Department for Environment and Heritage

Management Plan

Wolseley Common Conservation Park

2006

Government of South Australia

This plan of management was adopted on **3 July 2006** and was prepared pursuant to section 38 of the *National Parks and Wildlife Act 1972.*

Government of South Australia
Department for Environment and Heritage

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Cover photography: Buloke Woodland on gilgai soil (Courtesy of Carla O'Neill, DEH)

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FOREWORD

Wolseley Common Conservation Park comprises the former parklands of Wolseley, which is just to the south-east of Bordertown in the Upper South East region of South Australia. This small park of approximately 25 hectares is of great conservation significance. It protects one of the few remaining stands of Buloke Woodland on gilgai soil, a vegetation community, which is classified as endangered under national legislation. The Buloke Woodland conserved by the park has been found to represent the best example of a remnant pure Buloke Low Woodland ecosystem on gilgai soil in South Australia. It is believed that this vegetation community once supported a number of distinct native fauna species. Today, the park is known to provide habitat for threatened bird, reptile and invertebrate species. The park is mainly visited by local residents undertaking casual recreation or nature observation along the walking trail known as the "Buloke Walk".

The Tatiara Aboriginal Community has expressed an interest in the park. Wolseley Common Conservation Park is traditionally associated with Potaruwutj people and it has been suggested that the Buloke Woodland may have been a good source of timber for Aboriginal weaponry prior to colonial settlement.

The plan defines objectives and strategies for the future management of this reserve and facilitates the development and implementation of high quality conservation programs. Many people have contributed to the development of this plan of management. Their interest and helpful suggestions are gratefully acknowledged.

I now formally adopt the plan of management for Wolseley Common Conservation Park under the provisions of section 38 of the *National Parks and Wildlife Act 1972*. I encourage you to read the plan and appreciate the important conservation values of this park.

HON GAIL GAGO MLC

MINISTER FOR ENVIRONMENT AND CONSERVATION

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The input from a number of people with a long-standing interest in Wolseley Common, including the Tatiara Aboriginal Community and the Friends of Upper South East Parks, particularly Mr John Samuel-White was very much appreciated.

1 PARK LOCATION AND FEATURES

Wolseley Common Conservation Park was proclaimed on 29 November 2001 under the *National Parks and Wildlife Act 1972*. The park was proclaimed without access under State mining legislation. The nationally threatened Buloke Woodland that the park protects is one of the last remaining in South Australia and includes plant and fauna species of conservation significance. Wolseley Common Conservation Park is traditionally associated with the Potaruwutj people (Tindale, 1974).

The 25.19 ha park is situated in the Upper South East of South Australia. It comprises some of the former parklands and closed road reserves on the western and southern sides of the small town of Wolseley, which is located approximately 5 km south of the Adelaide-Melbourne highway and 13 km south-east of Bordertown (Figure 1). These parklands and closed road reserves that constitute the park are within the hundred of Tatiara and are comprised of Section 1013; Allotment 100 Deposited Plan 53044; Allotment 1 Deposited Plan 55986; Allotments 50, 51 and 52 Deposited Plan 28840; and Pieces 20 and 21 Filed Plan 218022.

In earlier times, Wolseley was a thriving railway town and townsfolk used the commonage for depasturing animals, firewood gathering, recreation and rubbish dumping. While those types of activities have now ceased and the park does not receive a lot of visitors, it continues to provide amenity to the residents of the adjoining township and remains a place of interest to the Tatiara Aboriginal Community.

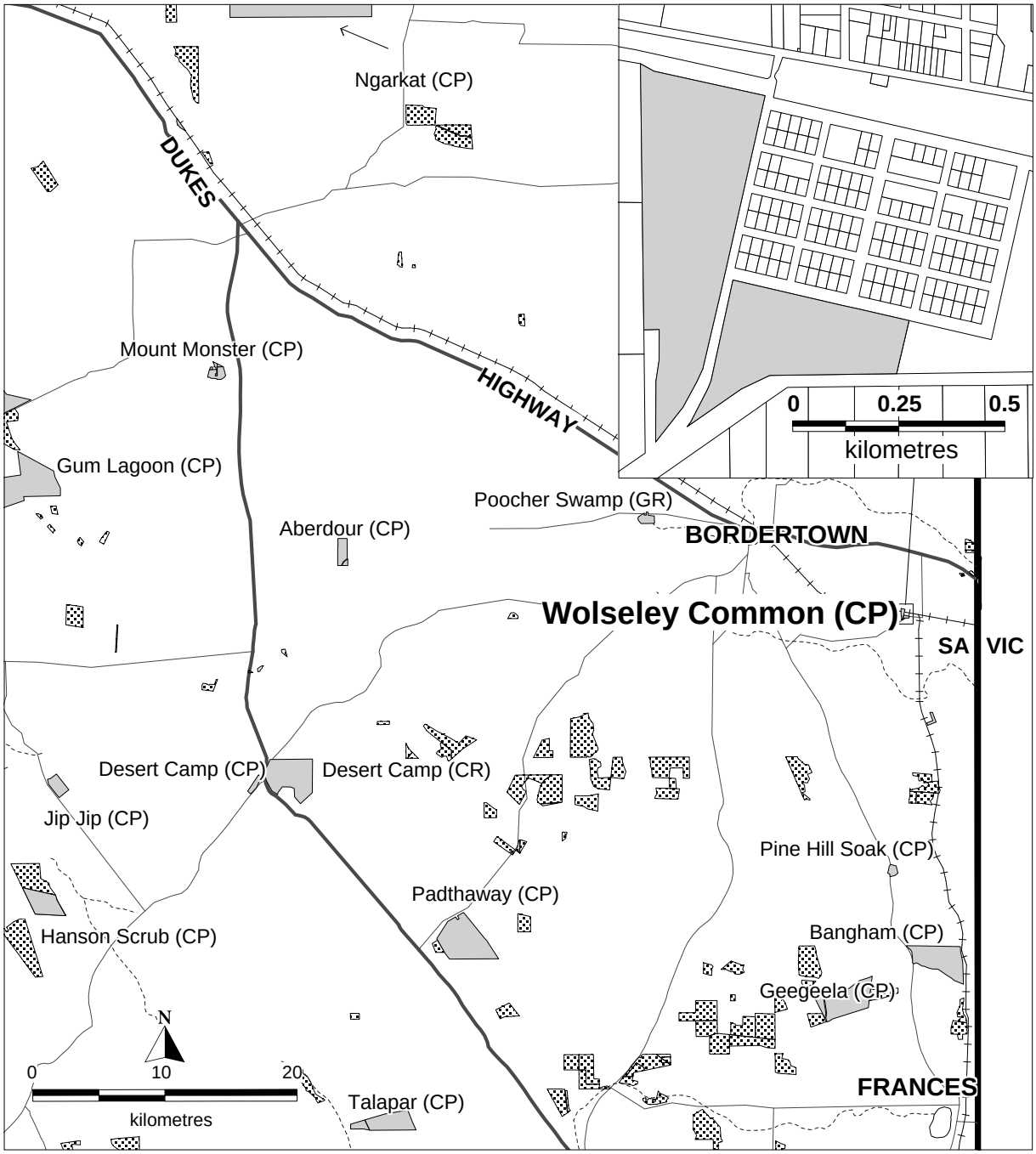
The park experiences cool wet winters, while summers are warm to hot and dry. It is particularly important for biodiversity conservation because it contains the largest intact remnant of Buloke Low Woodland on gilgai (crabhole) soils in South Australia. It protects a sample of a native vegetation association that was once extensive, but is now mostly cleared elsewhere in South Australia. Due to the threatened status of Buloke Woodlands at a state and national level, the addition of Wolseley Common Conservation Park to the State's reserve system was a major contribution to the protection and maintenance of biodiversity values in the Upper South East region.

The park provides habitat for native fauna and avifauna while also supplying a relatively intact refuge for native flora species. The Buloke Woodland remnant at Wolseley Common Conservation Park contains 68 indigenous plant species, 32 of which are of state and/or regional conservation significance. The park also provides a vital food resource and foraging site for the South-Eastern Red-tailed Black Cockatoo (*Calyptorhynchus banksii graptogyne*) a bird listed as endangered at a national, state and regional level.

Major landuses in the Upper South East region include grazing, cropping (mainly cereals, legumes and canola) and viticulture. The park itself is surrounded by the township of Wolseley and extensively cleared agricultural land. The nearest National Parks and Wildlife Act reserves to Wolseley Common Conservation Park are Poocher Swamp Game Reserve to the north-west, Pine Hill Soak, Bangham and Geegeela Conservation Parks to the south, Padthaway Conservation Park to the south-west and Ngarkat Conservation Park to the north.

The land that now forms part of Wolseley Common Conservation Park was reported to have been reduced to bare ground with only a few scattered Buloke trees by the 1960's. With the decline in the fortunes of the adjoining township the associated pressures on the land abated and native vegetation started to regenerate. This natural regeneration resulted in a remarkable improvement in biodiversity values. However, rubbish and numerous introduced plants still remained, such as the Sugar Gums (*Eucalyptus cladocalyx*) that surround the old oval (Figure 2). The conservation significance of the area was eventually recognised and the idea of proclaiming the park to ensure its long-term protection gained momentum. This was largely thanks to the active support of the Friends of the Upper South East Parks, namely Mr John Samuel-White, the Threatened Species Network and the former Upper South East Consultative Committee. Without the efforts of the Friends of the Upper South East, who have been involved in taking care of the land since 1998/99, the park would not look the way it does today.

Prior to proclamation of the park the *Draft Action Plan for Wolseley Common* was prepared by the Friends of Upper South East Parks, the then Department of Environment, Heritage and Aboriginal Affairs and the Threatened Species Action Group (1998) to tackle the more obvious environmental issues.



LEGEND

(CP) Conservation Park
(CR) Conservation Reserve
(GR) Game Reserve
NP&W Act Land
Heritage Agreement
Lake
Main Road
Road
River/Creek
Railway

Figure 1

Wolseley Common Conservation Park

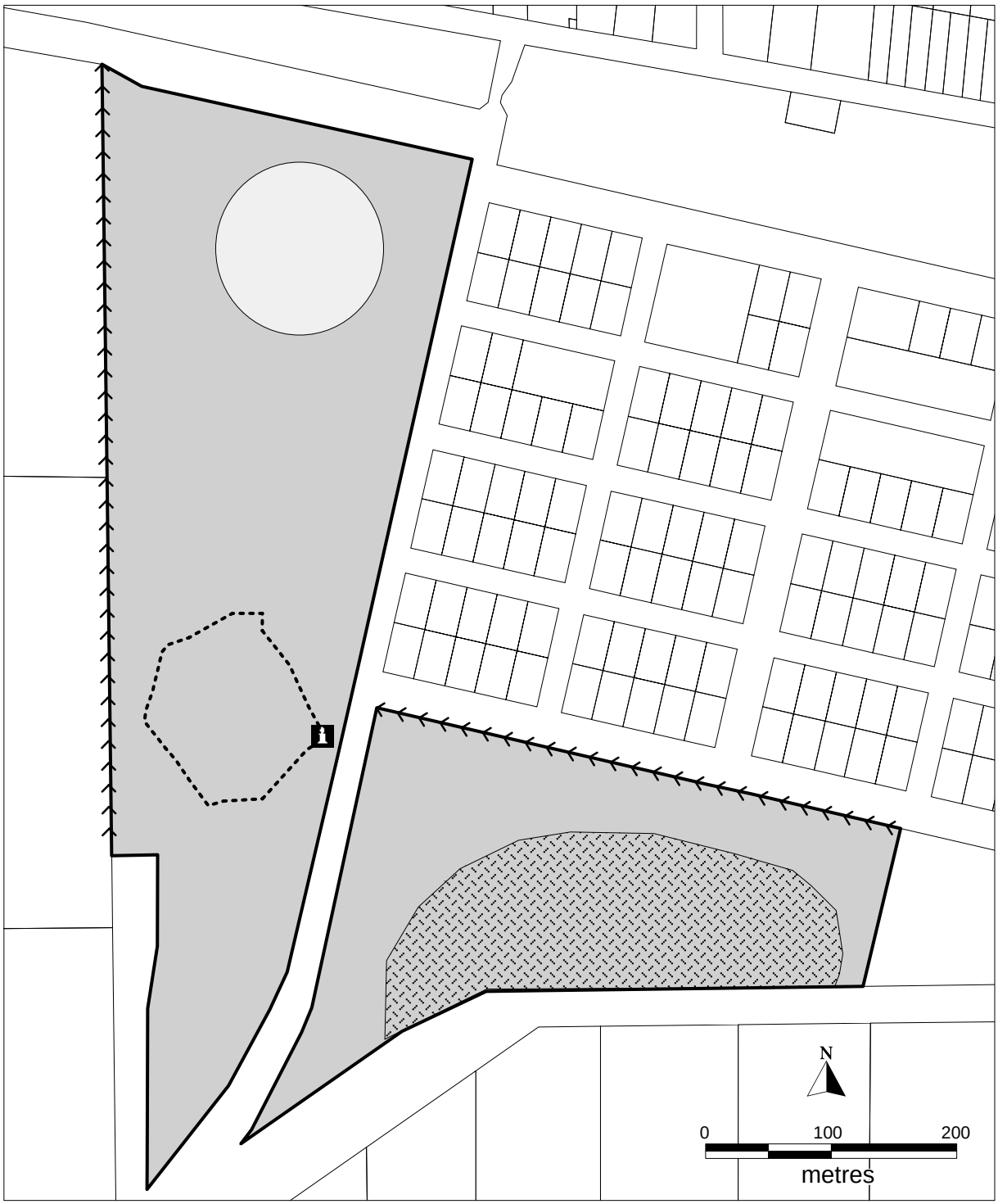
Location

Map designed and created by
Reserve Planning using PAMS
Projection: MGA Zone 54 (GDA 94)
Date: 16 February, 2005

The stated objectives of that plan were to:

- increase the area of indigenous vegetation;
- increase the long term viability of Wolseley Common;
- reduce the area infested with weeds; and
- improve the aesthetic and ecological quality of the park.

That initial action plan has been largely implemented, mainly through volunteer efforts. Introduced grasses are slashed and weeds are sprayed each year. A number of photopoints have been set up to monitor the progress of ecological restoration. Tube stock of local species has been planted and supported during the establishment period. Some signs and a sign-shelter that provide information about the park have been erected. A numbered-post walking trail ("Buloke Walk") has been marked out and an associated brochure produced. Other practical works that have been performed in the park include the installation of two lengths of fencing to define strategic boundaries (Figure 2) and the accumulated rubbish has either been removed or buried and is no longer an issue of concern. In addition to this some of the introduced Sugar Gums have been pollarded and former unmade road reserves within the park were revegetated.



LEGEND

NP&W Act Land

Historic Oval

Revegetation Area

Buloke Walk

Fence

Information Signs

Figure 2

Wolseley Common Conservation Park

Park Features

Map designed and created by
Reserve Planning using PAMS
Projection: MGA Zone 54 (GDA 94)
Date: 22 April, 2005

2 LEGISLATIVE FRAMEWORK

2.1 National Parks and Wildlife Act 1972

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

- preservation and management of wildlife;
- preservation of historic sites, objects and structures of historic or scientific interest within reserves;
- preservation of features of geographical, natural or scenic interest;
- destruction of dangerous weeds and the eradication or control of noxious weeds and exotic plants;
- control of vermin and exotic animals;
- control and eradication of disease of animals and vegetation;
- prevention and suppression of bush fires and other hazards;
- encouragement of public use and enjoyment of reserves and education in, and a proper understanding and recognition of, their purpose and significance;
- generally, the promotion of the public interest; and
- preservation and protection of Aboriginal sites, features, objects and structures of spiritual or cultural significance within reserves.

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

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

The draft plan for Wolseley Common Conservation Park was released for public exhibition in February 2006. At the close of the comment period, four submissions were received, raising issues with regards to native vegetation and fauna information, pest plant and animal control and community involvement. All comments and concerns were considered by the South East Consultative Committee and forwarded to the South Australian National Parks and Wildlife Council for advice before the plan was presented to the Minister for adoption.

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

2.2 Native Title Act 1993

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

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

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

3 VISION

The vision for Wolseley Common Conservation Park is a reserve that contributes to the conservation of threatened species and ecological communities in the Upper South East, through protecting the best known example of nationally threatened Buloke Low Woodland ecosystem on gilgai soil remaining in South Australia.

4 MANAGING NATURAL HERITAGE

4.1 Geology, Soils and Landform

Quaternary aeolian sand deposits generally overlie the Upper South East region. Wolseley Common Conservation Park and the surrounding local area is characterised by gilgai ("crabhole" or cracking) soils that result from winter waterlogging and summer drying. Plant communities in the park have developed on these grey-black soils that occur in shallow depressions, subject to inundation during wet winters.

Buloke Woodlands on gilgai soils are scarce in Victoria, being restricted to the western area of the State along the border with South Australia. The Buloke Low Woodland ecosystem in South Australia is largely restricted to more fertile, heavy grey clay flats, either subject to seasonal inundation with fresh water, or grading away to low hills with grey-brown clay loams. That the Buloke Woodland in the park occurs on gilgai soil is of scientific interest. It is important to note that this type of soil is prone to quite severe cracking in the dry season, which can adversely impact on young seedlings and could pose problems for revegetation programs. Access can also be an issue, as during winter vehicles can very easily become bogged in such soils. Further research into the erosion and waterlogging potential of the gilgai soils may be required to provide adequate information for visitor interpretative material, that explains the necessity for remaining on designated tracks within the park (see Section 7.3 Information and Interpretation).

While rising salinity is a recognised soil problem in other areas of the South East region, it is not an issue of current concern at Wolseley Common Conservation Park.

Objective

Conserve the soils within the park.

Strategies

- Consider the properties of the gilgai soil when planning or undertaking any management works on the park, including revegetation and construction of management tracks.
- Undertake soil conservation and rehabilitation management programs to mitigate any existing or potential degradation.
- Work cooperatively with the South East Natural Resources Management Board with regard to soil conservation measures.

4.2 Native Vegetation

An intact remnant of Buloke (*Allocasuarina luehmannii*) Low Woodland occurs at the Wolseley Common Conservation Park. Most importantly, the understorey at this site still retains a high diversity of native grasses, sedges and herbaceous species. Dominant understorey species are Wallaby Grass (*Danthonia* sp.), Spear Grass (*Stipa* sp.), and scattered low shrubs, including Wattle (*Acacia* sp.) and Bush-pea (*Pultenaea* sp.). Stokes (1996) ranked the floral indices of a number of Buloke ecosystem survey sites. The Buloke Woodland at Wolseley scored highly for its "comparative nativeness" values, numbers of significant taxa and native species richness. The Wolseley site scored the highest final ranking out of all the Buloke survey sites in the state and therefore Wolseley Common Conservation Park represents the best example of a remaining pure Buloke Low Woodland ecosystem on gilgai soil in South Australia.

Pre-European vegetation cover for Buloke Woodland was estimated at 18,389 hectares, and currently only about 530 hectares (2.9%) remains (Croft et al., 1999). The patches of remaining Buloke Woodland are generally similar in size to the woodlands conserved by Wolseley Common Conservation Park and are scattered throughout the agricultural areas outside the townships of Wolseley and Frances (Figure 1). Although most of these remnants are separated from each other they do tend to occur in the same localised areas within 3 to 5 km of each other. Less than 5 km north-east of Wolseley, there is one larger area of Buloke Woodland that is slightly discontinuous and covers an area approximately three time larger than the remnant conserved by the park; it is partially protected by a Heritage Agreement under the *Native Vegetation Act 1991*.

The extensive selective clearance and the senescent nature and degradation of remaining Buloke Low Woodland has earned the ecological community the status of endangered at a national level under the *Environment Protection and Biodiversity Conservation Act 1999* and is considered endangered at a state level according to DEH (2001).

Table 1: Plant species of conservation significance in Wolseley Common Conservation Park

Species Name	Common Name	Conservation Status Codes*	
		SA	South East
Acacia acinacea	Wreath Wattle		U
Acacia trineura	Three-nerve Wattle	E	E
Allocasuarina luehmannii	Buloke		U
Atriplex semibaccata	Berry Saltbush		U
Austrostipa blackii	Crested Spear-grass		V
Austrostipa elegantissima	Feather Spear-grass		R
Austrostipa puberula	Fine-hairy Spear-grass	R	
Brachyscome basaltica var. *gracilis*	Swamp Daisy	R	E
Calocephalus citreus	Lemon Beauty-heads		V
Carex inversa var. *inversa*	Knob Sedge	R	T
Carex inversa var. *major*	Knob Sedge	R	V
Chenopodium desertorum ssp. *microphyllum*	Small-leaf Goosefoot		U
Chrysocephalum semipapposum	Clustered Everlasting		Q
Comesperma polygaloides	Mauve Milkwort		U
Convolvulus angustissimus ssp. *peninsularum*	Grassland Bindweed		U
Daviesia benthamii ssp. *humilis*	Mallee Bitter-pea	R	T
Eclipta platyglossa	Yellow Twin-heads		E
Eutaxia microphylla var. *microphylla*	Common Eutaxia (prostrate)		K
Goodenia humilis	Swamp Goodenia		U
Goodenia pinnatifida	Cut-leaf Goodenia		V
Haloragis aspera	Rough Raspwort		U
Juncus radula	Hoary Rush	V	V
Lomandra effusa	Scented Mat-rush		Q
Maireana enchylaenoides	Wingless Fissure-plant		U
Minuria leptophylla	Minnie Daisy		K
Pratia concolor	Poison Pratia		V
Ptilotus exaltus ssp. *semilanatus*	Lamb's Tail	E	E
Pycnosorus chrysanthes	Golden Billy-buttons	E	E
Sida corrugata var. *angustifolia*	Grassland Sida		V
Swainsona procumbens	Broughton Pea	V	V
Templetonia stenophylla	Leafy Templetonia	V	E
Vittadinia pterochaeta	Rough New Holland Daisy		E

*Refer to Appendix A for the definition of the Conservation Status Codes

At least 68 native plant species have been recorded in the park. Of these, eleven are threatened at a state level and 31 have a conservation status in the South East region (Table 1).

It is recommended that the cleared area in the northern part of the park (referred to as the old oval) be rehabilitated to increase the size of the highly valued Buloke Woodland ecosystem in Wolseley Common Conservation Park (Figure 2). Revegetation of this area needs to incorporate the same local understorey species as those found in the rest of the park. One of the key management issues associated with rehabilitating the old oval is the control of the Sugar Gums (*Eucalyptus cladocalyx*) that currently surround the cleared area.

Although Sugar Gums are a native species, they have been introduced to the South East region. In the past, these trees have been pollarded as a management technique and ideally this should continue. It has been suggested that the Sugar Gums are of significance to some of the residents of Wolseley, since many of them either planted these trees or are the descendants of those who did. However, as an introduced species it would be ideal if the trees were removed from the park.

The local significance of these trees needs to be investigated and through negotiation, a compromise should be reached with interested parties that respects both heritage and natural values.

In the south-eastern section of the park revegetation works have already been started by local conservation volunteers in an effort to rehabilitate an area of the park that had been previously cleared for cropping (Figure 2). This has involved weed control and the replanting of Buloke and native grassy understorey species, along with a few state rare Three-nerve Wattle (*Acacia trineura*) plants. Revegetation in this area of the park should be supported and continued by DEH.

Sheep (*Ovis aries*) have been known to stray through the area from time to time and adjoining property owners need to be reminded of the need to ensure their stock do not stray into the park.

Phytophthora

Phytophthora is a generic name for a group of parasitic soil-borne root-rot fungi (most commonly *Phytophthora cinnamomi*) that cause disease and death in a range of native plant species. They are strictly water moulds, but are referred to as fungi because of their superficial resemblance. Phytophthora attacks the root system of a plant and reduces or stops the movement of water and nutrients; there is no cure for Phytophthora and once an area is infested it remains infested. The Australian Government Department of the Environment and Heritage has identified Phytophthora as a key threatening process and a National Threat Abatement Plan has been developed (Environment Australia, 2001).

The South East region is classified as being at Moderate Risk from the threat of Phytophthora fungus (Phytophthora Technical Group, 2003). Although there is yet to be any confirmation of Phytophthora within the parks of the South East, many plant species within the region are known to be susceptible to the fungus (Phytophthora Technical Group, 2003). Additionally, the majority of the South East region receives 400 mm or more average yearly rainfall, which is another contributing factor to the South East being at moderate risk with regards to Phytophthora. The fungus prefers moist, warm soils with a low to neutral pH, poor drainage and poor in nutrients and can persist in a wide range of soil conditions. Phytophthora can be spread through transfer of infested soil material on vehicles or foot wear (DEH, 2002). It is highly important that the disease is prevented from becoming established in the parks and reserves of the South East.

The soil found in Wolseley Common Conservation Park is alkaline in nature and not generally of the soil type that the fungus prefers. However, some of the plants found in the park may be susceptible to Phytophthora, such as the Swamp Goodenia (*Goodenia humilis*) which is uncommon in the South East region (Table 2). The possible threat of Phytophthora should always be kept in mind and measures should be taken to prevent infected plant material entering the park. For example, prior to entering the park any vehicles that have been in infected areas should be washed down using a pressurised spray containing specialised disinfectants to prevent the spread of Phytophthora (DEH, 2002). The DEH *Standard Operating Procedures for Phytophthora Threat Management* (2002) should be referred to when undertaking management activities to create awareness of the precautions that need to be taken to avoid the introduction of Phytophthora.

Mundulla Yellows

Mundulla Yellows is a syndrome that affects eucalypts and other native plants, resulting in the death of the affected plants over several years. It is characterised by progressive yellowing and dieback of foliage and can look similar to lime-induced chlorosis or iron-induced chlorosis (leaf yellowing due to lime intolerant plants striking limestone). A great deal of research has been conducted into the cause of Mundulla Yellows. Numerous biotic causes have been suspected and were either unconfirmed or dismissed (Mundulla Yellows Task Group, 2004; Luck et al., 2004). The latest theory suggests that the symptoms of Mundulla Yellows are caused by a complex interaction of soil properties (texture and parent material), nutrients, soil compaction, water availability, increased alkalinity and salinity, and the accumulation of bicarbonate in the soil solution (Luck et al., 2004).

Mundulla Yellows symptoms are primarily recognised in trees that are situated along roadsides, natural and man-made watercourses and sparsely separated trees in pastured paddocks (Croft et al., 1999). According to the Mundulla Yellows Task Group (2004), Wattle (*Acacia* sp.), Bursaria

(*Bursaria* sp.), Flax-lily (*Dianella* sp.), and Eucalyptus (*Eucalyptus* sp.), which are found in Wolseley Common Conservation Park, have been diagnosed with Mundulla Yellows in the Upper South East.

Allocasuarina species have been found with Mundulla Yellows symptoms in the Upper South East. However, Bulokes (*Allocasuarina luehmannii*) are yet to be found with any symptoms (Paton & Cutten, 2000; Mundulla Yellows Task Group, 2004) and none of the plants within Wolseley Common Conservation Park have shown symptoms of Mundulla Yellows.

In an effort to keep Wolseley Common Conservation Park free from Mundulla Yellows general plant hygiene guidelines for planting, pruning and disposal should be adhered to, as all of the factors that contribute to the syndrome are yet to be confirmed. The management and hygiene practices used for preventing the spread of Phytophthora should be employed, tools should be sterilised and cut material should not be removed from a site. Additionally, local seed from trees not affected by Mundulla Yellows should be used for new plantings, rather than seedlings raised in another area, since even if the plants appear healthy they could still be affected.

Objectives

Restore, conserve and enhance this area of significant, threatened species habitat.

Manage threats to biodiversity, particularly with regard to the Buloke Woodlands and plants of conservation significance.

Strategies

- Implement programs that monitor changes in vegetation communities, with a particular focus on understorey communities. Encourage research into any changes that are observed and utilise the outcomes of this research to guide management.
- Monitor the stability of plant species that are of conservation significance or those that provide habitat for threatened species and manage any threats to these species.
- Ensure that fencing is maintained as required to protect native vegetation.
- Restore the cleared area in the northern part of the park through long-term weed control and re-establishment of the existing native grassy understorey of Buloke trees.
- Continue to pollard and control the spread of Sugar Gums in the park, investigate the local significance of these trees, and negotiate with interested parties to either remove or retain the mature Sugar Gums.
- Continue the revegetation of the cleared area in the south-eastern section of the park.
- Consider the threat of Mundulla Yellows and Phytophthora and take steps to prevent the introduction of either whenever practicable, report and investigate suspected infections, and treat whenever possible.

4.3 Native Fauna

Little is known of the original fauna associated with Buloke Woodlands in South Australia, as this vegetation association has been largely cleared and modified, with less than 3% of its original coverage remaining (Croft et al., 1999). However, it is thought that Buloke probably supported distinctive fauna/avifauna that would have included higher rainfall area species reliant on non-eucalypt vegetation. Wolseley Common Conservation Park forms part of a key Threatened Habitat Area identified in Croft et al. (1999). The park is considered to be of very high conservation value due to the role it fulfils in providing valuable native habitat in a region where there is only sparse amounts of native vegetation remaining.

At least 30 bird species have been sighted at various times in Wolseley Common Conservation Park. Seven of these species found in the park have a conservation rating within the South East region. The Yellow Thornbill (*Acanthiza nana modesta*) and White-winged Chough (*Corcorax melanorhamphos whitaea*) are rated as vulnerable, the Red-capped Robin (*Petroica goodenovii*) is rated as rare, and the Collared Sparrowhawk (*Accipiter cirrhocephalus*), Sulphur-crested Cockatoo (*Cacatua galerita*) and the Longbilled Corella (*Cacatua tenuirostris*) are all classified as uncommon (Table 2).

It is likely that the park provides a food resource for the South-Eastern Red-tailed Black Cockatoo (*Calyptorhynchus banksii graptogyne*), which has a rating of endangered at a national, state and

regional level. It is believed that the park may provide suitable habitat for this species, which has been known to forage for Buloke seeds in the local area in the summer and autumn months, after breeding in the Lower South East (Stokes, 1996). The Buloke habitat provided by the park is also of great importance to the Bush Stone-curlew (*Burhinus grallarius*), which has been seen in the local area and is rated as vulnerable at a state and regional level. The reliance of these threatened birds on Buloke Woodlands highlights the significant contribution of this vegetation type to avifauna and consequently the biodiversity of the Upper South East.

In addition to the native bird species found in the park, six reptile species have been recorded, including the state rare Olive Snake-lizard (*Delma inornata*) (Table 2). To date the Fat-tailed Dunnart (*Sminthopsis crassicaudata*) is the only mammal recorded in the park.

Wolseley Common Conservation Park is said to have numerous foodplants suitable for supporting butterfly populations, however there appears to be a total lack of breeding indications on the plants (Stokes, 1996). Various mistletoe species found on Buloke could harbour several Azure (*Ogyris* sp.) butterflies that are mostly regionally rare. The Australian Painted Lady (*Vanessa kershawi*) is a common native butterfly species that has been recorded in the park (Stokes, 1996). The Grassland Copper (*Lucia limbaria*) is another native butterfly species that is likely to exist in the park since Native Sorrel (*Oxalis perrenans*), its foodplant, is found in the park and there was a sighting of this species in the park during the 1940's. It is also highly probably that the Sun Moth (*Synemon* sp.) could be found in the park since grassy woodlands, particularly those that comprise *Austrodanthonia* grasses, are critical habitat for this species. Two non-indigenous butterfly species the Cabbage White (*Pieris rapae rapae*) and the Wanderer (*Danaus plexippus plexippus*) have also been sighted within the park.

Five different Cicada species have been observed within Wolseley Common Conservation Park. These are the Dinger (*Kobonga oxleyi*), the Green Puff-body (*Urubanana festiva*), the Little Buloke Cicada (*Pauropsalta* sp. aff. *nodicosta*), the Little Shrub Cicada (*Pauropsalta* sp. aff. *nodicosta*) and the Black Grass-grinder (*Cicadetta* sp. aff. *waterhousei*), with the first three species all considered to be vulnerable and the latter three being new to science (Haywood, 2005). It is important to recognise that Buloke Grassy Woodlands are typically rich in invertebrate species, and given that this habitat has been largely cleared, it is reasonable to consider that the invertebrates that require this form of habitat are now a rarity themselves. If further invertebrate surveys were conducted in the park, it is likely that a number of other species would be identified.

Table 2: Fauna species of conservation significance that have been recorded in Wolseley Common Conservation Park (Stokes, 1996; Friends of the Upper South East et al., 1998)

Species Name	Common Name	Conservation Status Codes*	
		SA	South East
Acanthiza nana modesta	Yellow Thornbill		V
Accipiter cirrhocephalus	Collared Sparrowhawk		U
Cacatua galerita	Sulphur-crested Cockatoo		U
Cacatua tenuirostris	Longbilled Corella		U
Delma inornata	Olive Snake-lizard	R	
Petroica goodenovii	Red-capped Robin		R
Corcorax melanorhamphos whitaea	White-winged Chough		V
Petroica multicolor boodang	Scarlet Robin		U

* Refer to Appendix A for the definition of the Conservation Status Codes

Objective

Identify and protect native fauna inhabiting or using the park.

Strategies

- Survey and monitor the number of native fauna species within the park.
- Encourage approved volunteer groups and individuals to conduct fauna surveys and undertake population monitoring and management activities. Encourage surveys focussed on fauna species not yet recorded in the park (including invertebrates) and determining the habitat requirements of any new species sighted.

- Identify and protect significant fauna habitats and integrate habitat management and restoration/revegetation activities with introduced plant and animal management programs.

4.4 Introduced Plants

The park's native vegetation has been subjected to a long history of human exploitation and stock grazing, with the result that many introduced plants are found there. Some 25 introduced species have been recorded, including Boneseed (*Chrysanthemoides monilifera*), Bridal Creeper (*Asparagus asparagoides*), Boxthorn (*Lycium ferocissimum*), Cape Tulip (*Homeria flaccida*), Thistles (*Carduus* spp.), Wild Oats (*Avena* sp.), Phalaris (*Phalaris* spp.), and annual pasture grasses. While these exotic plants are a major problem in terms of park management, they are not currently considered to have a high abundance and therefore are not presently a key pressure.

With sustained effort it should be possible, given the relatively small size of the park, to put in place a control program that will reduce the number of introduced plants in the longer term and even eradicate some species. However, to maintain this situation and deal with the on-going threat of weed invasion a regionally integrated approach needs to be taken. To achieve this, surrounding property owners/managers, such as the Tatiara District Council and the South East Natural Resources Management Board, would need to be involved.

Weed control activities on park should be coordinated according to priorities determined in a DEH district pest plant management program and should recognise the legal requirements of the *Natural Resources Management Act 2004*. Much of the on-ground weed control work has been conducted by local volunteers and this work will be continued by DEH staff in conjunction with volunteers. Without wishing to pre-empt any program, selective grazing or slashing (at various heights) are alternatives that could favour native grasses on formerly grazed commonage land and on the old, closed road reserves. Selective herbicide spraying has been used successfully since the park's proclamation and will continue.

Objective

Control and if possible eliminate proclaimed plants, and control and minimise the adverse impacts of introduced plant species on the park's biodiversity.

Strategies

- Develop partnerships with local land managers and the South East Natural Resources Management Board, and contribute to integrated regional weed control programs.
- Establish pest plant control priorities and actions, and coordinate weed control activities on the park with any pest plant control/native plant revegetation initiatives taking place on neighbouring land.

4.5 Introduced Animals

The small size of the park means that it does not provide much in the way of habitat for introduced animals. However, the House Mouse (*Mus domesticus*), Feral Cat (*Felis catus*), European Rabbit (*Oryctolagus cuniculus*), Red Fox (*Vulpes vulpes*) and Brown Hare (*Lepus capensis*) are widespread throughout the South East region.

To date, pest fauna observed at Wolseley Common Conservation Park has included Brown Hares, Red Foxes and House Mice. It is also likely that, domestic cats and dogs would access the park from nearby residences from time to time. A more detailed survey would probably reveal the presence of other introduced species, probably small mammals (eg rats) and birds. The introduced bird species sighted within the park to date include the House Sparrow (*Passer domesticus domesticus*), Common Blackbird (*Turdus merula*) and Common Starling (*Sturnus vulgaris*).

Rabbits are not a current problem but hares can have serious impacts on both newly planted tube stock and regenerating plants and require management intervention. Foxes have ongoing impacts on native mammals, reptiles and invertebrates but effective control is difficult. Careful management through integrated pest control programs is the best way (until some long-term biological control alternative is found) to ensure that the numbers of introduced animals are reduced with minimal impact on native flora and fauna and domestic animals.

From a DEH perspective, the current situation at Wolseley Common Conservation Park does not warrant immediate plans for introduced animal control activities (eg baiting of foxes) apart from taking steps to protect seedlings from hare damage.

Any introduced animal control activities undertaken in the future should be integrated with district-wide programs, in conjunction with organisations such as the Tatiara District Council or the South East Natural Resources Management Board. As is the case for introduced plants, to gain maximum benefit park managers should if at all possible integrate their pest fauna control activities with those of neighbouring property managers.

Objective

Undertake measures to control introduced animals in the park, preferably as a component of regional initiatives.

Strategies

- Devise pest/introduced animal control programs in accordance with regional priorities, taking into account the possible adverse impacts of such programs on native wildlife and other off-target species.
- Work in cooperation with adjoining landowners, the South East Natural Resources Management Board and the Tatiara District Council to achieve effective pest animal control on a regional basis.
- Ensure that revegetation activities take into account the impact that introduced animals (eg rabbits and hares) can have on newly planted or established vegetation.

5 MANAGING FIRE

The nationally endangered Buloke Woodlands that the park protects are known to have an adverse reaction to being burnt and do not recover well after a fire, whereas some of the introduced species found in the reserve would recover more readily. From local accounts, the last fire in the park was during the 1970s. The access to the park for fire fighting and management purposes is currently considered to be adequate. The relatively small size of the park and its close proximity to the township of Wolseley are factors that need to be considered in managing fire.

A fire management plan will be prepared that addresses fire management for the park. The fire management zones designated within this fire management plan will be consistent with the primary purpose of conserving the biodiversity values of the park. Although there is adequate access to the park for fire fighting and management purposes, the need to construct any additional vehicle access tracks in the park will be determined through the fire management planning process. However, if fire management measures, such as the creation of firebreaks and access tracks are required prior to the preparation of the fire management plan, these measures will only be considered if they are necessary for the protection of native habitat or public safety.

Until a fire management plan is prepared, applied fire (ie ecological burning) would only be used if the benefits of such a practice are justified upon the basis of scientific principles, or is required to reduce fuel hazards. The adverse affects that fire would have on the Buloke trees and the way in which applied fire would probably favour introduced plant species are factors that would need to be considered when assessing whether or not applied fire would be an effective management tool. In addition, any bushfires will be suppressed as soon as practicable, due to the park's relatively small size, close proximity to Wolseley and the vulnerability of the park's vegetation.

The fire management plan for Wolseley Common Conservation Park will be prepared in consultation with adjoining Country Fire Service (CFS) Groups and the District Bushfire Prevention Committee, in order to integrate it with fire management in the district. Stakeholders and the wider community will also be consulted to ensure an understanding of the fire risks and mitigating actions being proposed or undertaken in the park.

Fire management planning will:

- identify natural and cultural heritage values and built assets;
- provide a framework for the management of bushfire suppression, including identification of fire management zones, strategic access and control lines;
- undertake an ecological assessment of the park to provide a framework for prescribed burning if required to assist with ecological management and fuel reduction; and
- identify performance indicators.

Objective

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

Strategies

- Develop, implement and review the fire management plan for the park in association with the CFS and other stakeholders, while ensuring that it is consistent with this plan of management.
- Continue to work with the relevant District Bushfire Prevention Committee and the CFS to minimise risk to life and property within and surrounding the park.
- Suppress all bushfires within the park as soon as practicable.
- Until a fire management plan is prepared:
    - maintain fire access tracks and only undertake fire management measures (ie creation of access tracks and firebreaks) if they are necessary for the protection of native habitat or are in the interest of public safety; and
    - only use applied fire as a management tool if it is supported by scientific principles, or required to reduce fuel hazards and all steps are taken to ensure that burning off is conducted safely.

6 MANAGING CULTURAL HERITAGE

6.1 Indigenous Heritage

The land comprising Wolseley Common Conservation Park is traditionally associated with the Potaruwutj people (Tindale, 1974). For Aboriginal people, land and waters have many interconnected complex meanings and values. The significance of land and waters is central to their lives: at birth, death, ceremonies and socially, whilst hunting, gathering, camping, and travelling.

Following colonial settlement, Aboriginal populations were substantially reduced as a result of introduced diseases, dispersal, dispossession of their land and water supplies, and sometimes through violent conflict.

The Potaruwutj people had a unique culture and language. Some of the language and traditional stories have been recorded. The full extent of Aboriginal heritage at Wolseley Common Conservation Park has not been comprehensively researched.

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

Aboriginal Heritage Act 1988

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

There are no sites listed on the Central Archive for Wolseley Common Conservation Park. However, no comprehensive survey of the park has been undertaken and there may be unidentified Aboriginal sites, objects or remains in the park. The Tattyara Aboriginal Heritage Consultancy has suggested that the Wolseley Common Conservation Park area may have been a good source of timber for Aboriginal weaponry prior to colonial settlement. In carrying out the activities and strategies envisaged in this plan, DEH will ensure that it complies with the *Aboriginal Heritage Act 1988*.

Objective

Ensure that any Aboriginal sites, objects and remains are protected and preserved in accordance with the *Aboriginal Heritage Act 1988*.

Strategies

- Consult with the Tatiara Aboriginal Community and any other relevant Aboriginal people or authorities, in decisions regarding the management of Aboriginal cultural heritage and before proceeding with significant development works within the reserve.
- Identify and protect any Aboriginal sites, objects or remains in cooperation with the Tatiara Aboriginal Community, any other relevant Aboriginal people, DAARE and relevant authorities.
- In consultation with the Tatiara Aboriginal Community and any other relevant Aboriginal people, submit cultural sites and stories that relate to the park for inclusion on the DAARE Central Archive.

6.2 Non-Indigenous Heritage

From the late nineteenth century until the park was proclaimed in 2001, part of the current Wolseley Common Conservation Park was incorporated within the parklands of the Wolseley township (proclaimed in 1884). The town is located where the Adelaide-Melbourne broad-gauge line met the Mount Gambier narrow-gauge line and for many years it was a change of gauge station and busy railway town. Due to the different rail gauges in use, freight and passengers had to transfer from one train to another.

The heyday of Wolseley was during World War Two when it was an important locomotive servicing and freight depot. The ruins of large fuel storage tanks constructed at that time are evidence to the once bustling township and can be viewed from the northern boundary of the park. It was during this time that an area now within Wolseley Common Conservation Park was cleared to provide a sports oval, which even had a track around the perimeter that was used for cycling and running (Figure 2). Post World War Two, the Mount Gambier branch line was converted to broad gauge but eventually the standardisation of the Adelaide-Melbourne line and declining rail traffic to Mount Gambier saw the branch line abandoned. Passenger trains no longer stop at Wolseley and the town's population has reduced as a consequence.

During the boom times however, there was obviously a long-standing practice of use and exploitation of the commonage and as mentioned previously, firewood cutting and hard grazing with cattle and horses had reportedly reduced the area to a few scattered trees early in the 20th Century. The impact of this activity remains to this day.

Although there are historic associations within the vicinity of Wolseley, there do not seem to be any sites or objects of non-indigenous heritage significance actually on the park, with nothing in the park being recorded on the State Heritage Register. However, further research may reveal some historic material or stories about the park that may be relevant to management or of interest to park visitors.

Objective

Ensure that any sites or items of heritage value are appropriately protected and interpreted.

Strategies

- Encourage research into the history of the park.
- Cooperate with relevant authorities and organisations to protect any sites or items of non-indigenous heritage significance that are discovered in the future.

7 MANAGING TOURISM AND RECREATION

7.1 Visitor Use and Access

Wolseley Common Conservation Park currently (2006) receives few visitors; it might be expected that with increased public awareness of the biodiversity significance of the park, more tourists with an interest in its natural features or history may visit. The park currently receives mainly local people undertaking casual recreation (eg walking) or nature observation along the walking trail known as the "Buloke Walk" (Figure 2). The walk begins at a small information shelter and, by following the numbered-posts, visitors are taken on a loop through the park. Brochures that are available at the information shelter facilitate a self-guided walking tour along the "Buloke Walk" (Figure 2). These brochures encourage appreciation of the native vegetation and in particular the seasonal plants, of the park. Children on bicycles have been known to use the area from time to time for recreational activities and, although not permitted in conservation parks unless permitted by the Director, dogs are sometimes exercised there.

There are no camping facilities or dedicated day-visit sites and the current pattern of low-key use (ie nature observation and bush walking) is compatible with the primary role of the park for biodiversity conservation. Given that there is no immediate demand or requirement for built facilities, none are proposed or contemplated for the term of this management plan.

Vehicle access is readily available from the road boundaries and does not appear to be causing problems at this time (2006). For the majority of the park area the only (internal) access is by foot, such as along the "Buloke Walk" (Figure 2). Given the low numbers of visitors, there is no immediate need for a substantial car parking area or high-profile park entrance and no additional walking trails or public vehicle access will be provided during the term of this management plan.

Objectives

Ensure that visitors who use the park understand and appreciate its natural values, respect its primary role for biodiversity conservation and have minimal impact on the park environment.

Provide visitor access to the park without compromising park values.

Strategies

- Monitor numbers of visitors and their impacts to assist in management of the conservation values of the park.
- Maintain current boundary and internal access arrangements.
- Manage the park for low-key visitor use without the need for development of facilities.

7.2 Commercial Tourism

No interest has been shown in this park by any commercial tour operator. If there were any such proposals in the future that were organised for the benefit of fee or reward the tour operator would need to obtain the requisite Commercial Users Licence. Additionally, tour operators would be required to conduct their operations in a manner that respects park values and that recognised the intention not to promote the reserve for increased visitation. Proposed tour activities would need to be agreed to (by DEH park managers) prior to the issue of a licence, to ensure that they are in accordance with the principles in this plan of management. Commercial tour activities would need to be monitored over time, to ensure compliance with licence conditions and minimal impact on park values.

Objective

Ensure that any commercial tourism undertaken on the park has minimal impact on its natural values and makes an appropriate financial contribution to management.

Strategies

- Consider any requests to allow private sector or other parties to undertake commercial tourism ventures on the park.
- Issue Commercial User Licences under section 35(3) of the *National Parks and Wildlife Act 1972* for appropriate use of the park by tour operators if the proposed activities are consistent with the objectives of this management plan and ensure licensees comply with conditions.

7.3 Information and Interpretation

The importance of the park for protecting Buloke Grassy Woodlands and its contribution to the survival of the nationally endangered South-Eastern Red-tailed Black Cockatoo (*Calyptorhynchus banksii graptogyne*) are themes that are eminently worthy of interpretation and would be likely to attract tourists that have a special interest in nature conservation. The geological and edaphic features of the park need to be conveyed to park visitors, especially with regards to the fragility of the gilgai soils, such that the need for visitors to remain on designated tracks is emphasised.

The park is quite well signposted and there is already some on-park interpretation available (ie a sign shelter, a posted walking trail ("Buloke Walk") and a printed brochure). If new signs or brochures are created for the park then some of the interesting historically significant stories about the park regarding Indigenous and non-indigenous heritage should be included. The park, and the use of the land, are closely linked to the history of the township, and may be of interest to visitors. Information regarding the significance of the soil and landforms of the park would also be ideal for inclusion in any additional signs or brochures for the park.

Objective

Enhance visitor understanding and appreciation of the park's natural values through the provision of interpretive material.

Strategy

- Provide interpretive material on-park and off-park to educate the public about the significance of the park's native vegetation and soils.

8 INVOLVING THE COMMUNITY

Friends and Volunteers

Volunteer support and community-based involvement that conserves and improves biodiversity and cultural values (while achieving effective management of recreational use) has become an essential component of park management. DEH acknowledges and supports the active volunteer contribution of Friends groups and volunteers towards the good management of parks throughout the State.

Although the Friends of Upper South East Parks were involved initially, at this stage (2006) there is no Friends group formally involved with Wolseley Common Conservation Park. However, a small but active group of volunteers have contributed considerably to management since proclamation. Revegetation and weed control are two areas where volunteer input has been significant.

It is important that DEH district and regional staff maintain effective communication with any volunteers to ensure that any work done in the park is in accordance with this management plan. Staff should provide volunteers with legal and policy advice, technical support, planning advice and an overall management direction, with regards to the work volunteers do in the park. Involvement in the park by other conservation based organisations, scientists and researchers from tertiary institutions and by staff and students from schools should also be supported and encouraged.

Regional Communities, Non-government Organisations and Park Neighbours

DEH supports and promotes partnerships and cooperative management arrangements to ensure integrated natural resource management. This requires the development of effective working relationships with other government agencies, local authorities, non-government organisations and the local community, particularly park neighbours. The integration of park management with land management programs being undertaken by the proprietors of adjacent vegetated land should be supported, especially to find ways of strengthening any native vegetation corridor linkages to other areas of habitat.

With regard to Wolseley Common Conservation Park, this involves forging management links with the District Council of Tatiara, the South East Natural Resources Management Board, conservation groups, the immediate park neighbours in the township of Wolesley and with South East community stakeholders generally. The park falls into the area covered by the South East Consultative Committee and the members of that committee were involved with the park prior to proclamation.

Partnership arrangements should be developed to provide a positive direction for the shared development and management of the park that fulfil the objectives of this plan. Moreover, with the likelihood of changes in landuse occurring in the South East region in the future, it is important for DEH to liaise with the District Council of Tatiara and development bodies to ensure that new developments do not adversely impact on biodiversity conservation and park values.

The park is located within the Special Use Zone of the Development Plan for the District Council of Tatiara, most recently consolidated in 2004 (*Development Act 1993*). Special Use Zone objectives are directed towards maintaining amenity values, but are intended for land used for recreational, educational, or institutional activities rather than biodiversity conservation. While this category of zoning may have applied to Wolseley Common Conservation Park in the past, it is not relevant to its current status as a conservation park.

On the other hand, the objectives for a Conservation Zone within the boundaries of the District Council of Tatiara are specifically conservation focussed and are much more relevant to the management of Wolseley Common Conservation Park. Therefore, it is suggested that when the Tatiara Development Plan is next revised, Wolseley Common Conservation Park should be included in the Conservation Zone.

Aboriginal Partnerships

DEH is committed to reconciliation and to the development of partnerships with Aboriginal people who may be associated with the park area, including the Tatiara Aboriginal Community, to ensure that the park is managed in a way that respects contemporary and traditional culture, knowledge and skills.

A survey is yet to be conducted to establish Indigenous heritage values and a partnership with the appropriate Aboriginal representatives needs to be developed. If such a partnership were developed for Wolseley Common Conservation Park, it might involve the delivery of programs that promoted reconciliation, cultural awareness, Indigenous employment and training, and Indigenous cultural heritage management.

Objective

Maintain cooperative working relationships for conservation outcomes.

Strategies

- Consult with the local council, relevant management boards, the local community and other relevant bodies to explore the benefits of partnership arrangements that will support future management decisions on issues of common interest.
- Provide opportunities for volunteer and community groups to assist in the management and monitoring of the park by facilitating the implementation of programmed activities.
- Build ongoing partnerships with Aboriginal groups to support the future management of the park.
- Ensure that re-zoning the park to a "Conservation Zone" is considered by the District Council of Tatiara when the Tatiara Development Plan is next revised.

SUMMARY OF MANAGEMENT STRATEGIES

MANAGING NATURAL HERITAGE
Geology, Soils and Landform
• Consider the properties of the gilgai soil when planning or undertaking any management works on the park, including revegetation and construction of management tracks. • Undertake soil conservation and rehabilitation management programs to mitigate any existing or potential degradation. • Work cooperatively with the South East Natural Resources Management Board with regard to soil conservation measures.
Native Vegetation
• Implement programs that monitor changes in vegetation communities, with a particular focus on understorey communities. Encourage research into any changes that are observed and utilise the outcomes of this research to guide management. • Monitor the stability of plant species that are of conservation significance or those that provide habitat for threatened species and manage any threats to these species. • Ensure that fencing is maintained as required to protect native vegetation. • Restore the cleared area in the northern part of the park through long-term weed control and re-establishment of the existing native grassy understorey of Buloke trees. • Continue to pollard and control the spread of Sugar Gums in the park, investigate the local significance of these trees, and negotiate with interested parties to either remove or retain the mature Sugar Gums. • Continue the revegetation of the cleared area in the south-eastern section of the park. • Consider the threat of Mundulla Yellows and Phytophthora and take steps to prevent the introduction of either whenever practicable, report and investigate suspected infections, and treat whenever possible.
Native Fauna
• Survey and monitor the number of native fauna species within the park. • Encourage approved volunteer groups and individuals to conduct fauna surveys and undertake population monitoring and management activities. Encourage surveys focussed on fauna species not yet recorded in the park (including invertebrates) and determining the habitat requirements of any new species sighted. • Identify and protect significant fauna habitats and integrate habitat management and restoration/revegetation activities with introduced plant and animal management programs.
Introduced Plants
• Develop partnerships with local land managers and the South East Natural Resources Management Board, and contribute to integrated regional weed control programs. • Establish pest plant control priorities and actions, and coordinate weed control activities on the park with any pest plant control/native plant revegetation initiatives taking place on neighbouring land.

Introduced Animals

- Devise pest/introduced animal control programs in accordance with regional priorities, taking into account the possible adverse impacts of such programs on native wildlife and other off-target species.
- Work in cooperation with adjoining landowners, the South East Natural Resources Management Board and the Tatiara District Council to achieve effective pest animal control on a regional basis.
- Ensure that revegetation activities take into account the impact that introduced animals (eg rabbits and hares) can have on newly planted or established vegetation.

MANAGING FIRE

- Develop, implement and review the fire management plan for the park in association with the CFS and other stakeholders, while ensuring that it is consistent with this plan of management.
- Continue to work with the relevant District Bushfire Prevention Committee and the CFS to minimise risk to life and property within and surrounding the park.
- Suppress all bushfires within the park as soon as practicable.
- Until a fire management plan is prepared:
  - maintain fire access tracks and only undertake fire management measures (ie creation of access tracks and firebreaks) if they are necessary for the protection of native habitat or are in the interest of public safety; and
  - only use applied fire as a management tool if it is supported by scientific principles, or required to reduce fuel hazards and all steps are taken to ensure that burning off is conducted safely.

MANAGING CULTURAL HERITAGE

Indigenous Heritage

- Consult with the Tatiara Aboriginal Community and any other relevant Aboriginal people or authorities, in decisions regarding the management of Aboriginal cultural heritage and before proceeding with significant development works within the reserve.
- Identify and protect any Aboriginal sites, objects or remains in cooperation with the Tatiara Aboriginal Community, any other relevant Aboriginal people, DAARE and relevant authorities.
- In consultation with the Tatiara Aboriginal Community and any other relevant Aboriginal people, submit cultural sites and stories that relate to the park for inclusion on the DAARE Central Archive.

Non-Indigenous Heritage

- Encourage research into the history of the park.
- Cooperate with relevant authorities and organisations to protect any sites or items of non-indigenous heritage significance that are discovered in the future.

MANAGING TOURISM AND RECREATION

Visitor Use and Access

- Monitor numbers of visitors and their impacts to assist in management of the conservation values of the park.
- Maintain current boundary and internal access arrangements.
- Manage the park for low-key visitor use without the need for development of facilities.

Commercial Tourism
• Consider any requests to allow private sector or other parties to undertake commercial tourism ventures on the park. • Issue Commercial User Licences under section 35(3) of the *National Parks and Wildlife Act 1972* for appropriate use of the park by tour operators if the proposed activities are consistent with the objectives of this management plan and ensure licensees comply with conditions.
Information and Interpretation
• Provide interpretive material on-park and off-park to educate the public about the significance of the park's native vegetation and soils.
INVOLVING THE COMMUNITY
• Consult with the local council, relevant management boards, the local community and other relevant bodies to explore the benefits of partnership arrangements that will support future management decisions on issues of common interest. • Provide opportunities for volunteer and community groups to assist in the management and monitoring of the park by facilitating the implementation of programmed activities. • Build ongoing partnerships with Aboriginal groups to support the future management of the park. • Ensure that re-zoning the park to a "Conservation Zone" is considered by the District Council of Tatiara when the Tatiara Development Plan is next revised.

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APPENDIX A: CONSERVATION STATUS CODES

Australian Conservation Status Codes

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

EX **Extinct**: there is no reasonable doubt that the last member of the species has died.

EW **Extinct in the Wild**: known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or it has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.

CE **Critically Endangered**: facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.

E **Endangered**: facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.

V **Vulnerable**: facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.

CD **Conservation Dependent**: the species is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.

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

South Australian Conservation Status Codes

The following codes are based on the current listing of species under Schedules of the *National Parks and Wildlife Act 1972*, as amended in 2000.

E **Endangered**: (Schedule 7) in danger of becoming extinct in the wild.

V **Vulnerable**: (Schedule 8) at risk from potential or long term threats which could cause the species to become endangered in the future.

R **Rare**: (Schedule 9) low overall frequency of occurrence (may be locally common with a very restricted distribution or may be scattered sparsely over a wider area). Not currently exposed to significant threats, but warrants monitoring and protective measures to prevent reduction of population sizes.

Regional Status Codes

The categories below apply to the species distribution at a regional level.

Mammals, Reptiles & Amphibians

There are no regional conservation status categories developed for mammals, reptiles or amphibians to date (2004).

Birds

Regional conservation status for birds follows Carpenter and Reid (1998) *The Status of Native Birds in the Agricultural Areas of South Australia*.

The regions are defined as follows:

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

Plants

Regional conservation ratings for plants follow:

- Lang, P. J. & Kraehenbuehl, D. N. (2001) *Plants of Particular Conservation Significance in South Australia's Agricultural Regions*.
- January (2001) update of unpublished database: *Florlist*. Department for Environment and Heritage.

The regions are as defined by the State Herbarium (Plant Biodiversity Centre), illustrated in the back cover of *Census of South Australian Vascular Plants (Edition V)* (Eds. Barker, B., Barker, R., Jessop, J. and Vonow, H., (2005)).

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

In order of decreasing conservation significance:

X **Extinct/Presumed extinct**: not located despite thorough searching of all known and likely habitats; known to have been eliminated by the loss of localised population(s); or not recorded for more than 50 years from an area where substantial habitat modification has occurred.

E **Endangered**: rare and in danger of becoming extinct in the wild.

T **Threatened**: (*Plants only*) likely to be either endangered or vulnerable but insufficient data available for more precise assessment.

V **Vulnerable**: rare and at risk from potential threats or long term threats that could cause the species to become endangered in the future.

K **Uncertain**: likely to be either threatened or rare but insufficient data available for a more precise assessment.

R **Rare**: has a low overall frequency of occurrence (may be locally common with a very restricted distribution or may be scattered sparsely over a wider area). Not currently exposed to significant or widespread threats, but warrants monitoring and protective measures to prevent reduction of population sizes.

U **Uncommon**: less common species of interest but not rare enough to warrant special protective measures.

Q **Not yet assessed**: but flagged as being of possible significance.

N **Not of particular significance:** (*Plants only*) Also indicated by a blank entry.

C **Common:** (*Birds only*) Also indicated by a blank entry.

O **Occasional Visitor Only:** (*Birds only*) Not considered of conservational status.