

**YATHONG NATURE RESERVE, NOMBINNIE NATURE RESERVE
AND ROUND HILL NATURE RESERVE**

PLAN OF MANAGEMENT

NSW National Parks and Wildlife Service

November 1996

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FOREWORD

Nature reserves are dedicated and managed to protect natural environments and wildlife and to provide for scientific study and public enjoyment of their features.

Yathong, Nombinnie and Round Hill Nature Reserves form a large, contiguous area in central NSW between Cobar and Griffith. They comprise plain and ridge country with a variety of woodland communities and the largest continuous stand of mallee remaining in NSW. The reserves support a rich array of wildlife communities and are a major area of habitat for a number of rare and endangered plant and animal species. Yathong Nature Reserve has been formally recognised as an International Biosphere Reserve.

The habitat value of the three nature reserves will be protected and enhanced by a program of rabbit control and the regeneration of formerly cleared and grazed areas. Other introduced species will be controlled where they pose a threat to native communities or nearby agricultural properties. Control of pest species will be facilitated by fencing or destruction of most of the ground tanks in the reserves. Wildfire will be controlled as far as is possible to reduce the frequency of fire to a pattern beneficial to the native plants and animals of the reserves.

Yathong and Round Hill Nature Reserves have been used for a large number of research projects and the reserves will continue to be available for appropriate research. An experimental program to re-introduce the endangered malleefowl to areas where it is now absent is being undertaken on Yathong Nature Reserve.

Yathong Nature Reserve is regularly visited by school groups from the district and by tertiary students. Round Hill is used for bird watching by ornithological groups.

The reserves provide a valuable opportunity for research into past Aboriginal occupation of central NSW, of which little is known. They also contain a number of homestead areas which illustrate the changing patterns of the grazing industry since first settlement of the district in the 1860's. Aboriginal and historic sites in the reserves will be protected and conservation plans will be prepared for former homesteads and shearing quarters.

The shearers quarters at Yathong homestead will continue to be available for use by scientific and other visitors to the nature reserves for scientific, nature observation and educational purposes. No additional facilities will be provided.

This plan of management establishes the scheme of operations for Yathong Nature Reserve, Nombinnie Nature Reserve and Round Hill Nature Reserve. In accordance with the provisions of Section 76 of the National Parks and Wildlife Act, 1974, this plan of management is hereby adopted.

PAM ALLAN

**Minister for
the Environment**

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1. INTRODUCTION

The National Parks and Wildlife Act, 1974, requires that a plan of management be prepared for each nature reserve. A plan of management is a legal document that outlines how the area will be managed in the years ahead.

The procedures for the adoption of a plan of management for a nature reserve are specified in the Act:

- * Where a plan of management has been prepared, the Director-General is required to refer the plan to the National Parks and Wildlife Advisory Council for its consideration and advice.
- * The Director-General then submits the plan to the Minister, together with any comments or suggestions of the Advisory Council.
- * The Minister may adopt the plan without alteration or with such alterations as he may think fit, or may refer it back to the Director-General and Council for further consideration.

A draft plan of management for Yathong Nature Reserve, Nombinnie Nature Reserve and Round Hill Nature Reserve was placed on public exhibition for three months from July to October 1994. Seventeen representations were received which raised seventeen issues.

All comments received were referred to the National Parks and Wildlife Advisory Council for its consideration and advice. The comments and suggestions of the Advisory Council were, in turn, considered by the Minister before adopting this plan.

Once a plan has been adopted by the Minister, no operations may be undertaken within the three nature reserves except in accordance with the plan. In accordance with section 72(4)(k) of the Act this plan also covers land acquired but not yet dedicated as part of Nombinnie Nature Reserve.

The planning process leading to the development of this plan has involved the collection and use of information, which for reasons of document size, has not been included in the plan. For additional information or enquiries about Yathong Nature Reserve or the north western part of Nombinnie Nature Reserve contact the Service's Cobar District Office at 45B Marshall Street, Cobar or by phone at (068) 36 3692. For additional information on Nombinnie and Round Hill Nature Reserves contact the Service's Griffith District Office at 105 Banna Avenue, Griffith or by phone at (069) 62 7755.

2. MANAGEMENT CONTEXT

2.1 NATURE RESERVES AND BIOSPHERE RESERVES

2.1.1 Nature Reserves in New South Wales

Reserving areas for nature conservation as a general purpose was introduced into Australia with the establishment of Royal National Park in 1879, some seven years after the world's first national park was created at Yellowstone in the United States of America.

Fauna reserves in New South Wales were first established under the Fauna Protection Act of 1948. Under the National Parks and Wildlife Act of 1967 fauna reserves were reclassified as nature reserves. The Fauna Protection Act was replaced by the National Parks and Wildlife Act, 1974.

Under the National Parks and Wildlife Act, nature reserves are areas of special scientific interest containing wildlife or natural environments or natural phenomena.

The purposes of nature reserves are defined in the Act as:

- "(a) the care, propagation, preservation and conservation of wildlife;
- (b) the care, preservation and conservation of natural environments and natural phenomena;
- (c) the study of wildlife, natural environments and natural phenomena; and
- (d) the promotion of the appreciation and enjoyment of wildlife, natural environments and natural phenomena."

Nature reserves are valuable refuge areas, where natural processes, phenomena and wildlife can be studied. They differ from national parks which include as a major objective the provision of appropriate recreation opportunities.

2.1.2 Biosphere Reserves

Yathong Nature Reserve was dedicated as a biosphere reserve in 1977.

Biosphere reserves are multiple function conservation areas designated under the UNESCO Man and the Biosphere program. They are representative of important ecosystems and contain both natural areas which are protected from disturbance and actively managed areas which have been modified by human activity. The latter areas are used for monitoring, research and education concerning conservation and human interaction with the environment. Each biosphere reserve remains under the control of the country in which it is located and is managed by appropriate national authorities. The primary goals of the biosphere reserve programme are:

- to conserve for present and future use the diversity and integrity of plant and animal communities within natural ecosystems and to safeguard the genetic diversity on which continuing evolution depends;
- to provide areas for ecological and environmental research, especially baseline studies both within and adjacent to biosphere reserves; and
- to provide facilities for education and training.

2.2 YATHONG, NOMBINNIE AND ROUND HILL NATURE RESERVES

2.2.1 Location and Regional Setting

Yathong, Nombinnie and Round Hill Nature Reserves together comprise a large area (approximately 191 000 ha) of plain and ridge country between Cobar and Griffith (see Map, Centre Pages). They were former grazing leases which were reserved to protect viable samples of the mallee and woodland communities of central NSW.

Round Hill and Yathong Nature Reserves were dedicated in 1960 and 1971 respectively, as nature reserves under the Fauna Protection Act, 1949. Nombinnie Nature Reserve was dedicated in 1988. Approximately 60 000ha owned by the Service in addition to the above area has not been dedicated as part of Nombinnie Nature Reserve pending exploration for minerals. This area is managed as if it were part of Nombinnie Nature Reserve.

The surrounding district is used for grazing (mainly sheep) and dryland wheat farming. The nearest village is Mount Hope, a remnant of a formerly much larger mining community. The reserves are remote from any large towns.

2.2.2 The Importance of Yathong, Nombinnie and Round Hill Nature Reserves

Yathong, Nombinnie and Round Hill Nature Reserves comprise a large and diverse area which samples a range of the land systems and plant and animal communities of central NSW. Their major features are as follows:

Land Systems: The reserves are located in central NSW on the boundaries between three major biophysical regions; the Cobar Penneplain, the Darling Depression and the Southern Riverine Plain (Morgan and Terrey 1992). The resulting geography of ranges, hills, rolling downs and lowlands, plains and dunefields gives the area great diversity of landscape and habitat.

Yathong Nature Reserve contains most of the Merrimerrriwa Range, which rises to 200m above the plains. It is stony with some cliff faces near the top and is a major landscape feature in the district.

Native Plants: The varied geography of the reserves and their location in central NSW is reflected in their diverse plant and animal communities. Plant communities on the reserves have sub-tropical, arid, semi-arid and southern elements. In all habitats of the area there are plants that are rare or whose distribution is relatively unknown.

The area protects the largest remaining stand of mallee in NSW, a community which has been subject to large scale clearing for grain cropping and has been severely diminished in NSW. Most other mallee reserves in NSW are tiny remnants of larger areas now cleared. The mallee of Yathong, Nombinnie and Round Hill, while not as productive habitat as the small reserves in the higher rainfall areas, shows an abundance and diversity of the shrub layer unmatched in the drier mallee areas further west.

The reserves are of sufficient size to be considered resistant to permanent damage by drought and fire. The small size of the other central NSW mallee nature reserves severely reduces their viability. It is only in large areas that many of the rarer plants and animals can be conserved.

Mallee communities contain a variety of plant species, many of which show preference for specific soils, from sandy dunes to plains and old clayey drainage depressions. The large and varied area of the three nature reserves therefore protects a wide range of species and habitats. The mallee west of Round Hill has not been burnt since 1957. Old mallee is unusual and is the prime habitat for a number of species such as the malleefowl.

In addition, the reserves contain areas of woodland habitats typical of central NSW such as white cypress pine (*Callitris glaucophylla*), bimbale box (*Eucalyptus populnea*), black box (*E. largiflorens*) and belah (*Casuarina cristata*). These communities have also been widely cleared for grazing and cropping in the region.

Rare and endangered plant species occurring in the three nature reserves include wild lime (*Eremocitrus glauca*), common sour-bush (*Choretrum glomeratum*), western wedding-bush (*Ricinocarpus bowmanii*), iron-grass (*Lomandra patens*), yellow darling pea (*Swainsona laxa*) and *Phebalium obcordatum*. Many other species which occur in the reserves have restricted distributions.

A number of species are near the limit of their range, for example brigalow (*Acacia harpophylla*), which is near its southern limit and azure daisy-bush (*Olearia rudis*) which is at its easterly limit.

Native Animals: The reserves support a rich fauna. Mammals include the wallaroo (*Macropus robustus*), echidna (*Tachyglossus aculeatus*), *Sminthopsis spp.*, *Planigale spp.*, and insectivorous bats. The three major species of kangaroos in Australia; the eastern grey (*Macropus giganteus*), western grey (*Macropus fuliginosus*) and red kangaroo (*Macropus rufus*) all occur in the three nature reserves. The western grey kangaroo is near the easterly limit of its range.

130 bird species have been recorded for the area. Mallee in particular contains a high diversity of birds with 12 species restricted to mallee. The area is good habitat for many migratory and nomadic species such as honeyeaters.

Mallee is rich in reptiles, especially in sandy areas and in mallee with porcupine grass (*Triodia irritans*). A number of the reptile species are dependent on the mallee environment; for example mallee dragons, (*Amphibolurus fordii*) and several species of striped skinks, (*Ctenotus spp.*).

The three nature reserves are a major area of habitat for a number of rare or endangered native animals including the recently discovered mouse sized carnivore (*Ningauia yvonneae*), kultarr (*Antechinomys laniger*), malleefowl (*Leipoa ocellata*), striated grass wren (*Amytornis striatus*), red-lored whistler (*Pachycephala rufogularis*), grey falcon (*Falco hypoleucos*) and pink cockatoo (*Cacatua leadbeateri*).

Research and Education: The three nature reserves are a scientific reference area of major importance in NSW. Yathong and Round Hill Nature Reserves have been used for a large number of research projects since they were established. Their diversity, suitability for comparison with other mallee reserves and with grazing properties and the availability of base data make them valuable for continued research use.

The reserves are also used by bird watching groups and for educational purposes by universities and schools.

Biosphere Reserve: Yathong Nature Reserve is one of two biosphere reserves in NSW. Its value as a biosphere reserve lies in its protection of a sample of natural communities in an area in which surrounding lands have been subject to grazing and clearing for dry wheat farming. The three nature reserves provide opportunities for evaluating changes to the biophysical resources (soils, hydrology, native vegetation and native animals) arising from these land uses. Yathong has been the location for important studies on the impacts of grazing and feral animals on native vegetation and the development of appropriate fire regimes for native plant and animal communities in semi arid NSW.

Cultural Heritage: The area covered by the three nature reserves incorporates a substantial section of the Riverina backblocks and demonstrates the history of land occupation from European settlement to the present; from large properties to smaller scale farming. At least five former homestead and shearing complexes remain, in varying condition, dating from the 1860s to the 1980s. There are also a large number of other relics such as fences, tanks, bores, troughs, yards, huts, and windmills. These resources are significant in that they represent a regional pattern of changing land use and settlement for over a century. Individual places and buildings add to the understanding of this process and the adaptations made to life in marginal country.

The reserves contain a number of Aboriginal sites including open camp sites, art sites and scarred trees. Little is known of the Aboriginal history or economy of the eastern part of the Western Division and the reserves provide an opportunity for survey and research.

The conservation significance of the reserves can be summarised as follows:

- they sample three major biophysical regions in NSW;
- they contain the largest remaining continuous stand of mallee in NSW;
- they contain sizeable examples of a number of plant and animal communities which are threatened by clearing elsewhere in the region;
- they contain significant populations of a number of rare and endangered plant and animal species;
- they are a major scientific reference area and are valuable for research, education and natural history studies;
- they protect structures and archaeological remains which demonstrate patterns of land use in the Riverina "backblocks" from European settlement to the 1980s; and
- they contain a variety of Aboriginal sites which provide an opportunity for improving the sparse knowledge of Aboriginal occupation of central NSW: a region where agriculture poses a major threat to Aboriginal heritage.

3. OBJECTIVES OF MANAGEMENT

3.1 GENERAL OBJECTIVES OF MANAGEMENT FOR NATURE RESERVES

The following general objectives relate to the management of nature reserves in New South Wales:

- * the protection and preservation of scenic and natural features;
- * the maintenance of natural processes as far as is possible;
- * the conservation of wildlife;
- * the preservation of Aboriginal sites and historic features; and
- * the encouragement of scientific and educational enquiry into environmental

3.2 SPECIFIC OBJECTIVES OF MANAGEMENT FOR YATHONG, NOMBINNIE, AND ROUND HILL NATURE RESERVES

In addition to the above general objectives the following specific objectives also apply to management of Yathong, Nombinnie and Round Hill Nature Reserves:

- * protection and encouragement of habitat diversity, including a range of age classes since fire;
- * encouragement of the regeneration and growth of native vegetation communities to ensure the survival of all native plant species occurring in the area and to improve the habitat value of currently disturbed areas for native animals;
- * protection of the habitat of rare plant and animal species and those species dependent upon the habitats of the reserves;
- * protection of native animal communities from predation and competition by feral animals;
- * re-introduction and build-up of malleefowl populations in the reserves;
- * improvement of knowledge of the natural heritage and ecology of the area and their management requirements;
- * provision of opportunities for research and educational use;
- * increase in knowledge about Aboriginal use of the area;
- * promotion of public appreciation of the natural values of the reserves and of the importance of protecting sufficient areas of natural habitat in western NSW;
- * promotion of awareness of changes to the natural systems of the region arising from grazing and agricultural practices and of rehabilitation strategies, in accordance with the function of Yathong Nature Reserve as an international biosphere reserve; and
- * encouragement of sympathetic management of adjacent land and minimisation of any adverse effects of reserve management practices on neighbouring lands.

3.3 OVERALL STRATEGY

Yathong, Nombinnie and Round Hill Nature Reserves will be managed to protect the plant and animal communities which they sample and to provide opportunities for research and educational use. Major efforts will be directed towards:

- control of rabbits and goats in order to permit regeneration of previously cleared plant communities; and
- management of fire to achieve a wider range of vegetation age classes and in particular to permit development of mallee communities with longer ages since fire than currently occur.

4. POLICIES AND FRAMEWORK FOR MANAGEMENT

This chapter contains the policies and framework for the management of Yathong, Nombinnie and Round Hill Nature Reserves together with relevant background information. Policies are summarised under the following section headings:

- 4.1 Natural Heritage
- 4.2 Cultural Heritage
- 4.3 Use of the Area

The policies established in this plan of management provide the framework for management consistent with anticipated resources available to the Service and anticipated community trends over the next five to ten years.

The actions identified are those to which priority will be given in the foreseeable future. Other management actions may be developed over the life span of this plan consistent with the policies set out in the plan.

Where not specifically provided for in this plan, management will also be in accordance with the National Parks and Wildlife Act and with general Service policies.

4.1 NATURAL HERITAGE

4.1.1 Geology, Landform and Soils

The eastern half of Yathong Nature Reserve and northern parts of Nombinnie and Round Hill Nature Reserve lie on the Cobar Peneplain. The landform comprises rolling lowlands with low ridges and hills, mainly of resistant Devonian rocks of quartzite, conglomerate and sandstone. Hills of Silurian feldspar and porphyry outcrop at Mount Nombinnie and at Shepherds Hill in Round Hill Nature Reserve. Soils are sandy lithosols on the ridges and red earths and gravel on the lowlands. Drainage tracts are incised on the ridges and poorly defined on the lowlands, apart from Keginni Creek which flows northwest from the Merrimerriva Range and disappears in the sandplain. The creek floods adjacent land after heavy rain.

Most of Nombinnie-Round Hill and the western part of Yathong consist of level to gently undulating plains of the Darling Depression with Quaternary alluvial and aeolian material forming flat plains of calcareous red earths and solonized brown soils overlain by dunes of silicious and sandy red earths. In the central western part of Yathong are east-west dunefields. Drainage on the plains is generally unorganised, with rainfall being absorbed locally. Old lakes and depressions in Nombinnie and Round Hill have grey silty clay soils. The dunefields were formed in previous, more arid climates and the lakes and depressions also indicate climatic change during the Quaternary with both pluvial and arid conditions.

The extreme southwestern corner of Nombinnie Nature Reserve lies on the edge of the Riverine Plain and is affected by large floods from Willandra Creek.

While most of the area shows little erosion, there are small areas of windsheeting and watersheeting and some large gullies, particularly on Yathong Nature Reserve, associated with past overgrazing.

Those parts of Nombinnie which have not been dedicated as nature reserve lie in the Cobar Basin in which large base metal deposits are located. The southern part of the Basin has not been explored as intensively as the northern part and the Department of Minerals and Energy has objected to reservation until adequate exploration has been carried out.

Policies

- * All management activities within the park will, where relevant, be guided by appropriate sediment and soil erosion control measures.
- * Areas subject to accelerated soil erosion arising from past overgrazing will be rehabilitated where necessary.
- * Mining and exploration will not be permitted in the areas dedicated as nature reserve.
- * In the event of any mineral exploration on those lands acquired under the National Parks and Wildlife Act but which have yet to be added to Nombinnie Nature Reserve and which are subject to this plan of management, the Service will seek to have included in the mining or other right granted under the Mining Act conditions to protect the natural and cultural values of the area.

Action

- * Work will be undertaken to stabilise and rehabilitate the erosion gullies in Yathong Nature Reserve.

4.1.2 Native and Introduced Plants

The climate of the reserves is semi-arid with unpredictable rainfall, hot summers and cool winters. The plant communities can basically be divided into woodland, occurring on the rolling lowlands and ridges and mallee occurring mainly on the sand plains. Yathong Nature Reserve is about 50% woodland while most of Nombinnie and Round Hill are covered by mallee.

The mallee and woodland communities appear to the casual observer to be similar throughout. The species groupings actually vary greatly, however, and are frequently intermixed, creating complex arrangements of habitats. The main communities are as follows:-

- **White cypress pine** (*Callitris glaucophylla*) woodland occurs widely on the lowlands and ridges. Pine occurs in small pure stands but is usually associated with a number of other species including rosewood (*Alectryon oleifolius*), belah (*Casuarina cristata*), wilga (*Geijera parviflora*), red box (*Eucalyptus intertexta*), kurrajong (*Brachychiton populneus*), mulga (*Acacia aneura*), bimble box (*E. populneum*), yarran (*Acacia homalophylla*) and mallees (*E. spp.*) Various shrubs occur including broombush (*Melaleuca uncinata*), turpentine (*Eremophila sturtii*) and hopbushes (*Dodonea spp.*). Ground cover varies with soil type and stoniness. The most common species is variable spear grass (*Stipa variabilis*).
- **Red box-white cypress pine** woodland is widespread on the rolling lowlands and also occurs on the old playa lakes. A range of secondary species occur as above; often forming small locally dominant stands. Shrubs include *Eremophila spp.* and *Acacia spp.* In some areas red box is dominant because of the almost total removal of pines by ringbarking.
- **Bimble box** occurs in often quite dense stands along drainage channels and run-on areas. A number of other tree species are present including white cypress pine, red box, budda (*Eremophila mitchellii*), needlewood (*Hakea tephrosperma*), wilga and yarran. Scattered shrubs and a wide range of ground

cover species including ephemerals occur. Bimble box was extensively ringbarked in the 1880's and 1890's but many of the trees suckered or regrew.

- **Belah** woodland occurs on level to undulating country on calcareous soils. Wilga and rosewood are the main secondary species but a number of others also occur. Belah was ringbarked and burnt on many properties during the last century.
- **Other woodland communities** include ironwood (*Acacia excelsa*), on the lowlands, mulga (*Acacia aneura*), on the ranges and black box (*E. largiflorens*), in a depression near the southwestern boundary of Nombinnie.

In the woodland communities trees vary from fairly dense to widely spaced. Areas of grassland also occur, containing both native and introduced grasses, where trees and shrubs were completely cleared for grazing.

- **Mallee** (*E. socialis*-*E. dumosa*-*E. gracilis*) covers most of the sandplain and dune areas. It occurs usually as dense mallee but also as open mallee mixed with scattered white cypress pine, mulga, wilga, red box, bimble box and other trees. Mallee pine (*Callitris preissii* var. *verrucosa*) occurs on some dune areas. Shrubs include broombush (*Eremophila* spp.), *Cassia* spp. and several wattles. Porcupine grass (*Triodia scariosa*), is the most conspicuous ground cover but a wide range of other species, including ephemeral herbs, occur. The structure and species vary considerably, particularly in the understorey.
- **Mallee** (*E. morrissii* and *E. viridis*) occurs in small areas on the ranges and hills. Other trees commonly occur including red box, wilga, rosewood, white cypress pine and belah. Broombush is widespread and the dominant ground cover is spear grass.

Both the woodland and mallee communities have been considerably altered by past clearing and sheep grazing, frequent burning and inhibition of regeneration by high rabbit, goat and kangaroo populations. Generally, the woodland communities are very open, with little understorey and the mallee communities are characterised by even-aged young regrowth. While this situation favours some plant and animal species such as kangaroos, many species are at very low numbers. Mallee pine for example, is absent from parts of the reserves because frequent fire has prevented the maturation of plants and hence the production of seed. Important food shrubs for some native animals are only sparsely present in many areas.

Unfortunately there is little information to indicate what the vegetation pattern was prior to settlement by Europeans and to which the biota had adapted. Further, little is known about the natural successions which would have occurred. It is expected, however, that there was greater variety of vegetation structure and species composition than now exists and that the woodland communities had much denser tree and shrub layers.

It is possible that natural processes such as fire operated over large areas in the past. Because of the severe reduction in natural vegetation cover in the western slopes area, however, it is necessary to encourage variety within the reserves in order to ensure the conservation of a wide range of species. In particular it will be necessary to achieve a greater range of age classes since fire and to encourage recovery of areas which have been subject to frequent burning. Management of fire will be discussed in section 4.1.4.

Many woody species are not regenerating in the woodland areas, particularly on Yathong Nature Reserve. Lack of regeneration of native species is a widespread problem throughout western NSW and is thought to be a combination of lack of seed sources as a result of long term stock grazing, and current grazing of seedlings by stock, rabbits and to a lesser extent feral goats and kangaroos. Rabbits in the reserves

are mainly found on the lowlands in areas of soft soil and numbers are very high in the central valley area of Yathong. Goats browse heavily on the stony ridges. Goats also pose a threat to neighbouring landholders as they can harbour footrot.

Rabbit control is expensive but will be necessary in order to ensure the long term survival of the woodland communities in heavily infested areas, avoid reduction in species diversity throughout the reserves and guard against soil erosion. Fox control must be combined with rabbit control to avoid increased predation on native animals following reduction in rabbit numbers. Reduction in goat and kangaroo numbers would also assist regeneration by reducing the overall grazing pressure. Goats are trapped under licence but significant numbers remain. Rabbit, goat and fox control are provided for in section 4.1.3.

In the heavily grazed and rabbit infested central valley area of Yathong, planting of native tree and shrub species may be necessary to assist return of a natural vegetation cover in reasonable time because of the lack of seed reserves. Growth of woody species may suppress grass and hence make this area less suitable for rabbits, reducing the effort needed for control.

Weeds occurring in the reserves include Bathurst burr (*Xanthium spinosum*), Patersons curse (*Echium plantagineum*), boxthorn (*Lycium ferocissimum*) and a number of pasture species. They occur as scattered individuals and small patches mainly along fire trails, around building sites, watering places and other disturbed areas. Few are thought to be spreading.

The Noxious Weeds Act 1993 took effect from 1st July 1993. The act places an obligation upon public authorities to control noxious weeds on land that they occupy to the extent necessary to prevent such weeds spreading to adjoining lands. In addition to weeds identified under the Noxious Weeds act, the Service controls other plants considered to be weeds where these have an unacceptable environmental impact.

Policies

- * Native vegetation will be managed to:
 - maintain or achieve floristic and structural diversity while retaining most of the vegetation communities in mature condition;
 - conserve rare and threatened plant species; and
 - maximise habitat values for those native animal species which depend upon the reserves and in particular to provide for conservation of rare or endangered species.
- * Communities subject to frequent fire or heavy grazing pressure will be rehabilitated.
- * Where replanting is necessary trees and shrubs propagated from local sources will be used.
- * Introduced plants and animals will be controlled where they pose a threat to native plant communities. Plants declared to be noxious under the Noxious Weeds Act will be controlled to the extent necessary to prevent such weeds spreading to adjoining lands.
- * Where possible pest control programs will be carried out in conjunction with adjoining landholders and relevant authorities.

- * Preference will be given to control techniques which have minimal environmental impact.
- * Stock grazing and bee keeping will not be permitted in the nature reserves.

Actions

- * Control of boxthorn and Bathurst burr will be continued.
- * The effect of management programs on vegetation and habitat rehabilitation will be monitored.

4.1.3 Native and Introduced Animals

As described in section 2.2.2 the reserves support a rich fauna and are a major area of habitat for a number of rare or endangered native animals.

The habitat values of the reserves have been degraded by frequent fire and by clearing with consequent loss of tree hollows, cover and important food shrubs such as *Eremophila longifolia*. Competition for food by rabbits and goats and predation by foxes and feral cats are also significant.

Management of the native fauna is made difficult by the lack of comprehensive survey of populations and information about the ecology of many of the species. It is evident, however, that protection from frequent fire, regeneration of cleared areas and control of introduced animals, as proposed in section 4.1.2, will also greatly benefit most native animals in the reserves. The rare red-lored whistler (*Pachycephala rufogularis*), striated grass wren (*Amytornis striatus*) and malleefowl (*Leipoa ocellata*), for example depend upon mature mallee while these species, small mammals and other ground nesting birds such as the chestnut quail thrush (*Cinlosoma castanotum*), spotted nightjar (*Caprimulgus guttatus*), southern scrub robin (*Drymodes brunneopygia*), and shy heathwren (*Sericornis cautus*) are very vulnerable to predation by foxes and cats. Frequent fire also increases predation by native raptors because of the lack of cover.

In order to provide for the complete range of native animals in the reserves it will be necessary to provide habitat diversity, including some areas of grassy woodland as well as shrubby areas and a variety of post fire stages in both the mallee and woodland.

The Service has developed a conservation strategy for malleefowl which involves captive breeding and release of chicks into Yathong Nature Reserve combined with supplementary feeding, fire, fox (*Vulpes vulpes*), goat (*Capra hircus*) and rabbit (*Oryctolagus cuniculus*) control and continued research. The malleefowl is extinct in the more arid areas of its former range and numbers are rapidly declining in the remaining areas to the extent that the species may be extinct in NSW in 10-20 years. Numbers in Round Hill Nature Reserve have dropped since the 1950s from possibly 200 to no more than a few pairs. Reduction in food resources and loss of cover as a result of frequent fire and heavy predation by foxes appear to be the major threats to survival in the remaining areas of habitat. Competition by goats, rabbits and high numbers of native birds such as the common bronzewing (*Phaps chalcoptera*) attracted by water available in tanks, are other causes. The conservation strategy will be implemented in cooperation with Western Plains Zoo and a number of other organisations.

Fox control would benefit a large number of native species in the reserves but would have to be combined with rabbit control because of the dampening effect that foxes have on rabbit numbers.

Feral pigs (*Sus scrofa*) occur in small groups around watering points. They damage native vegetation by grazing and rooting and eat small animals including sheep. Control programs have reduced numbers to relatively low levels.

There are a large number of ground tanks in the reserves, most of which are in poor condition. The ground tanks have modified the ecological conditions of the nature reserves and have an impact on both native and introduced animal species:

- they support some species of native animals at artificially high levels. In particular the watering points maintain high levels of kangaroos which may move onto neighbouring properties;
- some native species which should occur are displaced by species advantaged by the availability of water; and
- they support populations of introduced animal species.

Control of pigs and reduction in goat, fox and kangaroo numbers could be achieved by fencing of essential tanks and allowing the others to deteriorate to a point where they no longer hold water. This would allow regeneration of native plant communities now subject to overgrazing. Such gradual reduction in artificial water sources would allow native animal populations to adjust to the new conditions and avoid having animals move from the reserves to neighbouring properties.

In addition to the tanks which occur on the nature reserves, several tanks which are the responsibility of other authorities are included within the external boundaries of the nature reserves.

Policies

- * The existing diversity of native animals will be conserved.
- * Habitat diversity will be provided.
- * Priority will be given to management of habitats for conservation of rare and endangered native animals and those species which depend upon the habitats of the reserves.
- * Understanding of the diversity, distribution, ecology and management needs of native animals in the reserves will be increased.

Actions

- * Fox and rabbit control will be undertaken in the malleefowl research area in Yathong Nature Reserve.
- * An introduced animal species control plan will be prepared which provides for integrated rabbit, goat, fox, cat and pig control programs and monitoring of impacts and effectiveness. In particular, rabbit control programs will be designed to encourage regeneration of native vegetation communities. They will include the following:
 - reduction of rabbit numbers to a level which permits regeneration of native vegetation communities;
 - priority control in areas where rapid regeneration of natives is likely or where loss of native species is imminent;

- enclosure of rabbits from selected areas to encourage regeneration and provide seed sources; and
 - planting or seeding with natives where necessary to promote regeneration.
- * The Irymple and Yathong homestead tanks, Yathong shearers quarters tank and tanks considered strategically essential for fire management (Yarrin, 8 Mile, 10 Mile, Wagga, Sth Wangin, Hutchinsons) will be fenced to exclude goats, pigs, kangaroos and rabbits. All other tanks will not be maintained. The impact of decommissioning will be monitored.
 - * Tanks not to be maintained will be recorded.
 - * The Service will encourage the fencing of water points located within the external boundaries of the three nature reserves which are maintained by other authorities.
 - * The use of artesian bores as an alternative source of water for fire fighting and other management purposes will be investigated.

4.1.4 Fire Management

Fire is an integral part of the environment of the reserves. It is a major factor in determining the structure and species composition of the vegetation and has long term effects on animal populations.

The pre-European settlement fire regime is not known. The effect of fire since European settlement on the current vegetation pattern can clearly be seen, however, in the young, even-aged stands of mallee regrowth and the absence from many areas of slow maturing fire sensitive species such as *Callitris verrucosa*.

The majority of fires are started by lightning strikes and most enter from the northwest and western boundaries of the reserves. Fires are generally carried in the woodlands when extensive growth of *Stipa spp.* and ephemeral herbs occurs after a wet winter and spring and is then cured by hot dry conditions in summer. Fire risk is highest in the mallee when strong winds and high temperatures allow fire to bridge the gaps between overstorey crowns and inflammable understorey.

Fire survival is greater in larger plants. Low intensity fires may not kill plants larger than about 2m. Seedling grazing after fire, however, is much higher when the area burnt is small. Repeated patchy low intensity fires could therefore result in very low shrub densities. Intense fires usually kill *Callitris spp.*, *Acacia spp.* and most other plants but intense fires result in greater germination and establishment of seedlings. In the absence of fire seedling establishment occurs at low rates.

Patchy burns result in lower loss of animal numbers, increased habitat diversity, and the quick recolonisation of adjacent unburnt areas. Loss of food and cover as a result of poor seedling establishment would disadvantage the fauna, however, in the longer term. The best compromise would appear to be for areas burnt to be quite large but not continuous over the whole available habitat.

In recent times most parts of the reserves have been burnt every 10-20 years and very few areas have remained unburnt for longer than 30 years. This may be partly because of the use of large back burns during fire suppression operations. Many species of plants and animals are most suited by specific stages of the regeneration cycle and different spacing between fires will favour different species, depending on life span,

juvenile periods, patterns of seed setting etc. Mallee pine, for example takes 15 years to form cones but will survive for up to 200 hundred years if it escapes being burnt for the first 50 years of its life. Many reptiles, on the other hand are most favoured by 6-25 year post fire stages because of the promotion of growth of *Triodia irritans* (Caughley 1985).

Longer intervals between fires than presently occur will result in greater vegetation variety and it appears desirable that communities in the reserves should generally not be burnt more often than at least every 20-40 years. Some areas should remain unburnt for as long as possible. The most desirable result would be for all post fire stages to be represented to a significant extent in some part of the reserves in order to provide habitat diversity.

Public roads and fire trails divide the reserve area into blocks. Wide boundary firebreaks are maintained around the reserves and along the Mount Hope Road adjacent to a large area of mallee. Fire in mallee is difficult and dangerous to control because of high flame heights and rapid spread. The Service is a member of the Mallee Bushfire Prevention Scheme. Fire suppression will aim to restrict wildfire to within a block or minimum number of blocks.

Prescribed burning on a large scale is inappropriate in mallee communities within the reserves for the following reasons:

- the high level of predation of seedlings;
- rapid regeneration of fire carrying understorey, with risk of subsequent wildfire after a short interval;
- retardation of regeneration of areas disturbed by past clearing and grazing and
- difficulty of fire management and control during the limited period when fuel is plentiful after winter rains and when conditions are sufficiently dry but before summer when any fire is a major risk.

Prescribed burning of woodland communities may be appropriate to produce habitat diversity and reduce the risk of extensive wildfire once they have recovered to a more natural condition.

Policies

- * Fire will be managed to ensure:-
 - protection of human life and property;
 - protection of Aboriginal sites, historic places and management facilities;
 - conservation of those plant communities and plant or animal species which require a particular fire frequency; and
 - maintenance of species and habitat diversity.
- * As much of the vegetation as possible will be maintained in as old an age class as possible, with most areas not being burnt more often than at least every 20-40 years.
- * All wildfires will be suppressed and restricted as much as possible in extent.

- * In order to maintain diversity and reduce the likelihood of wildfire burning large areas, prescribed burning may be used where appropriate, such as along fire breaks, to protect homestead precincts and in woodland areas.
- * Fire breaks will be maintained along all reserve boundaries and the Mount Hope Road.
- * Fire trails will be maintained.
- * Preference will be given to fire suppression methods which least damage the landscape. Use of heavy equipment off existing fire breaks, roads and tracks will be avoided where possible.
- * Liaison will be maintained with fire brigades, shire councils, the Mallee Bushfire Prevention Scheme and local land owners to ensure co-ordination in suppression of wildfires in the reserves and adjoining lands.
- * In order to determine appropriate fire regimes for maintenance of biodiversity, research will be encouraged into:
 - fire behaviour in mallee;
 - effects of fire on mallee vegetation and fauna; and
 - fire effects in woodland communities.

Actions

- * Fire management plans will be prepared for the reserves which detail fire management objectives, strategies, programs, co-operative arrangements and resources, and the protection of neighbouring lands. They will be reviewed annually.
- * Records of fire occurrence, patterns and effects will be maintained and post fire regeneration will be monitored.
- * Additional concrete tanks to hold water for fire fighting will be placed at strategic locations and maintained full during the fire danger season.

4.2 CULTURAL HERITAGE

Cultural heritage includes both Aboriginal and non-Aboriginal history. The cultural heritage of an area is an important component of the environment that may have aesthetic, historic, scientific and social significance to present and future generations.

4.2.1 Aboriginal Sites

The reserves are within the traditional lands of the southern Ngayampaa and western Wiradjuri Aboriginal people. These people now have a major community at Murrin Bridge and also live at Lake Cargellico, Euabalong, Ivanhoe, Hillston, Cobar, Wilcannia, Griffith and elsewhere (letter from Western Heritage Group Inc. to NPWS).

The strong attachment of Aboriginal people to their land is slowly being acknowledged. Archaeological sites are important to Aboriginal communities as they are a testament to their culture's great antiquity. Aboriginal people may hold traditional knowledge which is important for nature conservation and may wish to be involved in management of reserves.

Limited surveys for Aboriginal sites have been undertaken on the reserves. Fifty six sites have been recorded in Yathong but only one in Nombinnie. The Nombinnie site is an open camp site on Mount Nombinnie while the recorded sites in Yathong are concentrated along the Merrimmerriwa Range and Keginni and Homestead Creeks. They include scarred trees, open camp sites and shelter sites with art. There are no known sites in the mallee, despite surveys having been undertaken in this area, and it is likely that this absence of sites reflects an occupation and use pattern.

Whilst no analytical work has yet been undertaken, it appears that sites are located in the vicinity of both ephemeral and more permanent water. The main creeks as well as the watercourses forming rockpools among the boulders on the range are associated with more or less extensive open sites. The types of artefacts suggest that the sites are relatively recent. They also indicate that stone sources were relatively abundant in the area. Many open sites are associated with scarred trees.

All the sites are vulnerable to damage by visitors and their location should not be made public unless explicit management provisions for visitors have been implemented.

Policies

- * All Aboriginal sites will be protected from disturbance.
- * All works proposed for the nature reserves will be preceded by a survey for Aboriginal sites.
- * Relevant Local Aboriginal Land Councils and other Aboriginal community organisations will be consulted and actively involved in all aspects of management of Aboriginal sites.
- * Aboriginal people with traditional ties to the area of the reserves will be permitted to carry out activities in the reserves related to education and maintenance of Aboriginal cultural sites. Prior arrangements will be necessary with the appropriate NPWS district manager.
- * Non-destructive research into past Aboriginal use of the area will be encouraged.

Action

- * A program of collection of oral tradition related to Aboriginal use and management of the area of the reserves will be undertaken.

4.2.2 Historic Places

The area of the reserves was settled by Europeans for grazing in the mid 1860s following development of water conservation techniques which allowed settlement away from the major rivers. The DeSailly brothers, wealthy Victorian pastoralists, established Yathong and other stations in the 'backblocks' away from the river frontages. The DeSaillys used steam-driven bore digging machinery to tap aquifers in the otherwise marginal country. Having established a network of tanks and bores they were able to stock the country with sheep. At their peak they controlled more than a million acres in NSW, and were prominent in the Riverina secessionist movement of the 1860s.

Their empire crumbled in the late 1860s as recession hit. "Yathong" was taken over by the banks, and run as one property in a chain of holdings. At its largest Yathong covered 250,000 acres, but its size fluctuated as sections of property were bought and sold. From this early period of its history little survives above ground, except the all-important tanks, a section of lashed-stake fencing and archaeological remains in the vicinity of Yathong Homestead.

From about 1900 the size of properties began to be reduced and parts of "Yathong" were incorporated into new, smaller properties. "Glenlea" and "Nombinnie" were established by the Western Lands Commission at the turn of the century and "Lysmoyle" and "Irymple" were probably established soon after. Many such properties were too small to be viable and ultimately failed. The pattern of breaking up of the larger runs to create small properties and the subsequent buildup of larger runs again is characteristic of the Riverina, and is well represented in the three nature reserves.

The classic Riverina homestead pattern, with a strong separation of the homestead and shearing areas is illustrated in the separation of the "Yathong" homestead and shearing areas. This pattern began to break down with the creation of smaller properties at the turn of the century. At "Glenlea", "Nombinnie" and "Lysmoyle" the two complexes were close together, reflecting a breakdown in the rigid class distinctions of the larger runs.

There is extensive archeological and structural evidence on the reserves of the pattern of settlement and land use this century. Of the homesteads only "Yathong" and "Irymple" are standing, and these are new buildings on the site of older dwellings. The shearers quarters at "Yathong", and the much smaller ones at "Lysmoyle" are standing, but the woolsheds at all of the properties have been demolished or destroyed by fire. A particularly fine timber slab and frame stable and adjoining tack room survive at "Yathong", but most other outbuildings have been removed.

While a number of structures have been destroyed or removed their archaeological evidence remains, as does the infrastructure of pastoral industry - windmills, tanks, fences and yards, rubbish dumps, hut sites and clearings. Taken together these provide an important resource for understanding the history and development of the area and evolution of the present landscape. Activities such as ringbarking, carried out by Chinese labourers during the 1890s depression, created a distinctive cultural landscape, which has now become part of a perceived 'natural' landscape as well.

Preliminary recording and assessment of the historic places on the reserves has been undertaken, along with recommendations for maintenance works (Historic Heritage Maintenance survey).

Policies

- * The historic structures and places within Yathong, Nombinnie and Round Hill Nature Reserves will be conserved in compliance with the *Australia ICOMOS Charter for the Conservation of Places of Cultural Significance*, (the Burra Charter) and the Heritage Act, 1977.
- * Structures will be altered or removed only in accordance with a conservation assessment which examines their cultural significance and will be recorded before undertaking any work.
- * The former homestead, living and shearing areas at the Yathong homestead will be protected as far as practicable from fire and disturbance.
- * All ground disturbance within the homestead, hut and shearing areas will be preceded by an archaeological survey.
- * The Lysmoyle shearers quarters will be maintained.
- * Research into the history and archaeology of land settlement in the area will be encouraged.

Actions

- * Stabilisation works will be carried out on the Yathong cookhouse oven.
- * High priority maintenance of historically significant buildings will be carried out in accordance with the recommendations of the Historic Heritage Maintenance Survey.

4.3 USE OF THE AREA

The major categories of use that can be appropriate, to varying degrees, on Service areas are:

- education and promotion of the area, the Service and the conservation of the natural and cultural heritage
- certain types of recreation
- research
- management operations, by the Service and other authorities with statutory responsibilities in the area

The extent to which these categories of use are appropriate to the reserves is indicated below.

4.3.1 Promotion and Public Use

The primary purpose of nature reserves is conservation of wildlife and natural environments. Research, educational use, nature study and enjoyment are appropriate uses, however, where they do not conflict with conservation.

Yathong Nature Reserve is regularly visited by school groups from the district and occasionally by tertiary students. Round Hill is used for bird watching by interested groups and both reserves have been the location for a range of research programs (see 4.3.2)

The reserves are isolated from towns of reasonable size and all roads, both public and reserve, are unsealed. The reserve roads are generally not usable in wet weather. There are no facilities for visitors apart from accommodation for researchers and students in the Yathong shearers quarters.

Parts of the reserves, particularly the Merrimerriva Range area, are attractive and have some potential for remote area walking. Limited use would not conflict with conservation but regular use of the same areas or use by large groups would cause damage from which the arid environment would be slow to recover. Adjacent Yathong State Forest, at the southern end of the Merrimerriva Range, is an attractive alternative location for walking and camping. During summer the heat, lack of water and the risk of fire preclude recreation use.

Promotion of the conservation value of the reserves would lead to greater appreciation by neighbours and the public and encourage sympathetic adjacent land management and visitor behaviour.

The use of Yathong for educational and recreational purposes and interpretation of its heritage values accords with its functions as a biosphere reserve.

Policies

- * Use of the reserves for research, nature observation and educational purposes will be encouraged.
- * The conservation values of the reserves will be promoted to increase public appreciation and encourage sympathetic management of adjacent lands.
- * Awareness of Yathong Nature Reserve as a biosphere reserve will be promoted.
- * Appropriate recreational use, such as self-reliant walking and camping, may be permitted where it will not cause damage to the reserves' conservation values or a burden on management.
- * All visitors must obtain permission from the appropriate district office of the Service.
- * No facilities, including water supplies, will be provided for visitors apart from limited accommodation in the Yathong shearers quarters for approved groups.
- * Vehicle use by visitors and researchers will be permitted only on formed roads and tracks.
- * Visitors camping in the reserves will be required to use fuel stoves for cooking. Visitors will be required to remove all rubbish and signs of a camp.
- * Horseriding will not be permitted in the reserves.

Actions

- * Information boards explaining the values and management of the reserves will be placed at the junction of the Euabalong and Lake Cargelligo roads near Round Hill, on the Mount Hope Road near the Matakana railway station and near the northern entrance to Yathong Nature Reserve on the Cobar Road.

4.3.2 Research

Yathong Nature Reserve was originally acquired to carry out a research program aimed at conservation of red kangaroos and other wildlife on grazing properties, with the eventual aim of kangaroo farming. The program was not proceeded with because it was found that Yathong's great biophysical diversity made it very difficult to design a useful and valid grazing experiment. It was further considered that the conservation value of Yathong was so great that it should be managed for this purpose only.

The reserve has, however, been used for other research by a number of organisations, including vegetation and fauna surveys, kangaroo biology and behaviour, fire patterns and impacts and rabbit control. Round Hill Nature Reserve has also been used for research such as mallee fowl and reptile ecology and vegetation and fauna survey. It is also regularly used for bird watching by interested groups.

Research has been carried out in the past without adequate consideration of its impact on the natural heritage of the reserves and for a wide range of purposes, not necessarily related to management for conservation of wildlife. The results of the research have also not always been made available to the managers of the reserves.

Yathong is the only one of the three reserves which has accommodation and other facilities for the support of research projects and it has the greatest amount of data available. It would be desirable, however, to extend knowledge of the resources of the other reserves, particularly newly reserved Nombinnie, by inventory and ecological research.

Use of Yathong for research is in line with its status as a biosphere reserve, particularly research concerned with the impact of human activity on the ecosystems represented in the reserves and restoration of areas degraded by former pastoral activities. This research will provide information for improved management of other reserves and properties in the central western area of NSW.

Policies

- * Yathong, Nombinnie and Round Hill Nature Reserves will be available for appropriate research use.
- * Priority will be given to research which improves knowledge of the resources and aids management of the reserves for conservation.
- * Only research which causes minimal disturbance to the natural and cultural values of the reserves will be permitted.
- * Interested groups and individuals will be encouraged to carry out observation and survey of wildlife in the reserves with the permission of the district managers.
- * Liaison will be maintained with researchers and observers to obtain as much mutual information and assistance as possible.

- * Information will be made available on research findings and management experience relevant to management of areas similar to the reserves.
- * The Yathong shearers quarters will be available for use by researchers, students and community groups undertaking wildlife observation.

Action

- * A prospectus will be prepared and distributed as a guide to preferred research projects in the park with emphasis on those of direct relevance to its management. In particular, the prospectus will include research into:
 - regeneration of cleared and grazed plant communities;
 - the diversity, distribution, ecology and management needs of native animals in the reserves;
 - the effect of ground tank closures;
 - fire effects and management;
 - traditional Aboriginal use; and
 - history of European settlement;

the monitoring of the effect of ground tank closures to be of high priority.

4.3.3 Management Operations

Yathong Nature Reserve and the north western part of Nombinnie are managed by the Cobar District of the Service. Two field officers are located in Yathong at the Yathong and Irymple homesteads. Round Hill Nature Reserve and the remainder of Nombinnie are managed by the Service's Griffith District with no on-site staff or facilities.

A number of public roads, management tracks and fire trails dissect the reserves and the State Rail Authority maintains tracks beside the Broken Hill railway line which passes through Nombinnie-Round Hill. An airstrip for management use is located on Yathong Nature Reserve.

The reserve boundaries are fenced to exclude stock, except where adjacent to uncleared and unstocked land. Internal fencing is not generally needed and is removed where appropriate.

A gravel pit located on Yathong Nature Reserve is used by the Service and has been used infrequently by Cobar Shire Council since at least 1971 for road maintenance purposes.

Policies

- * Management facilities may be upgraded as necessary.
- * Materials may be provided to neighbours for stock proof boundary fencing where appropriate.
- * Internal paddock fences will not be maintained.

- * Vehicle use for management purposes will, as far as possible, be confined to existing roads and tracks.

Actions

- * Management facilities and tracks will be maintained and may, if necessary, be upgraded in a manner consistent with the objectives and policies outlined in this plan of management.
- * The wire on internal paddock fences will be removed where the fences are a hazard to wildlife. Corner posts, strainers and posts will be retained for historical purposes.
- * Liaison will be maintained with the State Rail Authority and Cobar Shire Council to ensure that road and track maintenance is sympathetic to the conservation values of the reserves.
- * The operation of the gravel pit on Yathong Nature will be subject to a gravel quarry management plan which will include conditions to minimise the environmental impact of extraction operations.

5. PLAN IMPLEMENTATION

This plan of management is part of a system of management developed by the National Parks and Wildlife Service. The system includes the National Parks and Wildlife Act, management policies, established conservation and recreation philosophies, and strategic planning at corporate, regional and district levels.

The orderly implementation of this plan will be undertaken within the annual programs of the Service's Griffith and Cobar Districts. Priorities, determined in the context of district and regional strategic planning, will be subject to the availability of necessary staff and funds and to any special requirements of the Director-General or Minister.

District programs are subject to ongoing review, within which, works and other activities carried out at Yathong, Nombinnie and Round Hill Nature Reserves are evaluated in relation to the objectives laid out in this plan.

The environmental impact of all development proposals will continue to be assessed at all stages of development and any necessary investigations undertaken in accordance with established environmental assessment procedures.

Section 81 of the Act requires that this plan shall be carried out and given effect to, and that no operations shall be undertaken in relation to the nature reserves unless they are in accordance with the plan. If after adequate investigation, however, operations not included in the plan are found to be justified, this plan may be amended in accordance with section 76(6) of the Act.

As a guide to the orderly implementation of this plan, relative priorities for identified activities are summarised below:

Activity	Plan ref
High Priority	
* Resolve undedicated lands issue and add land to nature reserve	2.2.1
* Control boxthorn, Bathurst burr and galvanised burr	4.1.2
* Fence strategic ground tanks, monitor effects of decommissioning	4.1.3
* Record tanks not to be maintained	4.1.3
* Encourage fencing of tanks maintained by other authorities	4.1.3
* Control foxes in malleefowl release area	4.1.3
* Prepare and implement introduced animal species control plan.	4.1.3
* Prepare fire management plan	4.1.4
* Maintain fire records	4.1.4
* Place concrete water tanks	4.1.4
* Stabilise Yathong cookhouse oven	4.2.2
* Maintain management facilities and tracks	4.3.3

- * Liaise with SRA and Council 4.3.3

Moderate Priority

- * Rehabilitate erosion gullies in Yathong 4.1.1
- * Monitor vegetation changes 4.1.2
- * Investigate use of artesian bores 4.1.3
- * Undertake recording of Aboriginal oral tradition 4.2.1
- * Maintain historically significant buildings 4.2.2
- * Prepare and distribute research prospectus 4.3.2
- * Licence gravel extraction by Cobar Council 4.3.3

Low Priority

- * Erect information boards 4.3.1
- * Remove internal fencing wire 4.3.3

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ADVISORY COUNCIL REPORT
YATHONG, NOMBINNIE AND ROUND HILL NATURE RESERVES
PLAN OF MANAGEMENT

**YATHONG NATURE RESERVE, NOMBINNIE NATURE RESERVE AND ROUND
HILL NATURE RESERVE PLAN OF MANAGEMENT**

**SCHEDULE OF SUBMISSIONS RECEIVED DURING PUBLIC EXHIBITION OF
THE PLAN**

1. John Brickhill; Naturalist Griffith District NPWS.
2. Geographical Names Board.
3. Tom Fox; Environmental Policy Division.
4. Simon Leonard "Tocobil" Hillston.
5. Regional Manager; Soil Conservation Service.
6. "Fighters For Survival" (Marie Forsyth, "Stanifords").
7. R A Vagg; "Wing Ring" (President Mallee Bushfire Prevention Scheme).
8. Forsyth Family; Stanifords.
9. National Parks Association.
10. Hillston Rural Lands Protection Board.
11. Peter Thompson; Wester Heritage Group Inc., Wilcannia.
12. Griffith District Advisory Committee.
13. Australian Museum
14. Council of the Shire of Cobar.
15. J P and D M Costello "Stobhall", via Hillston.
16. Milthorpe Pastoral Company, Hillston.
17. Shire of Carathool.

YATHONG NATURE RESERVE, NOMBINNIE NATURE RESERVE AND ROUND HILL NATURE RESERVE PLAN OF MANAGEMENT

SUMMARY OF SUBMISSIONS

1. John Brickhill; Naturalist Griffith District NPWS

- 1.1 Argues that ground tanks proposed to be “destroyed” are cultural sites and should be preserved. Proposes that the aim of removing the tanks can be achieved by rendering the catchdrains ineffective so they do not catch water.
- 1.2 Updates and corrects a number of scientific names for native and non-native plants:
 - rosewood is *Alectryon deifolius*
 - kurrajong is *Brachychiton populneus*
 - broombush is *Melaleuca uncinata*
 - porcupine grass is *Triodia scariosa*
 - galvanised burr is *Sclerolaena birchii*; and
 - Patersons curse is *Echium plantagineum*.

2. Geographical Names Board

- 2.1 Points out that the name “Homestead Creek” on page 18 is not a geographic name. Suggests that if the Services wishes to continue to use that name then it should be registered with the Geographic Names Board. The Board enclosed some forms for that purpose.

3. Tom Fox; NPWS Environmental Policy Division

- 3.1 Add to the statement of significance a recognition that the “reserves collectively are one of the very few protected areas big enough to be likely to withstand stochastic happenings in the long term.”(ie major fires etc?)
- 3.2 Add a further policy that the Service will seek to impose conditions on any mining exploration that might occur in the undedicated lands subject to the plan.
- 3.3 Identifies 4 minor suggestions for the map.
- 3.4 Suggests removal of tanks be phased in.
- 3.5 Third action, page 18; use of the word “strip” in two different senses is misleading.
- 3.6 The plan should discuss pros and cons of wilderness declaration as wilderness is obliquely referred to. Does not support declaration, however.
- 3.7 The text of the plan notes that rabbit and fox control are to be “integrated and coordinated”. It follows that they should both be of the same priority, preferably high priority.

4. Simon Leonard “Tocobil” Hillston 15. J P and D M Costello `Stobhall`, via Hillston, 16. Milthorpe Pastoral Company, Hillston

- 4.1 The Act should be changed to provide that plans of management are referred to neighbours for comment.

- 4.2 A committee of three should be elected to ensure that the plan of management is carried out.
- 4.3 There are 'big clumps of belah in Nombinnie Nature Reserve which are not in other areas of the state'.
- 4.4 Quondong is common throughout the mallee.
- 4.5 Galvanised burr is a native of the country; it is not an introduced plant.
- 4.6 Rabbits during the period 1890 to the 1950's were responsible for overgrazing and lack of regeneration of the land.
- 4.7 Fox, cat and pig control is required "all the year round".
- 4.8 Argues that there should be at least three tanks maintained on Nombinnie and two bores on Lysmoyle to provide water for wildlife and for fire fighting. Goat traps can also be established at watering points.
- 4.9 Maintenance work should be carried out on all fire trails in Spring. All dry timber should be "burnt or raked back for a distance of 50m from the boundary trails".
- 4.10 Prescribed burning should be carried out in woodland and a 30m strip of mallee should be chained as a break during fire.
- 4.11 Is the Service's policy to stop fires or let them burn?
- 4.12 Extend the fire break which exists from Mount Hope to Nombinnie homestead southwards "to cut the Reserve down the middle". The extension of the fire break to be a zigzag configuration to "stop wind blowing up the trail".
- 4.13 Lysmoyle was not a soldier settlers block; it was settled before that time.

4.14 Provides a reworked plan implementation table:

High Priority

- rabbit control
- fox, cat control
- prepare fire management plan
- create Mt. Hope road fire break
- create (boundary?) fire breaks clear of timber

Ongoing

- control boxthorn and Bathurst burr
- control goats and pigs
- maintain fire records

Delete

- Destroy ground tanks
- place concrete water tanks

4.15 Two workmen should be stationed at Nombinnie at all times. Houses should be built for them.

5. Regional Manager; Soil Conservation Service

- 5.1 Strongly supports control of rabbits. Urges that control of other herbivores be undertaken, particularly goats, as part of a total grazing management programme.
- 5.2 Is concerned about the fire management prescriptions which acknowledge that fire frequency is too high but that most fires are started by lightning. A patch burn programme would seem to be necessary to limit the spread of lightning fires.
- 5.3 Doubts that seed reserves are depleted or non-existent but accepts that species composition may have changed.
- 5.4 Doubts "that the woodland Communities had much denser tree and shrub layers" (page 12 of the draft plan). Cites evidence from the 1901 Royal Commission on the Western Division.

6. "Fighters For Survival" (Marie Forsyth, "Stanifords")

- 6.1 Objects to closure of watering points since this results in native animals coming onto neighbouring properties, competing with domestic stock and fouling water.
- 6.2 The Service should be providing additional watering points for the benefit of native wildlife.
- 6.3 Seeks to be informed of any "birds animals and reptiles which have been introduced and requests that adjoining landholders are notified any time species are introduced from other areas." (page 26 refers)

7. R A Vagg; "Wing Ring" (President Mallee Bushfire Prevention Scheme)

- 7.1 Represents the Mallee Bushfire Association and argues that the maintenance of as many watering points as possible is required for firefighting purposes. Objects to the non-maintenance of ground tanks.

8. Forsyth Family; Stanifords

- 8.1 Objects to proposals to “fill in and fence off dams”.
- 8.2 Suggests a kangaroo proof fence around reserve.
- 8.3 Seeks to be informed of any “birds animals and reptiles (which) have been introduced and request that adjoining landholders are notified any time species are introduced from other areas.” (page 26 refers)

9. National Parks Association

- 9.1 Amend Act to require public exhibition of plans of management for nature reserves.
- 9.2 Seeks “speedy resolution” of the dedication of the lands objected to by the Department of Mineral Resources.
- 9.3 Supports prohibition of mining and mining exploration.
- 9.4 Identifies nine places which should be shown on the map.
- 9.5 The proposed fire break along the Mt. Hope road should be shown on the map.
- 9.6 Strongly supports policy on prohibition on beekeeping. This policy should be extended to other Service areas.
- 9.7 Supports actions for the control of weeds. Seeks more detail about methods used.
- 9.8 Supports actions for the control of feral animals. Seeks more detail about methods. Feral dogs should be mentioned.
- 9.9 Supports proposals for fencing and “draining” tanks, but emphasises that a public relations approach will be necessary to explain the programme.
- 9.10 Generally supports statement on fire management subject to:
 - full explanation of location of the proposed fire break along the Mt. Hope road;
 - elaboration of the policy that “research will be encouraged ... into fire”;
and
 - provision a timeframe for completion of the fire management plan and provision for public input.
- 9.11 Elaborate on the management of Aboriginal sites after protection works are carried out. Will they be available for public viewing?
- 9.12 Generally supports statements in the text re public use subject to the following proposed amendments:
 - management of the area as a “quasi-wilderness”;
 - providing information on the three tanks named for camping; and
 - providing location and status information on alternative camping opportunities e.g. in Yathong State Forest and adjacent timber reserve.

- 9.13 Amend the 4th star, page 24 to read “ ... survey of fauna **and flora** in the reserves.”
- 9.14 Amend the 7th star page 24 to provide that the quarters be available for use by not only researchers but other interested individuals and groups carrying out wildlife observation.
- 9.15 The plan needs to elaborate on the question of perimeter fencing. Is fencing needed on boundaries with unstocked land to prevent stock entering from other areas? Should be made clear that fencing does not exclude smaller animals such as foxes. Perhaps these should also be fenced out.
- 9.16 Amend the Plan Implementation Table to provide for the following high priority actions:
- control of goats and pigs;
 - control of foxes;
 - monitor vegetation changes; and
 - monitor introduced animals.
- 9.17 NPA objects to the “Americanism” trail. If used by vehicles these should be called roads. Term tracks should refer only to foot tracks.

10. Hillston Rural Lands Protection Board

- 10.1 Objects to decommissioning of watering points and proposes that the tanks be fenced by a six foot wire fence to prevent feral and native animals watering. “The watering points are essential in the time of National Disasters such as Bushfires and Droughts.”

11. Peter Thompson; Western Heritage Group Inc., Wilcannia.

- 11.1 The plan should acknowledge the particular groups of Aboriginal people with an association with the three nature reserves. Details of these associations provided.
- 11.2 These associations amount to “native title rights and interests”.
- 11.3 The main Aboriginal right to be acknowledged is for access to “allow hunting, food gathering, camping, visiting places of cultural importance, holding ceremonies and other traditional activities which can co-exist with or enhance nature conservation.”
- 11.4 The location of Aboriginal sites should not be publicised without the consent of the Aboriginal community.
- 11.5 Provide basic facilities for educational and cultural use of the nature reserves by Aboriginal people.
- 11.6 Aboriginal people have traditions and skills which are important for achieving the nature conservation objectives of the nature reserves.
- 11.7 Involve Aborigines in contract work.
- 11.8 The three nature reserves should be managed by one Service district office to simplify negotiations and relations between Aboriginal people and the Service.

- 11.9 A formal arrangement should be set up and financed to provide for Aboriginal negotiation with NPWS about management.
- 11.10 Negotiate a “Joint Management Agreement” with Aboriginal groups and the Service over the management of this land.
- 11.11 “Aboriginal Cultural survival” should be a specific objective of management for these nature reserves.

12. Griffith District Advisory Committee

- 12.1 Greatest concern of neighbours is the increasing numbers of goats, pigs and foxes in the reserves and inability to enter the reserves to trap, shoot or poison. A full time staff member is needed for feral animal control.
- 12.2 Community is concerned about removal of tanks and does not accept Service views on the advantages of this.
- 12.3 Increase neighbour access to help from Service staff and equipment for fire fighting.
- 12.4 The Act be amended to require that all plans of management for nature reserves be referred to neighbours.
- 12.5 Objects to policy that “Prescribed burning may be used where appropriate and will generally be timed to approximate the desirable natural fire cycle”. Appears to indicated that this will be insufficient to prevent wildfires.
- 12.6 Extend the fire break which exists from Mount Hope to Nombinnie homestead southwards “to cut the Reserve down the middle”. The extension of the fire break to be a zigzag configuration to “stop wind blowing up the trail”.

13. Australian Museum

- 13.1 Concern that the description of fauna is too *ad hoc*. The reasons for listing the animals which are so listed needs to be clear. Does it highlight a comparative lack of information on the native animals of the reserves? Need to describe species which are threatened or have special management requirements.
- 13.2 Provides additional references on native animals.
- 13.3 Plan should provide for scientifically designed fauna survey.
- 13.4 Doubts wisdom of the re-introduction of mallee fowl to Yathong Nature Reserve as an objective of management for the reserve. The high profile of the mallee fowl project may cause neglect of other endangered species. More appropriate to use resources to restore habitats and mitigate threats such as feral animals. Plan must ensure rabbit control is concurrent with fox control in mallee fowl research areas.
- 13.5 Are action statements required re rehabilitating areas subject to accelerated erosion?
- 13.6 Generally supports the sub-section on fire management. However points out an inconsistency whereby the plan claims that post European fire frequency is higher than pre-European fire frequency when most fires are started by lightning.

- 13.7 The Museum presumes that there will be a cost-benefit assessment made of installing and maintaining concrete water tanks for fire control.
- 13.8 There should be an integrated pest animal control programme, not just for rabbits. Implementation of the control plan should be an action.
- 13.9 Elaborate on existing and proposed pest species control methods.
- 13.10 Goat control is not working. "Surely control activities should be scaled up or alternative methods used."
- 13.11 Supports limiting access of wildlife to watering points but expresses concern that any natural water holes would be subsequently subject to additional pressure. Any such natural water holes will need to be monitored.
- 13.12 Elaborate on introduced species monitoring. A program is needed.
- 13.13 Common native fauna should also be monitored. Management activities are likely to have an impact on the fauna which in turn will have an impact on the vegetation.
- 13.14 Before removing existing internal fencing, ensure that the fencing is not required for wildlife management or other conservation purposes.
- 13.15 Circulate the research prospectus. Include in the Plan Implementation Table.
- 13.16 The Plan Implementation Table should include more rigorous deadlines.
- 13.17 Any actions require performance indicators. Alternatively the plan should specify that all actions will be completed within a certain time limit.

14. Council of the Shire of Cobar.

- 14.1 Points out that Council uses two gravel pits in Yathong Nature Reserve and Round Hill Nature Reserve for road maintenance "on an irregular basis (average one week per year)" and that the plan policy about extraction would prevent this.
- 14.2 Seeks an assurance that the plan will not inhibit Council's existing responsibilities for the maintenance of public roads.
- 14.3 Argues that ground tanks are required for road maintenance and fire fighting purposes.
- 14.4 Suggests that the cost of providing concrete tanks in lieu of ground tanks for fire fighting purposes should be reallocated to fencing and improving the existing ground tanks for this purpose.
- 14.5 Points out that the policy of maintaining a cleared break of fifty metres beside the Mount Hope Road for fire control purposes should also be applied to road SR12 through Yathong Nature Reserve. A cleared break of 25 metres each side of the road is suggested.
- 14.6 The input of the Mallee Bushfire Prevention Scheme should be sought when preparing the fire management plan for the reserves.
- 14.7 The plan of management should specify how pest animals will be controlled.

15. and 16. See 4.

17. Shire of Carathool.

17.1 Objects to closure of tanks.

17.2 Concerned about prohibition of heavy machinery off road in the event of a wildfire. Protection of whole community should have priority over protection of reserve.

**YATHONG NATURE RESERVE, NOMBINNIE NATURE RESERVE AND ROUND
HILL NATURE RESERVE PLAN OF MANAGEMENT**

SCHEDULE OF ISSUES RAISED IN THE SUBMISSIONS

1. Statement of Significance.
2. Native Vegetation.
3. Feral Animals and Weeds.
4. Fire Management.
5. Watering Points.
6. History.
7. Aboriginal Sites and Aboriginal Involvement in Management.
8. Public Use.
9. Research and Monitoring.
10. Management Operations.
11. Fencing.
12. Plan Implementation.
13. Map.
14. Editorial.
15. Amend the Act.
16. Mineral Exploration and Mining.
17. Erosion.

ISSUE: 1 Statement of Significance

PLAN REFERENCES: 2.2.2

SUBMISSION REFERENCES: 3.1

SUMMARY:

Tom Fox comments that the statement of significance should acknowledge that the “reserves collectively are one of the very few protected areas big enough to be likely to withstand stochastic happenings in the long term.”

DISCUSSION:

“Stochastic” is defined in the Macquarie Dictionary as an adjective “based on one item in the probability distribution of an ordered set of observations; conjectural.” The term would probably be used in the context of statistical analysis of biological data. It does not sit easily in a plan of management.

Page 4 of the plan states that:

‘The reserves are of sufficient size to be considered resistant to permanent damage by drought and fire. The small size of the other central NSW mallee nature reserves severely reduces their viability. It is only in large areas that many of the rarer plants and animals can be conserved.’

SERVICE RECOMMENDATION:

No change to plan.

ADVISORY COUNCIL RECOMMENDATION:

Service recommendation endorsed

ISSUE: 2 Native Plants and Animals

PLAN REFERENCES: 2.2.2, 4.1.2

SUBMISSION REFERENCES: 4.3, 4.4, 4.6, 5.3, 5.4, 13.1, 13.2, 13.4, 13.13

SUMMARY:

One submission stated that there are unusually big clumps of belah in Nombinie, that quondong is common throughout the mallee and that rabbits during 1890 to 1950's were responsible for overgrazing of the land.

The Soil Conservation Service doubted that seed reserves are depleted and that the woodland communities had much denser tree and shrub layers prior to European settlement (page 12 of draft plan).

The Australian Museum thinks that the description of animals occurring is too *ad hoc*. It considers that species of conservation concern should be listed rather than common species.

The Museum also doubted the wisdom of re-introduction of malleefowl to Yathong as an object of management, considering that it may cause neglect of other endangered species. The Museum thought it would be more appropriate to restore habitats and mitigate threats such as feral animals, and pointed out that rabbit control must be concurrent with fox control in malleefowl research areas.

DISCUSSION:

The presence of big clumps of belah and of quondong on the reserves is not unusual and should not be highlighted in the plan.

The plan acknowledges the past and on-going effect of rabbits on the vegetation of the reserves. Clearing, sheep grazing and frequent burning also had significant impacts, however.

The statements by the Soil Conservation Service appear to be based on evidence from elsewhere. After more than 130 years of clearing and grazing at Yathong it is extremely likely that seed sources have been depleted and that there are fewer trees and shrubs than formerly. The woodlands in most parts of the reserve are very open, with large areas devoid of trees and shrubs.

The plan lists (sections 2.2.2 and 4.1.3) both commonly occurring species and endangered species and discusses the conservation needs of the entire range of native animals occurring in the reserves. The policies give priority to both endangered fauna and those more common species which depend upon the habitats of the reserve.

It is agreed that perhaps malleefowl re-introduction should not be an objective of management of the reserve. Rather, it is part of management of that species on a state-wide basis. The plan includes a number of programs designed to restore habitats and mitigate threats to all native animals. It also states the need to control foxes and rabbits concurrently and provides for a rabbit control program. Rabbit control is not explicitly provided for in the malleefowl research area, however.

SERVICE RECOMMENDATION:

1. Delete objective section 3.2 regarding malleefowl re-introduction.
2. Insert 'and rabbit' after the first word in action 1 section 4.1.3.

ADVISORY COUNCIL RECOMMENDATION:

Service recommendation No. 1 not endorsed (i.e. the objective of management concerning mallee fowl not to be deleted)

Service recommendation No. 2 endorsed.

ISSUE: 3**Feral Animals and Weeds****PLAN REFERENCES:** 4.1.2, 4.1.3**SUBMISSION REFERENCES:** 4.5, 4.7, 5.1, 6.3, 8.3, 9.6-9.8, 12.1, 13.8-13.10, 13.2
14.7**SUMMARY:**

One submission pointed out that galvanised burr is a native plant, not introduced. The same submission stated that fox, cat and pig control is required 'all the year round'.

The Soil Conservation Service strongly supported rabbit control and urged that control of other herbivores, particularly goats, be undertaken as part of a total grazing management program.

Two submissions from landholders asked to be informed about introduction of animals from other areas (referring to p 26).

The NPA strongly supported the plan's provisions for prohibition of bee keeping and control of weeds and feral animals. It wanted the policy about bee keeping extended to other Service areas and inclusion of more detail about introduced species control methods in the plan. The NPA also suggested that feral dogs be mentioned.

Griffith District Advisory Committee expressed the concern of neighbours about increasing numbers of goats, pigs and foxes in the reserves and considered that a full time staff member is needed for control.

The Australian Museum suggested an integrated pest animal control program, not just for rabbits. It wanted more detail about control methods and was concerned that goat control is not working. The Museum also wanted more detail about monitoring of introduced species with provision for a formal monitoring program.

Cobar Shire Council wanted the plan to specify pest animal control methods.

DISCUSSION:

Galvanised burr is a native plant although there are indications that it was not previously common (or did not occur) in the area. The plan should be amended to reflect its native status.

The term 'introduced animals' in the plan refers to non-native species. The apparent confusion in two submissions would be avoided by making the statement on p 26 clearer.

It is Service policy that bee keeping not be allowed.

Feral dogs do not occur in significant numbers or have noticeable impact.

The plan of management cannot provide for additional staff.

The plan states that vegetation recovery is inhibited by grazing of rabbits, goats and kangaroos. It is not considered that kangaroo control is needed at this stage. Progressive reduction in access to artificial watering points (Issue 5) is expected to reduce numbers.

It is agreed that preparation of an integrated introduced animal control program (rather than a grazing management program) would be the best approach and that improved goat control is needed. The control program should include monitoring.

Details about methods are not provided for any programs in the plan of management and are more appropriately located in subsidiary plans such as an introduced species program.

SERVICE RECOMMENDATION:

1. Replace 'Introduced species' with 'Weeds occurring' in last paragraph p12.
2. Add new sentence at end of paragraph 4, p12.
'Rabbit, goat and fox control are provided for in section 4.1.3.'
3. Delete action 2, section 4.1.2.
4. Delete second sentence, action 1 section 4.1.3.
5. Delete action 2 and 4 section 4.1.3.
6. Add a new action to section 4.1.3 stating that an introduced animal species control plan will be prepared which provides for integrated rabbit, goat, fox, cat and pig control programs and monitoring of impacts and effectiveness. Incorporate first action statement from section 4.1.2 into this new action.
7. Revise section 5 in accordance with the above changes.

ADVISORY COUNCIL RECOMMENDATION:

Service recommendation endorsed.

The sub-committee also recommends that:

- the now standard paragraph re Noxious Weeds Act be added at the bottom on page 12 of the draft plan of management:

'The Noxious Weeds Act 1993 took effect from 1st July 1993. The Act places an obligation upon public authorities to control noxious weeds on land that it occupies to the extent necessary to prevent such weeds spreading to adjoining lands. The recent supplementation of government funding for weed control programs by the Service will permit increased priority being given to weed control programs in the three areas. In addition to weeds identified under the Noxious Weeds Act, the Service controls other plants considered to be weeds where these have an unacceptable environmental impact.'
- The plan acknowledge that galvanised burr, although a native plant, is declared noxious and that under the Noxious Weeds Act the Service has an obligation to ensure that noxious weeds do not spread onto neighbouring lands.
- 'Galvanised burr' be deleted from the first sentence of the last paragraph on page 12 of the draft plan (it is not an introduced species).
- A new '-' be added to the first policy on page 13:

- ‘ - plants declared to be noxious under the Noxious Weeds Act will be controlled to the extent necessary to prevent such weeds spreading to adjoining lands.’
- Add ‘and galvanised burr as necessary’ to the second program in the Plan Implementation Table.

Note: Galvanised burr, not galvinised burr

ISSUE: 4**Fire Management****PLAN REFERENCES: 4.1.4**

SUBMISSION REFERENCES: 4.9-4.12, 5.2, 9.10, 12.3, 12.5, 12.6, 13.6, 14.5, 14.6, 17.2

SUMMARY:

One submission urged maintenance of fire trails and suggested burning of all dry timber for a distance of 50m from boundary trails. It also recommended prescribed burning in pine country, chaining of a 30m strip of mallee as a fire break during fire control and extension of the Mount Hope - Nombinnie homestead fire break to the southern boundary. The submission asked whether it is Service policy to stop fires or let them burn.

The Soil Conservation Service expressed concern that fire frequency is too high yet most fires are started by lightning, and suggested a patch burn program.

The NPA supported the fire management section subject to:

- full explanation of location of the proposed fire break along the Mt. Hope road;
- elaboration of the policy that “research will be encouraged ... into fire”;
and
- provision of a timeframe for completion of the fire management plan and provision for public input.

Griffith District Advisory Committee recommended increased neighbour access to fire fighting assistance and equipment. The Committee thought that the policy about timing of prescribed burning to approximate the desirable natural fire cycle would be insufficient to prevent wildfires. It also recommended extension of the Mount Hope - Nombinnie homestead fire break to the southern boundary.

The Australian Museum pointed out the confusion in saying that recent fire frequency is too high (presumably higher than pre-European frequency) when most fires are started by lightning.

Cobar Shire Council recommended a 50m fire break along road SR12 through Yathong as for the proposed break beside the Mount Hope Road. It also said that the input of the Mallee Bushfire Prevention Scheme should be sought when preparing the fire management plan.

Carathool Shire Council was concerned that the plan prohibits heavy machinery off road in the event of a wildfire.

DISCUSSION:

Fire trails are maintained as necessary and the plan clearly states (policy 3) that all wildfires will be suppressed and restricted to as small an area as possible.

Timber has been recently cleared to a distance of 30m from boundary trails. This distance is considered adequate. A wider clearing would involve additional environmental impacts such as erosion resulting from clearing operations.

Chaining of a 30 m strip of mallee during fire suppression would have long term environmental impact and leave fuel on the ground. It may also be ineffective because of the likelihood of high intensity mallee fires spotting over the break. Back burning from a trail is a more effective method.

A 50m wide fire break has recently been constructed along the Mount Hope Road and this action can be deleted from the plan. The firebreak should be mentioned in the text. Notation on the map is not considered necessary. The purpose of the break is to cope with the high flame height and rapid spread of fire in mallee. Shire Road 12 passes through pine and eucalypt woodland.

The area of Nombinnie south of the homestead has a western boundary trail and is broken by several east west trails and a railway line. There are large blocks between tracks, however, and the area is considered to have high natural values for this reason. The existing firebreaks and trails provide adequate fire control lines. Other routes may be opened if necessary during fire suppression.

It is not clear why fires have been more frequent in recent years. It has been suggested that the incidence of fire on individual areas is more frequent because of the practice of back burning large areas for fire suppression. It is also possible that previously Aboriginal burning of woodland prevented fire from travelling to disjunct areas of mallee. The wide fire breaks recently constructed may reduce fire spread onto and within the reserves.

Prescribed burning in mallee is not appropriate because of the great difficulty of controlling fire once started. It is considered unlikely that Aboriginal people carried out patch burning in mallee for the same reason. This is supported by the fact that no Aboriginal sites have been found in the mallee. The mallee of the reserves lacks natural features such as sand dunes which could act as fire breaks.

Prescribed burning in pine woodland is not currently desirable in many areas because of the need to encourage regeneration of areas degraded by clearing and overgrazing. As a longer term means of creating habitat diversity and reducing the likelihood of large wildfires it may be appropriate. Some rewording of the plan is needed to make the reasons for prescribed burning clear.

The questions of how fire research will be financed and who will undertake it will depend upon the availability of staff and finances and proposals for wider research programs. More detail cannot be included in the plan.

The Service is a member of the Mallee Bushfire Prevention Scheme and this will be incorporated into the fire management plan. It is Service policy to publicly exhibit fire management plans for comment. The timing of the plan preparation cannot be predicted accurately. It will be part of state wide priorities to be developed.

Neighbour access to fire fighting staff and equipment will depend upon a number of matters and is more appropriately included in the fire management plan.

The plan does not prohibit use of heavy equipment off existing tracks but says this will be avoided where possible (policy 7). This is considered a responsible policy given the Service's mandate to conserve habitat, rare plants, Aboriginal sites etc.

SERVICE RECOMMENDATION:

1. Insert a new second sentence in paragraph 5 p16:

`This may be at least partly because of the use of large back burns during fire suppression operations.'

2. Replace first sentence top of p 17 with:

`Wide boundary firebreaks are maintained around the reserves and along the Mount Hope Road adjacent to a large area of mallee. Public roads and fire trails divide the reserve area into blocks.'

Delete action 3 section 4.1.4. Transfer first sentence paragraph 2 p 17 to the beginning of previous paragraph. Delete remainder of paragraph 2.

Add `and the Mount Hope Road' to policy 5.

3. Amend last paragraph section 4.1.4 to read as follows:

Prescribed burning is inappropriate in the reserves on a large scale because of the high level of predation of seedlings and rapid regeneration of fire carrying understorey, with risk of subsequent wildfire after a short interval. Prescribed burning could also set back regeneration of areas disturbed by past clearing and grazing. Prescribed burning is difficult to manage as it must be carried out when fuel is plentiful after winter rains and when the conditions are sufficiently dry, but not so far into summer as to result in a major fire. It is particularly difficult and risky in mallee. Patch burning of woodland areas may be appropriate once they have recovered to a more natural condition, in order to produce habitat diversity and reduce the risk of extensive wildfire.

4. Replace policy 4 section 4.1.4 with:

`Prescribed burning may be used where appropriate, such as along fire breaks and to protect homestead precincts, and in the woodland areas to create habitat diversity and reduce the likelihood of wildfire burning large areas.'

ADVISORY COUNCIL RECOMMENDATION:

Service recommendation endorsed subject to:

- deletion of 'at least' from the first recommendation;
- addition of 'fire breaks' following 'Use of heavy machinery off existing' in the 7th policy in sub-section 4.1.4 **Fire Management** at the bottom page 17/top page 18 of the draft plan;
- redraft the third Service recommendation into point form; viz

'Prescribed burning on a large scale is inappropriate in mallee communities within these reserves for the following reasons:

- the high level of predation of seedlings;

- rapid initial regeneration of fire carrying understory with risk of subsequent wildfire after a short interval;
- retardation of regeneration of areas disturbed by past clearing and grazing; and
- difficulty of fire management and control during the limited period when fuel is plentiful after winter rains and when conditions are sufficiently dry but before summer when any fire is a major risk.

Prescribed burning of woodland communities may be appropriate to produce habitat diversity and reduce the risk of extensive wildfire once they have recovered to a more natural condition.'

- Redrafting of the last recommendation as follows:
 - 'To maintain diversity and reduce the likelihood of wildfire burning large areas, , prescribed burning may be used where appropriate, such as along fire breaks, to protect homestead precincts and in woodland areas.'
- Addition of the following to the end of the last policy in sub-section 4.1.4:
 - 'to determine the appropriate fire regime in order to maintain natural biodiversity.'

The policy will now read:

- '* Research will be encouraged into:
 - fire behaviour in mallee;
 - effects of fire on mallee vegetation and fauna and their fire management needs; and
 - fire effects in woodland communities
 to determine the appropriate fire regime in order to maintain natural biodiversity.'

ISSUE: 5**Watering Points****PLAN REFERENCES:** 4.1.3, 4.1.4**SUBMISSION REFERENCES:** 1.1, 3.4, 4.8, 6.11, 6.2, 7.1, 8.1, 9.9, 10.1, 12.2, 13.7, 13.11, 14.3, 14.4, 17.1**SUMMARY:**

John Brickhill, NPWS, argued that ground tanks are cultural sites and should not be destroyed. Instead the catch drains should be rendered ineffective.

Tom Fox, NPWS, suggested that tank removal be phased in.

Several representations objected to the closure of tanks, saying they were needed for wildlife, fire fighting and goat trapping and that animals would move onto neighbouring properties.

The National Parks Association supported tank closure but emphasised that a public relations approach will be necessary to explain the program.

The Australian Museum supported the proposal to reduce the number of watering points. The Museum, however, also pointed out that such a program may result in increased pressure on land surrounding natural water holes and that this should be monitored. The Museum suggested culling of excess animals that have been supported by unnaturally high water availability.

The Australian Museum suggested a cost benefit analysis of installing concrete water tanks and Cobar Council suggested fencing of ground tanks rather than provision of concrete tanks.

DISCUSSION:

The removal of artificial watering points has become policy in a number of plans of management for western reserves in order to reduce grazing pressure from artificially high numbers of kangaroos and avoid encouraging pigs and goats. Ground tanks also encourage mesic fauna to use arid and semi-arid areas and thus to compete with native animals which are adapted to dry conditions.

It is agreed that the proposal should be explained to neighbours but attempts so far have not resulted in neighbour acceptance.

Neighbour concerns about animals moving onto their properties and high pressure on natural watering places may be avoided by phasing in the reduction in artificial watering points. This could be achieved simply by not maintaining them. Many are currently in poor condition. Non-maintenance would also conserve the historic value of the tanks.

It is now considered that sufficient water for fire suppression cannot be held in concrete tanks and that it will be necessary to maintain some ground tanks in addition to those for domestic purposes. Concrete tanks have been found useful as well, however, during recent drought conditions.

SERVICE RECOMMENDATION:

1. Replace last sentence section 4.1.3 with:

‘Control of pigs and reduction in goat, fox and kangaroo numbers could be achieved by fencing of essential tanks and allowing the others to deteriorate to a

point where they no longer hold water. Such gradual reduction in artificial water sources would allow native animal populations to adjust to the new conditions and avoid having animals move from the reserves to neighbouring properties.'

2. Replace action 3 section 4.1.3 with:

'The Irymple and Yathong homestead tanks, Yathong shearers quarters tank and tanks considered strategically essential for fire management will be fenced to exclude goats, pigs, kangaroos and rabbits. All other tanks will not be maintained.'

ADVISORY COUNCIL RECOMMENDATION:

Service recommendation endorsed.

The sub-committee also recommends the following additional amendments:

- The addition of the following as new fourth, third and second last paragraphs in sub-section 4.1.3 '**Native and Introduced Animals**'

'The existence of (???) **districts to provide**) ground tanks in the three nature reserves has modified the ecological condition of the nature reserves. The tanks have an impact on both native and introduced animal species;

- they support some species of native animals at artificial levels which would not otherwise occur in the area. In particular these water points maintain high levels of grey kangaroos which move onto neighbouring properties;
- some native species which should occur are disadvantaged and displaced; and
- they support all species of introduced animals.

Closure or decommissioning of water tanks will lead in the moderate to long term to a reduction in grey kangaroo numbers on the nature reserves which will allow regeneration of native plant communities now subject to overgrazing.

In addition to the tanks which occur on the three nature reserves, a number of additional tanks, which are the responsibility of other authorities, are included within the external boundaries of the nature reserves.

- The inclusion of the following new policies:

'* The Service will encourage the fencing of water points located within the external boundaries of the three nature reserves which are maintained by other authorities.'

'* Tanks not required for management purposes will be recorded, decommissioned but not destroyed.'

'* Decommissioning of tanks will be progressive and in accordance with a program which will include monitoring of the impact of the program.'

‘* The Service will investigate the use of artesian bores as an alternative source of water for fire fighting and other management purposes.’

ISSUE: 6

History

PLAN REFERENCE: 4.2.2

SUBMISSION REFERENCE: 4.13, 15.13, 16.13

SUMMARY:

Three submissions pointed out that "Lysmoyle" was not a soldier settlers block; it was settled before the 1920's.

DISCUSSION:

It has not been determined exactly when Lysmoyle and Irymple were established. The plan suggests that they were `probably established by soldier settlement after world War I'. Given that local landholders may well have reliable information about this, it is recommended that the plan be altered.

SERVICE RECOMMENDATION:

Replace first sentence p 20 with:

`Glenlea' and `Nombinnie' were established by the Western Lands Commission at the turn of the century and `Lysmoyle' and `Irymple' were probably established soon after.

ADVISORY COUNCIL RECOMMENDATION:

Service recommendation endorsed

ISSUE: 7 Aboriginal Sites, Aboriginal Use and Involvement in Management

PLAN REFERENCES: 4.2.1

SUBMISSION REFERENCES: 9.11, 11.1 to 11.11

SUMMARY:

The NPA asked whether Aboriginal sites will be made available for public viewing after protection works have been undertaken.

The Western Heritage Group Inc. argued that a number of Aboriginal people have associations amounting to native title rights in the reserves. It submitted that the plan should provide for traditional Aboriginal use of the reserves (including provision of facilities) and involve Aboriginal people in management, both through contract work and formal joint management arrangements. The Group stated that Aboriginal people have skills which are important for achieving the nature conservation status of the reserves. It asked that 'Aboriginal Cultural survival' be a specific objective of management for the reserves.

The Group further stated that the location of Aboriginal sites should not be publicised without the consent of the Aboriginal community and that the reserves should be managed by one Service office to simplify relations with Aboriginal people.

DISCUSSION:

There are no intentions to provide for public viewing of Aboriginal sites in the reserves. The plan should reflect this. The plan currently provides for consultation with the Aboriginal community about site management but this could be expressed more strongly.

The issue of native title rights in the reserve is a legal matter and cannot be determined through the plan of management. Questions of traditional use and joint management of Service areas must be resolved on a state wide basis. Legislation has been before parliament for some time to allow Aboriginal ownership and joint management of certain areas but it is likely to be some time before any determination of whether this is appropriate in Yathong/Nombinnie/Round Hill.

As far as can be allowed under current legislation, it is agreed that Aboriginal people should be able to carry out activities such as education of their children and maintenance of cultural sites. Provision of facilities would not be appropriate under the current management emphasis on protection and enhancement of habitat values, with only very limited public use.

Collection of Aboriginal knowledge about traditional management could be valuable. This may be limited, however, given that the area was settled by Europeans in the 1860s.

Management of the reserves by two Service districts is a matter of logistics. It is inevitable that the community must deal with two or more offices (for other Service areas as well as the subject reserves), depending upon where district boundaries are drawn.

SERVICE RECOMMENDATION:

1. Insert the following new paragraphs at the beginning of section 4.2.1:

`The reserves are within the traditional lands of the southern Ngiyampaa and western Wiradjuri Aboriginal people. These people now have a major community at Murrin Bridge and also live at Lake Cargellico, Euabalong, Ivanhoe, Hillston, Cobar, Wilcannia, Griffith and elsewhere (letter from Western Heritage Group Inc. to NPWS)

The strong attachment of Aboriginal people to their land is slowly being acknowledged. Archaeological sites are important to Aboriginal communities as they are a testament to their culture's great antiquity. Aboriginal people may hold traditional knowledge which is important for nature conservation and may wish to be involved in management of reserves.'

2. Delete policy 5 section 4.2.1.

3. Replace policy 3 section 4.2.1 with:

`Relevant Local Aboriginal Land Councils and other Aboriginal community organisations will be consulted and actively involved in all aspects of management of Aboriginal sites.'

4. Add new policy to section 4.2.1:

`Aboriginal people with traditional ties to the area of the reserves will be permitted to carry out activities in the reserves related to education and maintenance of Aboriginal cultural sites. Prior arrangement will be necessary with the appropriate NPWS district manager.'

5. Add new action statement to section 4.2.1:

`A program of collection of oral tradition related to Aboriginal use and management of the area of the reserves will be undertaken.'

ADVISORY COUNCIL RECOMMENDATION:

Service recommendation endorsed.

The sub-committee also recognised that the submission from Peter Thompson raised important issues not directly addressed by the plan of management and resolved to recommend to the Advisory Council and the Director-General that the letter and these issues be referred to the relevant sections of the Service for consideration and response to Peter Thompson.

ISSUE: 8

Public Use

PLAN REFERENCES: 4.3.1

SUBMISSION REFERENCES: 3.6, 9.12

SUMMARY:

Tom Fox, NPWS noted that the plan refers obliquely to wilderness values and should discuss the pros and cons of declaration. He did not, however, support wilderness declaration.

The NPA supported allowing limited use for self reliant recreation provided that no facilities are built, ie the reserves be managed in accordance with wilderness principles.

The NPA wanted the plan to include information on the location and status of the three tanks named for camping and on alternative camping opportunities eg. in Yathong State Forest and timber reserve.

DISCUSSION:

The reserves, while containing large areas without internal tracks, are not considered to satisfy the criteria for wilderness. Their vegetation has been significantly modified by clearing, stock grazing and fire and they have only minimal appeal for walking other than along the Merrimerrriwa Range, which is close to roads.

Discussion in the plan about whether or not to declare a wilderness area is not considered appropriate when the area does not satisfy wilderness criteria and the objectives of management preclude encouragement of wilderness recreation. Minor alteration of the plan text is needed to make it clear that the area does not have high value for self-reliant recreation. Policy 6 section 4.3.1 states that no recreation facilities will be provided.

Whoey tank (in Round Hill Nature Reserve) was named in the plan as a camping site as it has been used by bird watching groups for many years. The tank has not held water for a very long time, however, and bird watching groups are now commonly camping at other locations. Eight Mile Tank is in Yathong Nature Reserve. It is now not considered appropriate to direct visitors there as it will either be fenced or not maintained. Reference to camping at tanks should be deleted from the plan.

Recreational walking and camping can be undertaken in Yathong State Forest, which covers the southern part of the Merrimerrriwa Range and has some attractive recreational features.

SERVICE RECOMMENDATION:

1. Amend paragraph 2 p22 to read:

`Parts of the reserves, particularly the Merrimerrriwa Range, are attractive and have some potential for remote area walking. Such use does not currently occur and is not encouraged. Limited use would not conflict with conservation but regular use of the same areas or use by large groups would cause damage from which the arid environment would be slow to recover. Adjacent Yathong State Forest, at the southern end of the Merrimerrriwa Range, is an attractive alternative location for walking and camping. During summer the heat, lack of water and the risk of fire preclude recreation use.

2. Delete policy 7 section 4.3.1.

3. Insert following new sentence at the beginning of policy 9:

`Visitors camping in the reserves will be required to use fuel stoves for cooking.'

ADVISORY COUNCIL RECOMMENDATION:

Service recommendations endorsed subject to deletion of the second sentence of the first recommendation. The recommended amendment now reads:

'Parts of the reserves, particularly the Merrimerrriwa Range, are attractive and have some potential for remote area walking. Such limited use would not conflict with conservation but regular use of the same areas by large groups would cause damage from which the arid environment would be slow to recover. Adjacent Yathong State Forest, at the southern end of the Merrimerrriwa Range is an attractive alternative location for walking and camping. During summer the heat, lack of water and the risk of fire preclude recreation use.'

ISSUE: 9**Research and Monitoring****PLAN REFERENCES:** 4.3.2**SUBMISSION REFERENCES:** 9.13, 9.14, 13.3, 13.13, 13.15**SUMMARY:**

The NPA suggested that the policy on p24 encouraging fauna survey by interested members of the community be amended to include flora survey. The NPA also considered that the Yathong shearers quarters should be made available to such people as well as to researchers.

The Australian Museum considered that the plan should provide for scientifically designed fauna survey to provide a comprehensive species list and information about the status/recovery of fauna as the vegetation communities regenerate.

The Museum also thought that the plan should specify circulation of the research prospectus to be prepared.

DISCUSSION:

The suggestion by the NPA that community groups be encouraged to survey plants as well as animals is sensible. It was intended that the shearers quarters be available for such groups and this should be made clear in the plan.

There is a reasonable degree of knowledge of which native animals occur in the reserves compared to what is known about many other Service areas. What is mainly needed is further research into their ecology and management needs. It would certainly be desirable to monitor fauna populations as suggested. At present, however, there is no outstanding need to carry out research or monitoring in the reserves and research priority must be determined on a state-wide basis. It is therefore not appropriate to include an action statement in the plan committing the Service to fauna research in the reserves.

It is agreed that the research prospectus should be circulated.

SERVICE RECOMMENDATION:

1. Amend policy 4 section 4.3.2 by replacing 'fauna' with 'wildlife'.
2. Amend policy 7 by adding 'students and community groups undertaking wildlife observation'.

ADVISORY COUNCIL RECOMMENDATION:

Service recommendation endorsed.

The sub-committee also recommends that the action relating to the prospectus provide for the monitoring of dam closures. The action will now read:

‘* A prospectus will be prepared ...to its management. This prospectus will include monitoring of dam closures.’

The monitoring of dam closures to be high priority.

ISSUE: 10

Management Operations

PLAN REFERENCES: 4.3.3

SUBMISSION REFERENCES: 4.15

SUMMARY:

The three identical submissions considered that two workmen should be stationed at Nombinnie at all times and that houses should be built for them.

DISCUSSION:

While stationing of extra staff on Nombinnie may be desirable, any such proposal must be determined on a district basis and cannot be done through the plan of management.

SERVICE RECOMMENDATION:

No change to the plan.

ADVISORY COUNCIL RECOMMENDATION:

Service recommendation endorsed.

ISSUE: 11**Fencing****PLAN REFERENCES:** 4.3.4**SUBMISSION REFERENCES:** 8.2, 9.15, 13.14**SUMMARY:**

A landholder suggested construction of a kangaroo proof fence around the reserves.

The NPA considered that the plan should provide more information about boundary fencing i.e whether it excludes smaller animals such as foxes, or whether this should be done, and whether fencing is needed on boundaries with unstocked land to prevent stock entering via these areas from elsewhere.

The Australian Museum said that before internal fencing is removed, the Service should ensure that it is not required for management purposes.

DISCUSSION:

Construction of a kangaroo or small animal proof fence around the reserves would not be practicable.

Any confusion about the type of boundary fencing could be eliminated by inserting 'stock-proof' in the text. Fencing of boundaries with unstocked land would be expensive and is not necessary.

It is agreed that consideration should be given to whether internal fencing is needed for management purposes.

SERVICE RECOMMENDATION:

1. Add 'to exclude stock' after 'fenced' in paragraph 3, section 4.3.4. Insert 'generally' before 'needed' in last sentence.
2. Add 'except where needed for management purposes' to policy 3, section 4.3.4.
3. Amend action 2 section 4.3.4 by inserting 'not needed for management purposes' after fencing.

ADVISORY COUNCIL RECOMMENDATION:

Service recommendation 1. endorsed.

Service recommendations 2. and 3. not endorsed. The sub-committee recommends:

- addition of the word 'paddock' before 'fences' in policy 3 at the top of page 25. The new policy will read:

‘* Internal paddock fences will not be maintained.’

and

- amend the 2nd action, page 25 to read:

‘* The wire on all internal paddock fences will be removed where they are a hazard to wildlife. Corner posts, strainers and posts will be retained for historical purposes.’

ISSUE: 12**Plan Implementation****PLAN REFERENCES:** Section 5**SUBMISSION REFERENCES:** 3.7, 4.2, 4.14, 9.16, 13.16, 13.17**SUMMARY:**

Tom Fox notes that the text of the plan says that rabbit and fox control are to be “integrated and co-ordinated”. It follows that they should both be of the same priority, preferably high priority.

The three identical submissions from landholders suggested that a committee of three be elected to ensure that the plan of management is carried out. These submissions also provided a reworked plan implementation table which:

- gave high priority to feral animal, weeds and fire control;
- emphasised that these control programmes needed to be “ongoing”; and
- recommended deletion of proposals to destroy ground tanks and replace them with concrete water tanks

The NPA recommend that the Plan Implementation Table be amended to provide for high priority actions for feral animal control and monitoring of vegetation and introduced animals.

The Australian Museum argued that the plan could be improved by including more specific performance indicators and a more rigorous timetable for implementation of actions. Alternatively the plan could have a “more specific lifespan and state that all actions will be completed within five years of publication of the plan”.

DISCUSSION:

The proposal that a committee of three be “elected to ensure that the plan be carried out is (theoretically) unnecessary for two reasons:

- the Act requires that it be carried out once adopted; and
- it is increasingly a responsibility of Advisory Committee’s to be more deeply involved in district management; in particular as a “Customer Council”. Advisory Committee’s do represent public (including neighbour) interests and ensuring that the plan be carried out is a reasonable interpretation of their role.

There is a strong concern represented in the submissions that feral animal, weed and fire control be given high priority. The recent resourcing package formalises the Service’s commitment to this strategy. The Plan Implementation Table should reflect this new priority. The distinction between “high” priority and “ongoing” in these projects is not helpful. The programmes listed should be high priority; whether they require constant attention (i.e. are “ongoing”) is not relevant.

The question of deleting the proposals to decommission the ground tanks and substitute concrete water tanks is handled in issue 5 Watering Points.

The inclusion of “more specific performance indicators and a more rigorous timetable for implementation of actions” is not appropriate given that:

- the Service is establishing a system of performance management which will operate at regional and district level; and
- because of the statutory constraints attached to a plan of management, the inclusion of unsubstantiated indicators based on limited knowledge and imperfect management systems is fraught with danger.

The suggestion that the plan could have a “more specific lifespan and state that all actions will be completed within five years of publication of the plan” is not appropriate for the same reasons.

SERVICE RECOMMENDATION:

Allocate the following projects to high priority:

- control boxthorn and Bathurst burr
- prepare and implement an introduced animal species control plan
- monitor vegetation changes
- prepare fire management plan
- maintain fire records

ADVISORY COUNCIL RECOMMENDATION:

Service recommendation endorsed.

The sub-committee also recommends that the classification ‘Ongoing’ be deleted from the Plan Implementation Table. The ongoing programs are proposed to be reallocated (in addition to those recommended by the Service) as follows:

Control goats and pigs	High
Monitor vegetation changes	Moderate (note this is a variation of the Service’s recommendation)
Monitor introduced animals	Moderate
Maintain management facilities and tracks	High
Liaise with State Rail Authority and local government	High

The sub-committee also recommends the inclusion of a further program in the Plan Implementation Table:

Resolve undedicated lands issue and add land to the nature reserve	High
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The sub-committee resolved to recommend to the Advisory Council that the issue of the lands acquired but not yet added to the Nombinnie Nature Reserve because of mining objections be drawn to the Minister’s attention with a recommendation that early action be taken to finalise the outstanding dedication of the lands as nature reserve.

ISSUE: 13**Map**

PLAN REFERENCES: Map, centre pages.

SUBMISSION REFERENCES: 3.3, 9.4, 9.5

SUMMARY:

Tom Fox suggested the following changes to the map:

- Add "Part" to Nombinnie Nature Reserve labels;
- identify as TSR the wide exclusion running along the road through the south-eastern corner of Yathong Nature Reserve;
- amend the legend to indicate that nature reserves are dedicated lands, not reserved lands; and
- clarify the status of the blocks of excluded land south of Matakana.

The NPA identified nine additions to the map:

- the Merrimerrriwa Range;
- Mount Nombinnie;
- Shepherds Hill;
- Keginni Creek;
- Lysmoyle;
- Round Hill;
- Whoey Tank;
- One-Eyed Governemnt Tank;
- 8-Mile Tank.

DISCUSSION:

Nombinnie Nature Reserve is in two parts, each of which is labelled on the map. Addition of 'Part' to the labels is not, however, considered necessary. The second and third of Tom Fox's comments are straightforward and are recommended. The lands included in the two exclusions are public watering places or freehold. The public watering places are held under tank lease by neighbours (understood to be Roto property). To all intents and purposes, the excluded lands are the same status as surrounding properties; that is leased or freehold land.

The nine additions to the map proposed by the NPA are supported except for the tanks, which are no longer to be referred to in the plan (Issue 5). Homestead Creek should also be shown.

SERVICE RECOMMENDATION:

1. Identify as TSR the wide exclusion running along the road through the south-eastern corner of Yathong Nature Reserve.
2. Amend the legend to indicate that nature reserves are dedicated lands, not reserved lands.
3. Add to the map the following places
 - the Merrimerrriwa Range;
 - Mount Nombinnie;
 - Shepherds Hill;
 - Keginni Creek;
 - Lysmoyle;
 - Round Hill;
 - Homestead Creek.

ADVISORY COUNCIL RECOMMENDATION:

Service recommendation endorsed subject to inclusion on the map of all dams/tanks proposed to be retained.

PLAN REFERENCES: Various**SUBMISSION REFERENCES:** 1.2, 2.1, 3.5, 9.17**SUMMARY:**

John Brickhill updated a number of scientific names for native and non-native plants:

- rosewood is now *Alectryon deifolius*
- kurrajong is now *Brachychiton populneus*
- broombush is now *Melaleuca uncinata*
- porcupine grass is now *Triodia scariosa*
- galvanised burr is now *Sclerolaena birchii*; and
- Patersons curse is now *Echium plantagineum*.

The Geographical Names Board pointed out that the name "Homestead Creek" on page 18 is not a geographic name. The Board suggested that if the Services wishes to continue to use that name then it should be registered with the Geographic Names Board.

Tom Fox suggested that the action in section 4.1.4 about creation of a cleared firebreak along the Mount Hope Road be amended. The use of the word "strip" with two different senses is misleading.

The NPA objected to the "Americanism" trail. If used by vehicles they are roads. If used by pedestrians they are tracks.

DISCUSSION:

The amendments by John Brickhill are supported. They are a matter of (recent) scientific fact.

The point raised by the Geographic Names Board is acknowledged. The plan is not proposed to be amended but the name "Homestead Creek" will be registered with the Board.

Tom Fox's point is acknowledged. As stated in Issue 4, however, the firebreak has now been constructed and it is proposed to delete the action statement.

The term "trail" has regulatory if not legal status and appears throughout regulation 7 of the National Parks and Wildlife (Land Management) Regulation which is concerned with the "Use of Vehicles, Vessels, Horses etc". Fire trails or management trails are terms that have been long used in the NSW national parks system and the term(s) appear on all signs regulating their use. To set the management planning process up as a review process for established (semi-legal) practice is not supported.

SERVICE RECOMMENDATION:

1. Amend as required on pages 10, 11 and 12 wherever occurring by deleting the existing scientific name and substituting the following for:
 - rosewood is *Alectryon deifolius*
 - kurrajong is *Brachychiton populneus*
 - broombush is *Melaleuca uncinata*
 - porcupine grass is *Triodia scariosa*
 - galvanised burr is *Sclerolaena birchii*; and

- Patersons curse is *Echium plantagineum*.

ADVISORY COUNCIL RECOMMENDATION:

Service recommendation endorsed.

Note: the species name of rosewood is '*oleifolius*'

ISSUE: 15

Amendment of the Act

PLAN REFERENCE: Introduction

SUBMISSION REFERENCES: 4.1, 9.1, 12.4

SUMMARY:

Each of these submissions picked up the point that exhibition of the plan was not a requirement of the Act. The neighbours of the nature reserve were in particular concerned that it should be a requirement that neighbours have a copy of the draft plan for comment.

DISCUSSION:

The Act does not require that plans of management for nature reserves be placed on public exhibition. The Service has, however, adopted the policy that all plans of management be placed on public exhibition.

The matter is not one to be resolved by the plan of management process and no amendment to the plan arises from these submissions.

SERVICE RECOMMENDATION:

No amendment to the plan of management.

ADVISORY COUNCIL RECOMMENDATION:

Service recommendation endorsed.

ISSUE: 16 Mineral Exploration, Mining and Gravel Extraction

PLAN REFERENCE: Sub-section 4.1.1

SUBMISSION REFERENCES: 3.2, 9.2, 9.3, 14.1, 14.2

SUMMARY:

Tom Fox recommends that a further policy that the Service will seek to impose conditions on any mining exploration that might occur in the undedicated lands subject to the plan be added on page 10.

The National Parks Association seeks “speedy resolution” of the dedication of the lands objected to by the Department of Mineral Resources.

The NPA specifically supports prohibition of mining and mining exploration (3rd policy, page 10).

Cobar Shire Council pointed out that the plan policy against gravel extraction would prevent its occasional use of two gravel pits in Yathong and Round Hill Nature Reserves for road maintenance and sought assurance that the plan would not inhibit its road maintenance responsibilities.

DISCUSSION:

The proposal by Tom Fox is a logical extension of the preceding policy on page 10 and is supported. The Government owns the land via the National Parks and Wildlife Act and the Service would expect to be extensively consulted on any proposed mining exploration. Presumably any mining that would follow would be subject to a full environmental impact statement.

The land has been subject to Department of Mineral Resources objections because of the mineral potential of the area. Until this potential is confirmed or otherwise, the department is not prepared to lift its objections to addition of the land to the national park. Resolution of this long standing difficulty is not a matter for the plan of management.

The gravel pits used by Cobar Shire Council predate reserve establishment. They are in fact used by the Service and infrequent use by Council is not opposed.

SERVICE RECOMMENDATION:

1. Add a new fourth policy on page 10:
 - * In the event of any mineral exploration on those lands acquired under the National Parks and Wildlife Act but which have yet to be added to Nombinnie Nature Reserve and which are subject to this plan of management, the Service will seek to have included in the mining or other right granted under the Mining Act conditions to protect the natural and cultural values of the area.”
2. Insert a new paragraph in section 4.3.4:

‘Gravel pits located on Yathong and Round Hill Nature Reserves are used by the Service and infrequently by Cobar Shire Council for road maintenance purposes. Formalisation of use by the Council is needed.’
2. Add new action to section 4.3.4:

A licence will be arranged for use of two existing gravel pits on Yathong and Round Hill Nature reserve by Cobar Shire Council. The licence will include conditions to minimise the environmental impact of extraction operations.

3. Replace policy 3 section 4.1.1 with:

‘Mining and exploration will not be permitted in the areas dedicated as nature reserve.’

ADVISORY COUNCIL RECOMMENDATION:

Service recommendation endorsed subject to:

- deletion of ‘Round Hill Nature Reserve’ from recommendations 2 and 3;
- the licence to be conditional upon;
 - * Cobar Council demonstrating that it had a prior right and use of the gravel resource;
 - * no alternative gravel source is available; and
 - * use is subject to a gravel extraction plan.
- the continued use of the gravel pit by Council is kept under review.
- addition of a new fourth paragraph in sub-section 4.3.4 **‘Management Operations’** incorporating the above which acknowledges the current position but also emphasises that the operation of gravel pits in nature reserves is inconsistent with the purpose of nature reserve dedication;

and

- addition of a statement in the Minister’s Foreword.also emphasising the purposes of nature reserve dedication and management.

ISSUE: 17

Erosion

PLAN REFERENCE: 4.1.1

SUBMISSION REFERENCE: 13.5

SUMMARY:

The Australian Museum referred to statements about erosion in the plan and asked whether action statements about rehabilitation are needed.

DISCUSSION:

The plan includes a policy providing for erosion control where necessary. Work is needed on the erosion gullies in Yathong Nature Reserve and this should be an action statement.

SERVICE RECOMMENDATION:

Add the following new action to section 4.1.2:

- * Work will be undertaken to stabilise and rehabilitate the erosion gullies in Yathong Nature Reserve.

ADVISORY COUNCIL RECOMMENDATION:

Service recommendation endorsed.

YATHONG NATURE RESERVE, NOMBINNIE NATURE RESERVE, ROUND HILL NATURE RESERVE DRAFT PLAN OF MANAGEMENT

FINANCIAL IMPACT STATEMENT

OVERVIEW

Yathong Nature Reserve and the north western part of Nombinnie Nature Reserve are managed by the Cobar District of the Service. Round Hill Nature Reserve and the remainder of Nombinnie are managed by the Service's Griffith District.

Cobar District

Cobar District received a total allocation of \$695,633 (excluding 001 salaries) during 1994-95. This comprised \$112,000 recurrent funds and \$583,633 capital works (including resource package funds).

Of the 1994-95 capital works funds \$80,000 was spent in Yathong or Nombinnie Nature Reserve.

The district has 15 permanent establishment staff positions and 1 temporary position.

It is estimated that Yathong and Nombinnie Nature Reserves absorb 10 % of the district's financial and staff resources.

Griffith District

Griffith District received a total allocation of \$372,915 (excluding 001 salaries) during 1994-95. This comprised \$190,000 recurrent funds and \$182,915 capital works (including resource package funds).

Of the 1994-95 funds \$42,000 was spent in Nombinnie or Round Hill Nature Reserve.

The district has 13.5 permanent establishment staff positions.

It is estimated that Nombinnie and Round Hill Nature Reserves absorb 6 % of the district's financial and staff resources.

All programs proposed in the plan of management are in accordance with the Service's Corporate Strategy.

STAFF RESOURCES

Two Cobar District field officers are located in Yathong Nature Reserve and are assisted by rangers from the district office (estimated at 0.2 of a persons time).

Three Griffith District Staff are involved in the management of Round Hill and the eastern part of Nombinnie Nature Reserve for part of their time. Implementation of the plan of management will not require additional staff.

REVENUE

The only revenue collected on the reserves is staff rental in Yathong Nature Reserve and an annual licence fee for a contract to remove goats. This amounts to \$2,500 annually.

PROGRAMS FUNDED BY RECURRENT FUNDS

On the basis of the estimated percentage of total district funds, \$22,600 of recurrent funds was allocated to the reserves for 1994-95. The majority of recurrent funds is spent on administration and maintenance.

Adoption of the plan of management will require funding of a number of minor programs partly from recurrent fund allocations. Capital works money will also be required to provide sufficient funds for these programs. The following are of high priority:

- control of boxthorn and Bathurst burr \$4,000
- control of goats, pigs, foxes and cats (undertaken each year) \$10,000
- maintenance of management facilities and tracks \$20,000

Several programs such as preparation of an introduced species control plan, preparation of a fire management plan, recording of historic tanks, preparing conservation assessments and liaison with other Departments require staff time only and will be undertaken as opportunities arise.

OTHER MANAGEMENT PROGRAMS

All other works proposed in the plan of management will require funding from capital works, Resource Package or other sources. For the purpose of preparing this financial impact statement these programs have been assessed on the following basis.

- Programs that need to be done in the immediate to near future on the basis that to not undertake these works will result in unacceptable degradation of the resource and/or greatly increased costs associated with rehabilitation at a later date. These programs will appear on the current three year capital works or Resources Package programs.
- Programs which are given high priority for legal and public safety reasons or in accordance with directions from the Minister or the Director-General.
- Programs that can be deferred without unacceptable loss of natural and/or cultural heritage values. These programs may appear on later three year capital works programs.
- Programs which are proposed to be funded as part of regional or state-wide programing. Examples of this category of program include natural and cultural heritage conservation programs as well as visitor use monitoring. Such programs will generally be funded by allocation to the region or in some cases to head office divisions.
- Programs which are proposed for funding by means other than appropriation. Such programs include those that may be funded by grant, concession operation, sponsorship or other such means.

Capital Works and Resource Package

Adoption of the plan of management will require funding of the programs below from capital works and Resource Package allocations. The following are of high priority:

- rabbit control and revegetation \$240,000
- fencing of strategic ground tanks, monitoring impacts \$20,000
- erecting concrete water tanks \$36,000
- upgrading of fire trails \$166,000

Programs which may be deferred without unacceptable loss of natural or cultural heritage values are:

- rehabilitation of erosion gullies in Yathong \$5,000
- erection of information boards at strategic boundary locations \$7,000

No additional plant will be required and there will be no significant additional maintenance commitment for existing plant as a consequence of works arising from the plan of management. Funding for plant replacement will be sought from existing Service allocations on a regional priority basis.

Regional or Head Office Support Programs

Planning and implementation of biodiversity surveys are subject to region-wide programming and will be funded as part of the regional allocation. Major programs concerned with fire research and programs concerned with visitor surveys and monitoring are part of state-wide programs and will be funded as part of head office allocations. Programs within these categories have not been specifically listed in the plan of management.

Funding for maintenance of historically significant buildings will be sought through head office allocations in accordance with state-wide priorities.

Programs Funded by Donations and Grants

No programs are proposed for funding by grant or donation.

FINANCIAL IMPACT

Yathong, Nombinne and Round Hill Nature Reserves will continue to be managed within existing resources, with works being scheduled for undertaking as resources become available.