B	<i>Cassia</i> adjacent main road
3A	<i>Cassia</i> inside dairy
3B	Park adjacent to 3A; no <i>Cassia</i>
4	In/out park comparison; <i>Cassia</i>
5A	Low open woodland
5B	Regenerating <i>Myoporum platycarpum</i>
6A	Weeds and shrubs around dam
6B	Weeds and shrubs inside rim of dam
7A	Level of dam, vegetation inside rim
7B	Shrubs around dam
8	Low woodland
9	Heavily used area at Wild Dog Hill
10A	<i>Plagianthus microphyllus</i> - <i>Sida intricata</i> shrubland
10B	<i>Plagianthus microphyllus</i> - <i>Sida intricata</i> shrubland
11A	<i>Dodonaea lobulata</i> shrubland
11B	<i>Dodonaea lobulata</i> shrubland
12A	<i>Sida calyxhymenia</i> shrubland
12B	<i>Sida calyxhymenia</i> shrubland
13A	Regenerating <i>Heterodendrum oleaefolium</i>
13B	Regenerating <i>Heterodendrum oleaefolium</i>
14	Regenerating <i>Casuarina cristata</i>
15	In/out park comparison; <i>Cassia</i>
16	Regenerating <i>Casuarina cristata</i> , eroded soil
17A	Regenerating <i>Casuarina cristata</i>
17B	Regenerating <i>Casuarina cristata</i>
18	<i>Heterodendrum oleaefolium</i> grove; no regeneration

Map 7: Location of the photopoints established by Megan Lewis



**Photo 10: University students - student activities in Whyalla Conservation Park provide research information when managed and coordinated**

- *Establish a log of visits to and the results of research within the Park.*
- *Support educational activities and research in the Whyalla Conservation Park by involvement of NPWSA staff where possible.*
- *Document and collate, where the opportunity arises, the knowledge of neighbouring pastoral lessees which is relevant to the Park.*

### **3.3 PARK PROTECTION**

#### **3.3.1 Pest plants**

Pest plant control is an important part of the conservation of the natural vegetation of Whyalla Conservation Park. There is also a requirement under the Animal and Plant Control Act to control certain pest species. There are other species which pose a threat to natural vegetation and which are desirable to control.

Disturbance plays a major role in weed infestation in the Park, in conjunction with the network of tracks which act as vectors.

Considerable Boxthorn control was undertaken a few years ago and Boxthorn is no longer considered to be a significant weed species although vigilance is required to control regrowth and re-infestation. This is also the case for Bathurst burr. The major pest plant species are, in priority order, Horehound, Three-cornered Jack, Saffron thistle, Wards weed and Onion weed. Maltese cockspur is also present in the Park. Control measures have been undertaken for some of these species and are ongoing.

##### Potential pest plants

Several potential pest plant species have been found in close proximity to the Park or within it. Examples are Carrion flower (*Stapelia variegata*), Prickly-pear or Indian fig (*Opuntia ficus-indica*) and Devils rope (*Opuntia imbricata*). Another potential pest plant species, Gazania (*Gazania linearis*) is widely planted in Whyalla and is showing signs of naturalising on the northern border of the city.

## **Objective**

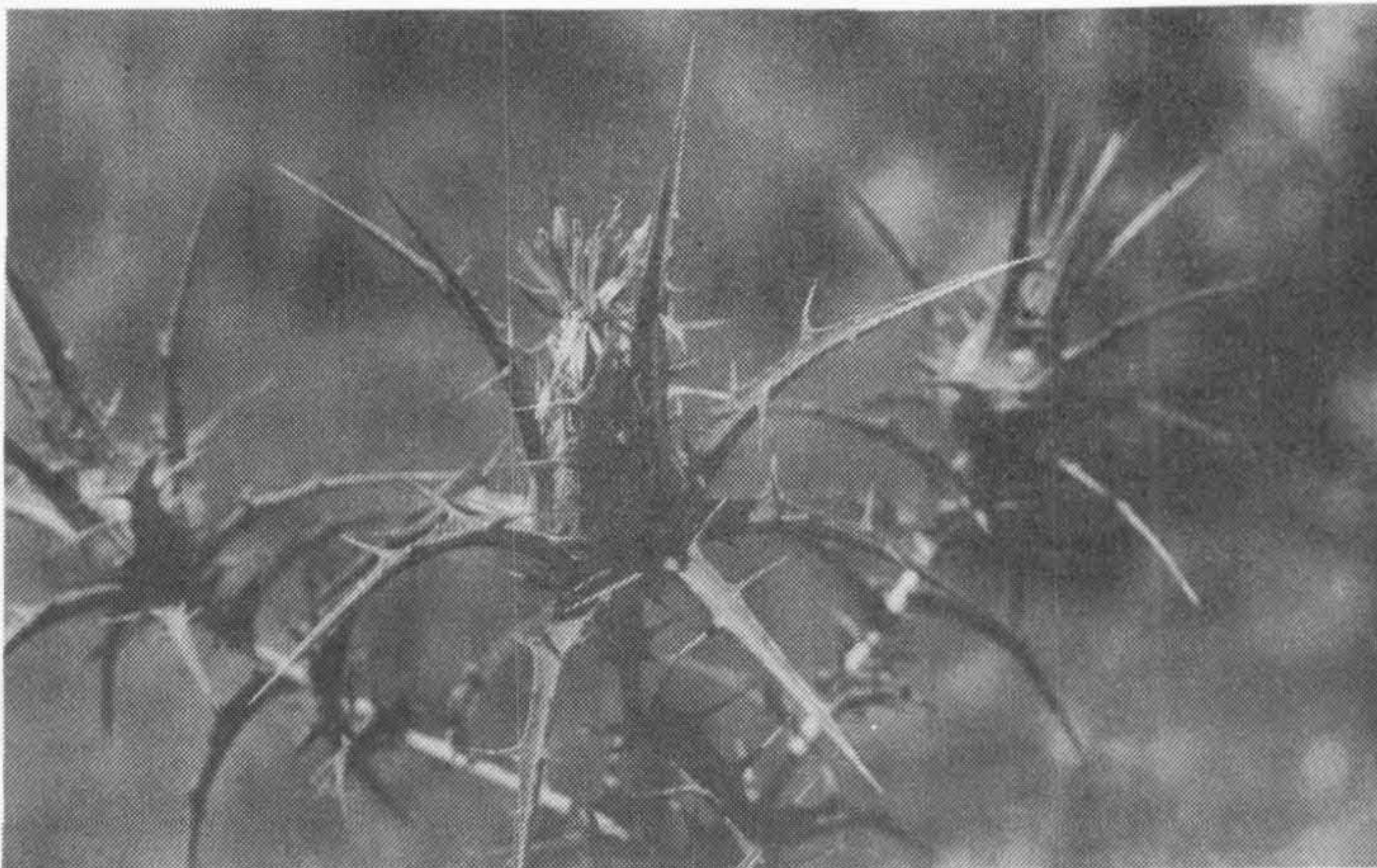
- *To control and, where practical, eradicate populations of pest plants, giving priority to those which pose the greatest threat to the natural values of the Park.*

## **Strategies**

- *Prepare a weed control plan for the Park which specifies methods, priorities and programming.*
- *Map areas of infestation of pest plants.*
- *Monitor likely sites of pest plant infestation, including run-off areas.*
- *Control pest plants using such low impact methods such as hand pulling, spot spraying, grubbing and cut-and-swab in accordance with best practice with regard to environmental weeds.*
- *Use weedicides in accordance with Departmental policy and Animal and Plant Control Board recommendations.*
- *Encourage and promote a community-based approach to weed threats to the Park.*

### **3.3.2 Pest animals**

The long rectangular shape of the Park, results in a boundary of approximately 14 kilometres, enclosing a comparatively small area. These factors enhance the opportunities for pest species to enter the Park. A rabbit proof fence around the Park is not practical due to high costs and problems of vandalism and maintenance.



**Photo 11: Saffron thistle - a common weed in disturbed areas in Whyalla Conservation Park**



Pest species such as foxes, rabbits and cats are now quite common. These are priority species.

Rabbit control work has been undertaken in the Park. Most rabbit warrens have been mapped and fumigation carried out on a regular basis. Control measures should be extended into neighbouring land where the landholder approves.

The re-location of the Whyalla refuse dump to a site five kilometres south of the Park may provide a source of pests (particularly cats) which may, in turn, threaten the Park.

### **Objective**

- **To control, and where practical, eradicate populations of pest animals in an integrated manner, giving priority to those species which pose the greatest threat.**

### **Strategies**

- *Maintain regular patrols to assess and monitor pest animal status.*
- *Encourage neighbours and the local community interest and participation in pest animal control in the wider area.*
- *Establish an integrated pest control programme for the Park.*
- *Continue mapping, monitoring and fumigation of rabbit burrows and investigate alternative methods of control.*

### **3.3.3 Fire**

The provisions of the Country Fires Act 1989 applies to NPWSA Reserves. As a landholder, the Department is obliged to protect life and property from fire, and to prevent or inhibit the outbreak of fire or its spread. The Whyalla Conservation Park is also within the Whyalla MFS district, as gazetted under the South Australian Metropolitan Fire Service Act 1936-1987. The Whyalla SAMFS will therefore respond to, and will initially be responsible for the control of, any occurrence of fire within the Park.

The Ranger responsible for the Park is based in Port Augusta. NPWSA firefighting equipment is based at Mambray Creek (Mt Remarkable National Park) and Port Augusta. Response to fires in Whyalla Conservation Park are dealt with in the NPWSA North Region Fire Response Plan and the SAMFS Whyalla Response Plan.

The closest fire stations to the Park are Whyalla and Whyalla West Metropolitan Fire Service stations (response time - 15 min). If the MFS requires assistance, a second alarm is declared and assistance from other stations is requested (Carpenter, 1993, pers. comm.). The nearest other SAMFS station is Port Augusta (50 min) and the nearest CFS units are at Stirling North (55 min) and Iron Knob (45 min).

Any fire may be detrimental to the continuation and/or preservation of the Western myall low open woodland association. As in the case of most Acacias, Western myalls are killed easily, particularly if a fire burns to the base of their trunks, or the canopy is 100% scorched, and the average mortality rate in a fire is 80% (Lay, 1990). No fuel reduction burning will be undertaken in the Park for this reason.

One source of ignition of fire in the Park is likely to be from visitor activity. The Park is subject to a district wide ban on open fires from 1st November to 30th April each year. In addition, wood fires and barbecues are banned at other times of the year due to the potential impact on resources, and the risk of fires escaping. Gas barbecues are permitted all year, except on total fire ban days.

The ETSA power lines which traverse the Park are also a potential source of ignition.

Whyalla Conservation Park has a comprehensive network of internal tracks, of which strategic tracks will be maintained for management access. Access to the Park for fire protection and suppression is adequate.

### **Objective**

- ***To prevent and/or control fire within Whyalla Conservation Park.***

### **Strategies**

- *Prepare a brief fire prevention/suppression plan for the Park.*
- *Maintain the ban on camp-fires and wood barbecues.*
- *Maintain strategic tracks for fire access and as fire control lines.*
- *Liaise closely with the South Australian Metropolitan Fire Service in Whyalla concerning fire issues.*

## **3.4 VISITOR MANAGEMENT**

### **3.4.1 Vandalism**

Vandalism has been a serious problem with the Park area long before it became a reserve under the NPW Act. Local elements are almost exclusively responsible for this problem. Almost the entire range of inappropriate and destructive behaviour is part of the Park's history of visitor use, including shooting, damage from trail bikes, fence cutting, destruction of Park facilities and wildlife offences. These activities have a very significant effect on the natural and heritage values of the Park and the quality of the experience of its visitors.

The BHP land immediately south of the Park is used extensively by trail bikes. This activity extends into the Park, but much has been curtailed by management and vigilance.

Formal arrangements are in place for the Park to be closed at night. The Friends roster a regular volunteer Park presence to check on activities and damage. Volunteers report offences and Park presence after dark to NPWSA staff for follow up. This strategy has been highly effective in reducing damage. Repairs are carried out quickly when damage does occur.

Damage by trail bikes has been minimised by management of established routes. This is done primarily by trial and error.

Awareness within the Whyalla community through Friends activities has also had an important effect which contributes to the decline of vandalism. There is, however, little room for complacency.

### **Objective**

- ***Prevent and reduce vandalism and manage inappropriate visitor activity within the Park.***

## **Strategies**

- *Educate the Whyalla community and the general public about the values of the Park through Friends activities and community interaction and information .*
- *Maintain arrangement for Park closure at night.*
- *Continue to patrol the Park regularly and to report and follow up offences or unauthorised presence.*
- *Continue to respond to inappropriate traffic movement by management of routes and tracks.*
- *Monitor and record visitor activities and numbers.*

### **3.4.2 Public access**

The main visitor access to the Park is currently from the Lincoln Highway. An alternative entrance is via a station track through the adjoining property from the Iron Knob road.

A network of internal tracks dissect the Park, including two easements beneath the main power line. The main feature within the Park to which visitors have access is Wild Dog Hill in the north west corner.

Internal tracks need to be rationalised in order to minimise impact and disturbance and enhance the habitat value of the Park. The established main public access makes it necessary for vehicles to travel along the southern and western boundaries to Wild Dog Hill. Other internal tracks connect and a proportion of vehicle traffic disperses throughout the Park.

The issue of access both to and within the Park is directly linked with inappropriate vehicle activity (especially motor cycles), public safety and habitat preservation.

## **Objectives**

- *Provide an appropriate level of visitor access to Whyalla Conservation Park which best serves its conservation needs and public safety.*
- *Ensure that the power line easements within the Park are operated in accordance with Park management aims.*

## **Strategies**

- *Stage the closure of some internal access tracks to the public. Information, physical closure and trial and error will be used to effect this. Incremental improvements in levels of misuse will provide the cues for staging.*
- *Investigate public access to the Park. Options are:*
  - Maintain the Park entry arrangements from Lincoln Highway.*
  - Change of main Park entry to the alternative entrance. This will include constituting a new road reserve on the station track alignment.*
- *Maintain communication with ETSA regarding the conservation management of the easement lines in Whyalla Conservation Park.*

### 3.4.3 Visitor activities

The close proximity of the Park to the city of Whyalla means that it is a popular area for both informal and organised recreation. Bushwalking, photography, nature study and picnicking are popular activities. Walking trails are provided and a permanent astronomical telescope mount is in place for skywatching.

School and education groups are required to submit trip intentions details for activities within the Park. This is Departmental policy. A standard form takes care of the requirements. In addition, Park activities after dark must be approved by NPWSA or the Friends.

Camping is not provided for in Whyalla Conservation Park due to its high impact and the fragile nature of this arid area. One-off camping events may be approved in some circumstances, such as for survey work.

It is recognised that a small number of visitors to the Park act in a manner detrimental its values.

Activities such as hang-gliding and rock climbing are not permitted in the Park in accordance with Departmental policy. Tracks for use by mountain bikes have not been designated due to the public risk factor whilst trail bike riding is a problem. This may be reviewed if a demand becomes apparent in the future.

Horse-riding is not provided for due to adverse impact and safety concerns on narrow tracks.

#### **Objective**

- ***Provide for visitor enjoyment of Whyalla Conservation Park .***

#### **Strategies**

- *Continue to encourage groups or organisations using the Park to give prior notice to either NPWSA staff or the Friends group.*
- *Promote the use of NPWSA "Trip Intentions" forms.*
- *Provide Park information which is clear on matters of visitor activity.*

### 3.4.4 Visitor facilities

It is desirable to restrict visitor activity to specific areas within Whyalla Conservation Park. The current access arrangements dictate that visitors and vehicles must travel along the entire southern boundary and most of the western boundary to access Wild Dog Hill, where a car park, picnic facilities and a walking trail are located. Wild Dog Hill is the logical principal visitor focus in the Park.

Bins are provided at Wild Dog Hill. Disposal of litter is carried out on a rostered basis by the Friends.

The increase of visitors to the area over the past few years has meant a rise in the amount of litter, including human waste. There is no toilet provided at present It would be desirable to do so, and the Friends has the financial resources necessary, and a site has been identified.

There is a need for a visitor information near the Park entrances. The provision of a parking bay, information and picnic facilities close to the Lincoln Highway would be convenient to some travellers.

The dam area is currently used as an additional informal visitor area. The drainage line/saltbush vegetation contrast provides the basis for an interesting walking trail. The level of disturbance from previous activities and the power line mean that development of a visitor facility would have little effect.

### **Objective**

- **Provide appropriate visitor facilities at suitable locations within the reserve.**

### **Strategies**

- *Carry out replacements and repairs to facilities promptly as needed.*
- *Encourage the use of existing facilities to minimise detrimental impact on other areas.*
- *Maintain rubbish disposal arrangements. Extend to additional facilities when developed.*
- *Provide suitable toilet facilities within the Park, initially at Wild Dog Hill.*
- *Investigate the development of alternative visitor facilities, including information bays at Park entrances and a site at the dam location. (See figures 2 and 3.)*

#### **3.4.5 Public safety**

The Department of Environment and Natural Resources has a duty of care to provide a safe environment for workers and visitors to the Park.

The main areas of concern with regard to safety are to do with vehicular traffic. The turnoff from the Lincoln Highway into the Park is a potential problem; particularly where southbound traffic must turn into oncoming traffic to enter the Park. Trail bike activity brings with it a likelihood of collisions, particularly where tracks enter the Park from adjoining land. Dramatic improvements in inappropriate use of the Park have resulted from the Friends volunteer presence in the Park on a regular basis and raising awareness within the Whyalla community.

### **Objective**

- **Minimise risk to Park visitors and workers.**

### **Strategies**

- *Provide training and information with regard to Occupational Health Safety and Welfare issues to Friends volunteers.*
- *Maintain a regular volunteer and staff presence within Whyalla Conservation Park.*
- *Rationalise internal tracks.*
- *Discourage public vehicle access to tracks other than the southern and western boundaries and around Wild Dog Hill.*
- *Ensure appropriate warning signage where necessary.*
- *Liaise with the Department of Road Transport to provide safe entry to the Park from the Lincoln Highway.*

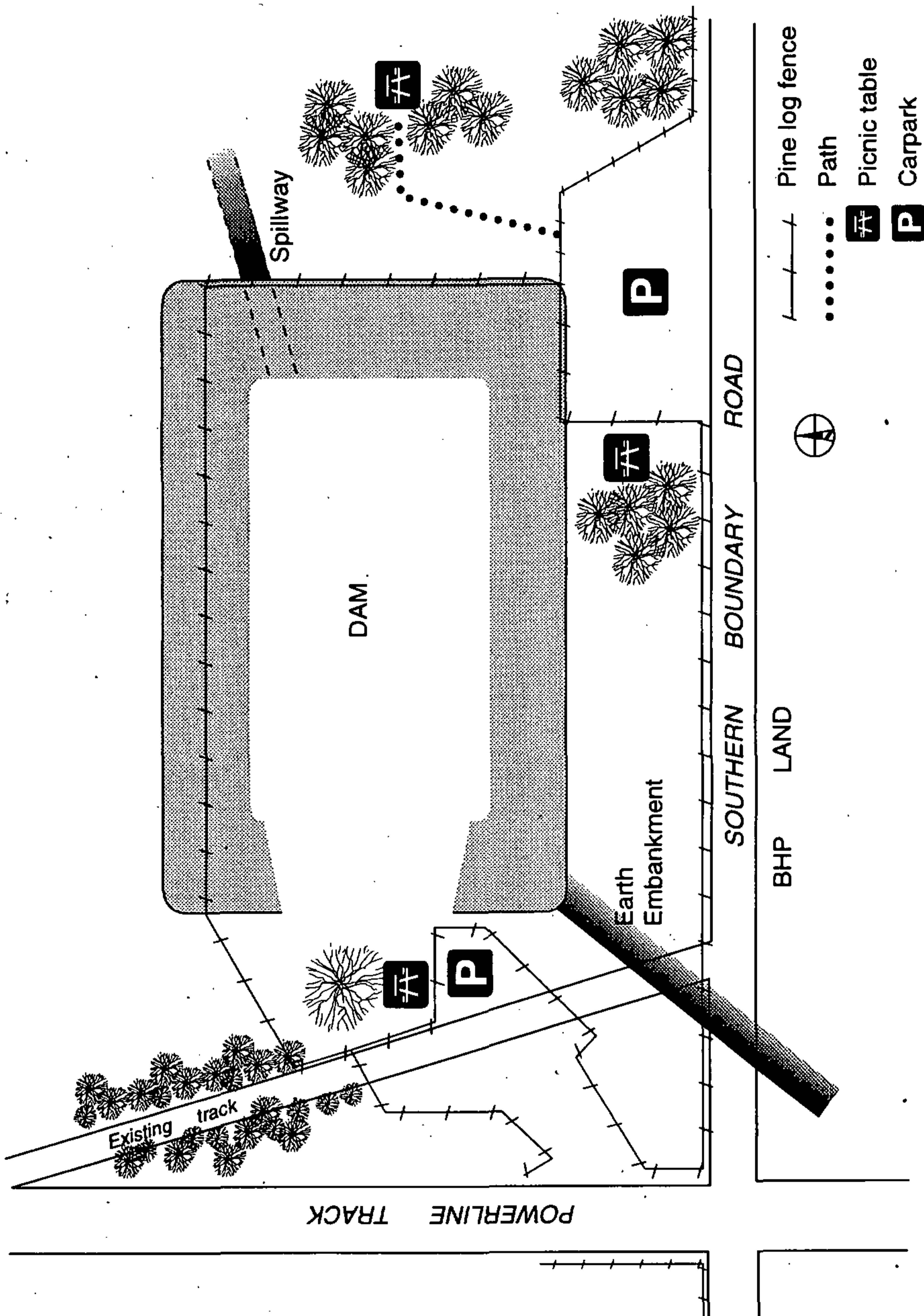


Figure 2: Proposed development of a day visitor area at the dam

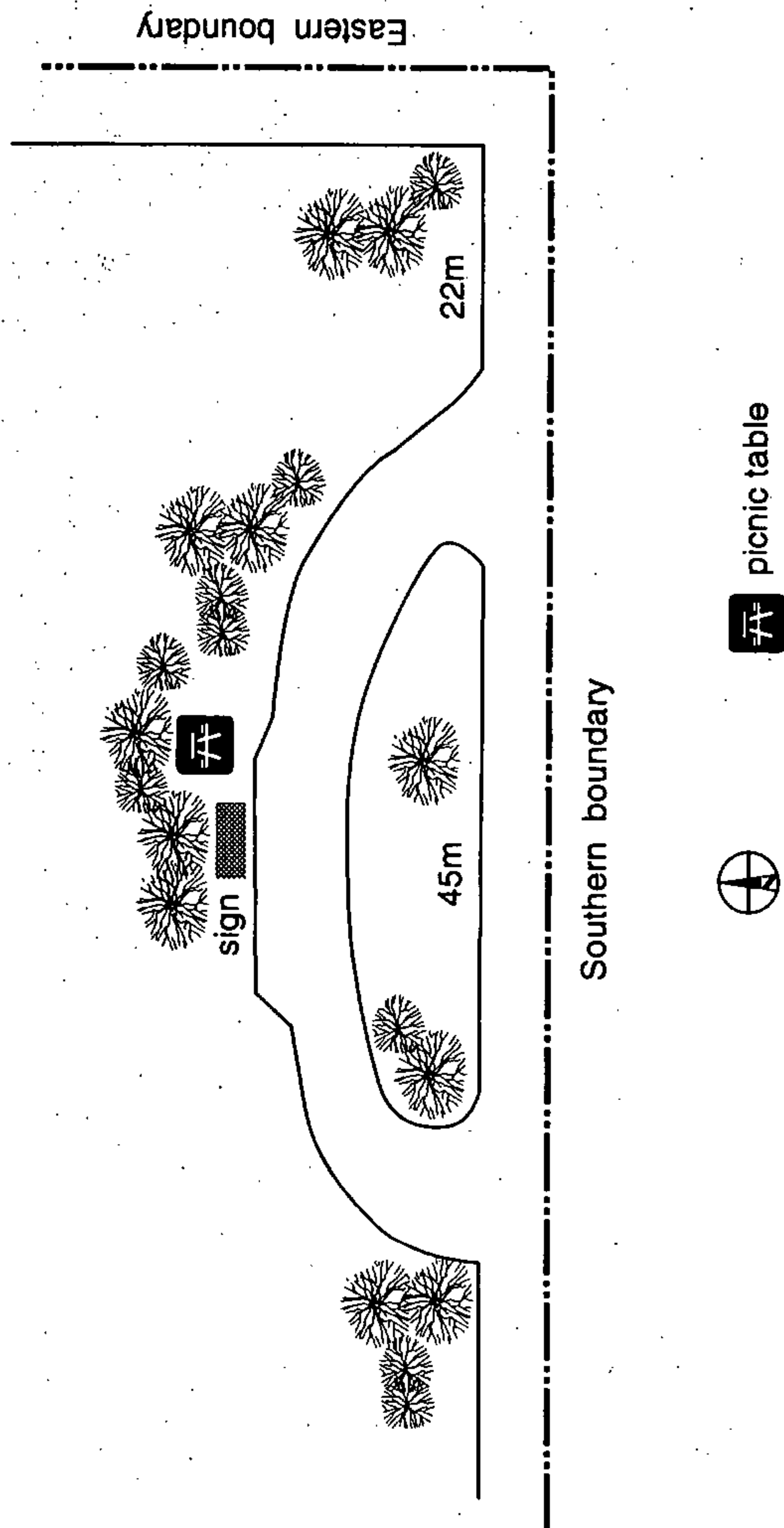


Figure 3: Proposed development for a caravan pull-off at the main entrance

### **3.5 Aboriginal Heritage**

The Department has an ongoing commitment to Aboriginal involvement in management of reserves, and actively seeks interests and input in order to fulfil this commitment.

Whyalla Conservation Park is located in land traditionally associated with the Pangkala people, who have interests in the Park.

Wild Dog Hill, a prominent rock outcrop in the north-west corner of the Park is significant to Aboriginal people. The feature's name originates from an Aboriginal story. Other Aboriginal sites within the Park have not been identified but are likely to be present.

#### **Objectives**

- ***Develop constructive relationships with Aboriginal groups who have demonstrated an interest in being involved in the management of the Park.***
- ***Protect Aboriginal sites within the Park.***

#### **Strategies**

- *Provide opportunities for Aboriginal people to be involved in Park management and activities.*
- *Survey, record and protect Aboriginal sites within the Park in accordance with the wishes of the traditional custodians and in line with the requirements of the Aboriginal Heritage Act.*

### **3.6 Environmental Interpretation And Education**

Pre-visit, directional, interpretive and enforcement information are a necessary part of Park management. The Friends Group has produced a Park brochure. Information signs are located at the Park entrance and there is an interpretive walking trail at Wild Dog Hill. Various other signs are also in place.

Provision of information about the area such as history and ecology is likely to increase visitor appreciation which in turn affects behaviour in the Park.

Signs need to be informative but should be compatible with the Park landscape.

#### **Objective**

- ***Encourage public enjoyment and further public awareness and appreciation of the purpose and significance of the Conservation Park by the provision of a coordinated program of information and interpretation.***

#### **Strategies**

- *Develop a plan for the provision of information and environmental interpretation for Whyalla Conservation Park.*
- *Increase off-site, local and regional public awareness and appreciation of the values of Whyalla Conservation Park.*





Photo 12: An information sign at the Park's main entrance showing available visitor facilities

### 3.7 Neighbouring Land

The land to the south of the Park and north of the City of Whyalla is owned by BHP. Vegetation is contiguous with that of the Park and is of conservation value. This land is largely undisturbed but some sections of it are used by off-road vehicles.

Land to the east and north of the Park is contiguous habitat under pastoral lease.

Management of the BHP land to the south of the Park would be desirable to improve the amenity of this area and to complement the Park. This could include designation of areas for trail bike activity and addition of a portion of land immediately adjacent to the conservation Park. This would significantly benefit the conservation value of the Park by altering its shape and creating a buffer between current access arrangements and the activities on BHP land.

The adjacent Cultana Industrial Estate and the proposed Tioxide development have the potential to impact negatively on the Park. The developers were considerate and cooperative in the placement of existing industry. Good communication should be fostered with the estate managers to ensure that the interests and values of the Park are not compromised by future developments.

#### **Objectives**

- *Enhance the conservation or recreation function of the Park and to provide a more rational and manageable boundary.*
- *Minimise the effects on Whyalla Conservation Park of neighbouring industrial developments.*

#### **Strategies**

- *Investigate possibilities of management cooperation and/or addition of BHP land to the Park by developing and maintaining liaison with the company.*
- *Maintain contact and cooperation with Park neighbours in order to have input to matters which may affect the Park.*



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**PART 4  
SUMMARY OF  
MANAGEMENT ACTIONS**

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# SUMMARY OF MANAGEMENT ACTIONS

## 4.1 IMPLEMENTATION - PRIORITIES & DURATION

As a guide to the orderly application of the recommendations of this plan, the management proposals discussed in previous sections are summarised and ranked below. This ranking indicates the relative priorities of projects and their duration. Projects of a continuing nature will extend into the term of subsequent management plans for the reserve.

Action	Priority	Duration	Page	Reference
<b>Natural vegetation</b>				
Manage access and visitor activities to minimise disturbance and protect vegetation.	High	Continuing	35	3.2.1
Maintain the ban on wood fires in the Park to reduce the risk of potentially destructive fire.	High	Continuing	35	3.2.1
Research the distribution, status and biology of vegetation with an ecological focus, as resources permit.	Medium	Continuing	35	3.2.1
Monitor vegetation change over time using established photo-points.	Medium	Continuing	35	3.2.1
Revegetate disturbed sites using well planned and appropriate techniques, both active and passive.	Medium	As required	35	3.2.1
Promote natural regeneration by the eradication and/or the control of pest plants and animals.	High	Continuing	35	3.2.1
<b>Fauna</b>				
Record and monitor the fauna of the Park informally and formally as resources permit.	Medium	Continuing	36	3.2.2
Establish a Park data base.	Medium	Continuing	36	3.2.2
Manage fauna and habitats identified by research.	Medium	Continuing	36	3.2.2
<b>Drainage and erosion</b>				
Establish a system to monitor erosion.	Medium	Continuing	37	3.2.3
Construct drains along the northern boundary to alleviate erosion problems.	High	Short	37	3.2.3
Minimise vehicle impact by phasing out public use of internal tracks to assist in erosion control.	High	As required	37	3.2.3
Restore natural drainage in the Park by breaching the dam wall, and installing diversion banks.	High	Continuing	37	3.2.3
Sheet and crown the southern boundary road to prevent it acting as a drainage channel (when resources permit and depending on future public access arrangements).	Medium	Continuing	37	3.2.3

Action	Priority	Duration	Page	Reference
Ensure that adequate planning and measuring of sites are undertaken prior to works, including seeking of professional advice.	High	Continuing	37	3.2.3
<b>Further research and monitoring</b>				
Establish a Park record system or data base.	Medium	Continuing	37	3.2.4
Encourage the continued use of the Park by educational establishments for educational and research activities.	Medium	Continuing	37	3.2.4
Develop guidelines for group use of the Park to ensure that such use is sustainable.	Medium	Continuing	37	3.2.4
Require schools and other educational institutions to provide information regarding projects to DEH&AA, including methods, objectives and results.	Medium	Continuing	37	3.2.4
Establish a log of visits to and the results of research within the Park.	High	Short	39	3.2.4
Support educational activities and research in the Whyalla Conservation Park by involvement of NPWSA staff where possible.	Medium	Continuing	39	3.2.4
Document and collate, where the opportunity arises, the knowledge of neighbouring pastoral lessees which is relevant to the Park.	Low	Continuing	39	3.2.4
<b>Pest plants</b>				
Prepare a weed control plan for the Park which specifies methods, priorities and programming.	High	Short	40	3.3.1
Map areas of infestation of pest plants.	High	Continuing	40	3.3.1
Monitor likely sites of pest plant infestation, including run-off areas.	Medium	Continuing	40	3.3.1
Control pest plants using such low impact methods such as hand pulling, spot spraying, grubbing and cut-and-swab in accordance with best practice with regard to environmental weeds.	High	Continuing	40	3.3.1
Use weedicides in accordance with Departmental policy and Animal and Plant Control Board recommendations.	High	Continuing	40	3.3.1
Encourage and promote a community-based approach to weed threats to the Park.	High	Continuing	40	3.3.1
<b>Pest animals</b>				
Maintain regular patrols to assess and monitor pest animal status.	High	Continuing	41	3.3.2

Action	Priority	Duration	Page	Reference
Encourage neighbours and the local community interest and participation in pest animal control in the wider area.	Medium	Continuing	41	3.3.2
Establish an integrated pest control programme for the Park.	High	Short Continuing	41	3.3.2
Continue mapping monitoring and fumigation of rabbit burrows and investigate alternative methods of control.	High	Continuing	41	3.3.2
<b>Fire</b>				
Prepare a brief fire prevention / suppression plan for the Park.	High	Short Continuing	42	3.3.3
Maintain the ban on campfires and wood barbecues.	High	Continuing	42	3.3.3
Maintain strategic tracks for fire access and as fire control lines.	High	Continuing	42	3.3.3
Liaise closely with the Metropolitan Fire Service in Whyalla concerning fire issues.	Medium	Continuing	42	3.3.3
<b>Vandalism</b>				
Educate the Whyalla community and the general public about the values of the Park through Friend's activities and community interaction and information.	Medium	Continuing	43	3.4.1
Maintain arrangement for Park closure at night.	High	Continuing	43	3.4.1
Continue to patrol the Park regularly and to report and follow up offences or unauthorised presence.	High	Continuing	43	3.4.1
Continue to respond to inappropriate traffic movement by management of routes and tracks.	High	Continuing	43	3.4.1
Monitor and record visitor activities and numbers.	Medium	Continuing	43	3.4.1
<b>Public access</b>				
Stage the closure of some internal access tracks to the public.	High	As required	43	3.4.2
Investigate public access to the Park.	Medium	As required	43	3.4.2
Maintain communication with ETSA regarding the conservation management of the easement lines in Whyalla Conservation Park.	Medium	Continuing	43	3.4.2
<b>Visitor activities</b>				
Continue to encourage groups or organisations using the Park to give prior notice to either NPWSA staff or the Friends group.	High	Continuing	44	3.4.3
Promote the use of NPWSA "Trip Intentions" forms.	High	Continuing	44	3.4.3

Action	Priority	Duration	Page	Reference
Provide Park information which is clear on matters of visitor activity.	High	Continuing	44	3.4.3
<b>Visitor facilities</b>				
Carry out replacements and repairs to facilities promptly as needed.	High	Continuing	45	3.4.4
Encourage the use of existing facilities to minimise detrimental impact on other areas.	High	Continuing	45	3.4.4
Maintain rubbish disposal arrangements. Extend to additional facilities when developed.	High	Continuing	45	3.4.4
Provide suitable toilet facilities within the Park, initially at Wild Dog Hill.	High	Short As required	45	3.4.4
Investigate the development of alternative visitor facilities, including information bays at Park entrances and a site at the dam location. (See figures 2 and 3.)	Medium	Short As required	45	3.4.4
<b>Public safety</b>				
Provide training and information with regard to Occupational Health Safety and Welfare issues to Friends volunteers.	High	As required	45	3.4.5
Maintain a regular volunteer and staff presence within Whyalla Conservation Park.	High	Continuing	45	3.4.5
Rationalise internal tracks.	High	As required	45	3.4.5
Discourage public vehicle access to tracks other than the southern and western boundaries and around Wild Dog Hill.	High	Continuing	45	3.4.5
Ensure appropriate warning signage where necessary.	High	Continuing	45	3.4.5
Liaise with the Department of Road Transport to provide safe entry to the Park from the Lincoln Highway.	High	Short	45	3.4.5
<b>Aboriginal heritage</b>				
Provide opportunities for Aboriginal people to be involved in Park management and activities.	High	Continuing	48	3.5
Survey, record and protect Aboriginal sites within the Park in accordance with the wishes of the traditional custodians and in line with the requirements of the Aboriginal Heritage Act.	High	Continuing	48	3.5
<b>Environmental interpretation and education</b>				
Develop a plan for the provision of information and environmental interpretation for Whyalla Conservation Park.	High	Short Continuing	48	3.6



Action	Priority	Duration	Page	Reference
Increase off-site, local and regional public awareness and appreciation of the values of Whyalla Conservation Park.	High	Continuing	48	3.6
<b><i>Neighbouring land</i></b>				
Investigate possibilities of management cooperation and/or addition of BHP land to the Park by developing and maintaining liaison with the company.	Medium	Continuing	49	3.7
Maintain contact and cooperation with Park neighbours in order to have input to matters which may affect the Park.	Medium	Continuing	49	3.7