



NSW NATIONAL PARKS & WILDLIFE SERVICE

Central Mallee Reserves

Plan of Management

Incorporating Yathong Nature Reserve, Nombinnie Nature Reserve,
Nombinnie State Conservation Area and Round Hill Nature Reserve



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Cover photo: Complex of mallee vegetation, Round Hill Nature Reserve, 2021. M Billington/DPIE.

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How to use this plan

This plan of management directs the management of Yathong Nature Reserve, Nombinnie Nature Reserve, Nombinnie State Conservation Area and Round Hill Nature Reserve (referred to collectively as the Central Mallee reserves). This plan includes a scheme of operations consistent with section 72AA of the *National Parks and Wildlife Act 1974*. Once the plan is adopted, no management operations can be undertaken that are not consistent with the plan and its scheme of operations. This plan will also apply to any future additions to the Central Mallee reserves.

Sections 1 to 6 of the plan summarise the reserves' key values, management principles and management considerations. These matters are outlined thoroughly in a separate document, the Central Mallee Reserves Planning Considerations. It is recommended that readers of the plan refer to the planning considerations report for detailed explanations of the reserves' values and management considerations.

The scheme of operations is the core part of this plan. It describes the desired outcomes for the reserves' values and actions that National Parks and Wildlife Service (NPWS) proposes to undertake to achieve these outcomes.

The park use regulations tables set out the recreational activities that are permitted in the reserves and any requirements to undertake these activities, including whether consent must be sought from NPWS to undertake them.

Acknowledgements

Yathong Nature Reserve, Nombinnie Nature Reserve, Nombinnie State Conservation Area and Round Hill Nature Reserve are in the traditional Country of the Ngiyampaa Aboriginal People.

Contact us

For more information about this plan of management or Yathong Nature Reserve, Nombinnie Nature Reserve, Nombinnie State Conservation Area or Round Hill Nature Reserve, contact the NPWS Central West Area at npws.centralwest@environment.nsw.gov.au; Level 2, 203–209 Russell Street, Bathurst NSW 2795; PO Box 2267, Bathurst NSW 2795; or by telephone on 02 6332 7640.

Central Mallee Reserves Plan of Management

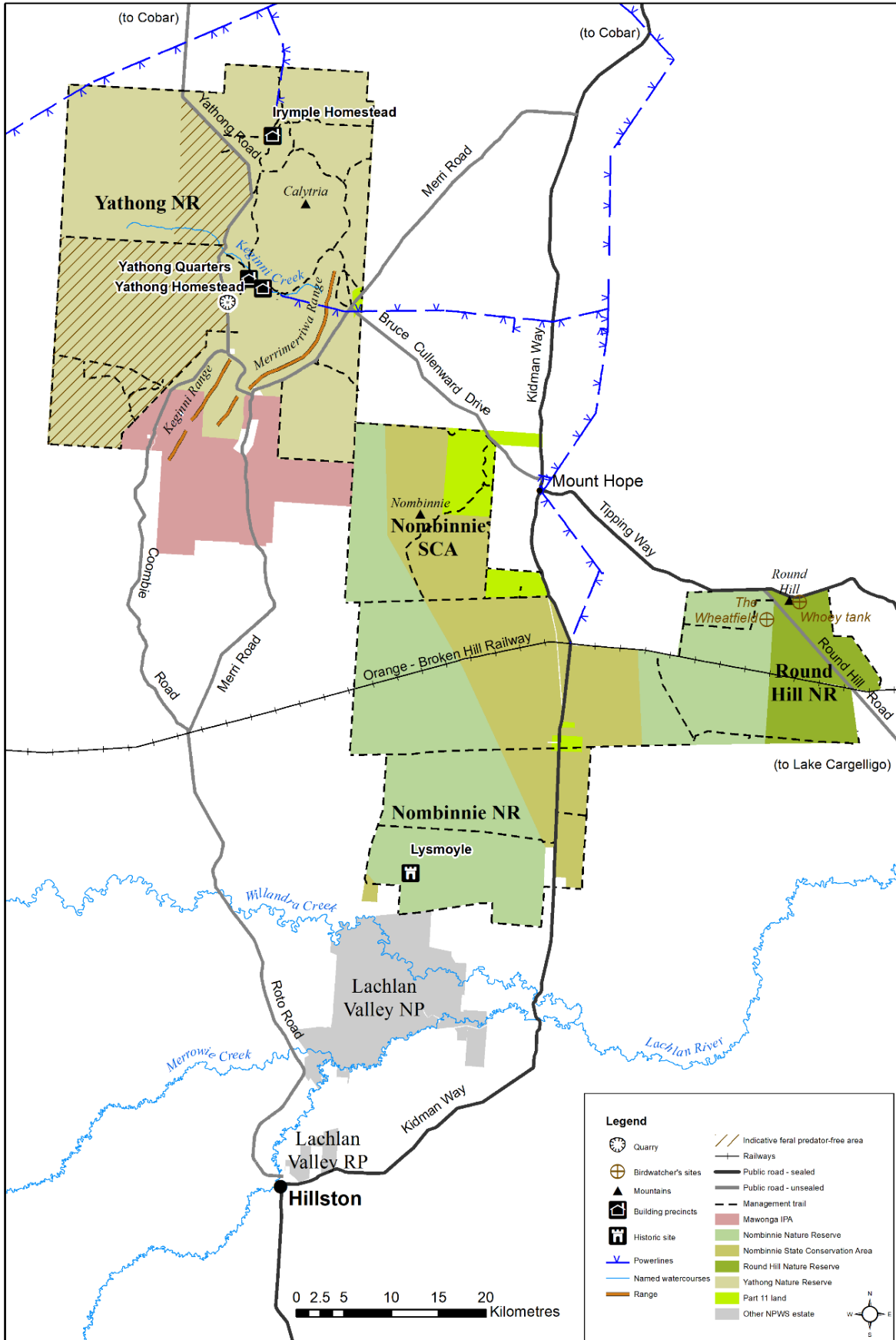


Figure 1 Map of Central Mallee Reserves

The Central Mallee reserves

Yathong Nature Reserve, Nombinnie Nature Reserve, Nombinnie State Conservation Area and Round Hill Nature Reserve are referred to as the Central Mallee reserves. The reserves cover 248,435 hectares and are located in western New South Wales, roughly halfway between Cobar and Griffith.

Why these parks are important

Much of the mallee woodland that was once widespread across central and western New South Wales has been cleared. The Central Mallee reserves are important because they contain the largest area of remaining mallee woodland within a protected area in New South Wales.

Together, these reserves protect a large area of intact vegetation within the Cobar Peneplain Bioregion. This is one of the most poorly conserved bioregions in New South Wales, with just 2.6% protected in the parks system. Mallee woodland comprises approximately 175,200 hectares or 68% of these reserves.

The reserves support 5 threatened plant species and 44 threatened animal species listed under the *Biodiversity Conservation Act 2016* and/or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

Predation by feral cats and foxes interacting with other threats such as land clearing and feral herbivores, has resulted in a large number of species becoming locally extinct and a significant decline in the overall biodiversity and ecosystem health of the region.

Together, these parks form one of the most important areas in the region for the conservation of threatened species.

A feral predator-free area of 40,000 hectares is planned for Yathong Nature Reserve and will support the reintroduction of extinct or locally extinct mammals, known for their role in the semi-arid landscape as 'ecosystem engineers'. This will elevate the function of these reserves as a stronghold for threatened species in New South Wales and will be the largest feral predator-free area established in the State.

Table 1 The reserves and their regional setting

Features	Description
Area	Yathong Nature Reserve – 118,805 ha Nombinnie Nature Reserve – 70,000 ha Nombinnie State Conservation Area – 46,000 ha Round Hill Nature Reserve – 13,630 ha
Reservation date	Yathong Nature Reserve – 5 Nov 1971 (41,160 ha), 12 Jul 1974 (46,538 ha), 27 Feb 1976 (-4 ha), 11 Nov 1977 (65 ha), 9 Dec 1977 (19,482 ha), 1 Jan 2011 (4212 ha), 1 Jan 2015 (4151 ha), 30 Oct 2020 (3201 ha) Nombinnie Nature Reserve – 16 Dec 1988 Nombinnie State Conservation Area – 11 Mar 2005 Round Hill Nature Reserve – 1 April 1960 (5180 ha), 20 Dec 1963 (73 ha), 19 May 1967 (384 ha), 9 Oct 1970 (7993 ha)
Previous tenure	Western Lands leases
Biogeographic region	Cobar Peneplain Bioregion – the eastern half of Yathong Nature Reserve, northern parts of Nombinnie reserves and Round Hill Nature Reserve.

Features	Description
	<p>Murray Darling Depression Bioregion – most of the Nombinnie reserves, Round Hill and the western part of Yathong Nature Reserve.</p> <p>Riverina Bioregion – an area of approximately 875 hectares at the south-western margin of Nombinnie Nature Reserve, adjoining Lachlan Valley National Park (Hunthawang).</p>

Management principles

Development of the objectives, actions and regulations in this plan has been directed by the management principles outlined in the *National Parks and Wildlife Act 1974*.

The National Parks and Wildlife Act requires that a nature reserve be managed to:

- conserve biodiversity, maintain ecosystem function, protect geological and geomorphological features and natural phenomena
- conserve places, objects, features and landscapes of cultural value
- promote public appreciation, enjoyment and understanding of the nature reserve's natural and cultural values
- provide for appropriate research and monitoring.

The National Parks and Wildlife Act requires that a state conservation area be managed to:

- conserve biodiversity, maintain ecosystem function, protect natural phenomena and maintain natural landscapes
- conserve places, objects and features of cultural value
- having regard to the conservation of the state conservation area's natural and cultural values:
 - provide for the undertaking of uses permitted under other provisions of the Act in such areas (including uses permitted under section 47J)
 - provide for the sustainable use (including adaptive re-use) of any buildings or structures or modified natural areas
- provide for sustainable visitor or tourist use and enjoyment that is compatible with the conservation of the state conservation area's natural and cultural values and with uses permitted under other provisions of this Act in such areas
- provide for appropriate research and monitoring.

1. Protecting the natural environment

The reserves straddle the boundaries of 2 major biogeographic regions, the Cobar Penepplain and the Murray Darling Depression and a very small proportion (0.35%) falls within the Riverina Bioregion. Vegetation in the Central Mallee reserves is characteristic of the low-fertility soils and semi-arid climate of central west NSW. As a sizeable remnant of relatively intact vegetation in a largely cleared landscape, the reserves have considerable environmental value for native biodiversity.

The term 'mallee' refers to both multi-stemmed mallee eucalypts and also a distinctive ecosystem in the southern semi-arid zone of Australia in which mallee eucalypts form the canopy species. As a result of clearing for agriculture, the distribution of mallee woodland between central NSW and Western Australia is now significantly restricted. Remaining areas and the habitats they provide are under pressure from further fragmentation, grazing and feral predators.

The vegetation of the Central Mallee reserves is notably diverse with 802 plant species recorded. Twelve plant communities have been described in Yathong Nature Reserve and 19 vegetation communities have been described for Nombinnie and Round Hill nature reserves. A total of 27 unique plant community types occur across the reserves. Regionally significant communities include brigalow and ironwood (both at the southern limit of their range).

Five threatened plants listed under the Biodiversity Conservation Act and/or the Environment Protection and Biodiversity Act occur in the reserves: curly-bark wattle, holly-leaf grevillea, Cobar rustyhood orchid, bitter quandong and *Osteocarpum pentapterum*. These threatened species are being supported under the *Saving our Species* program.

The native vegetation in parts of the reserves, particularly Yathong Nature Reserve, was heavily modified by grazing and pastoral activities before the reserves' establishment. Feral goats, cats, foxes and rabbits, as well as an overabundance of kangaroos have all contributed to ongoing impacts on native vegetation and habitats. Vegetation monitoring in Yathong over 20 years has documented a serious decline in native vegetation values.

Implementing reserve fire management strategies aimed at avoiding too frequent fire for mallee woodland and concentrated efforts to decrease goat populations in the last 5 years have, however, contributed to increased ground cover and successful recruitment for a number of species.

The main weeds of concern are African boxthorn around Yathong Homestead, and thorn apple in bumble box open woodland and red box woodland in Yathong Nature Reserve. African boxthorn is listed as a priority species for asset protection under the regional Local Land Services (LLS) strategic weed plan.

Western New South Wales has seen at least 24 mammal extinctions since European settlement, predominantly medium-sized, ground-dwelling mammals. Many of those remaining are now listed as threatened. Despite this, habitat within the reserves continues to support a range of animals, including micro-bats, 50 reptile species and other mallee specialists. These reserves are also recognised as an Important Bird Area for the protection of malleefowl and red-lored whistler populations.

Forty-four threatened animal species listed under the Biodiversity Conservation Act and/or the Environment Protection and Biodiversity Act have been recorded. Several of these are being supported under the *Saving our Species* program, including the malleefowl, red-lored whistler, striated grasswren and kultarr. National recovery plans are also in place for these species.

The Central Mallee reserves are a focus for malleefowl protection and have made significant contributions to best practice for the conservation of this species. Monitoring in early 2021 indicated there were about 190 mounds, but only a very small proportion have been found to be active in any one year (usually less than 5%). In some years no active mounds have been recorded. Malleefowl populations have been drastically reduced by cat and fox predation. The conservation and recovery of malleefowl requires ongoing feral predator control.

The impacts of feral cats, foxes, goats, rabbits, pigs and deer are classified as key threatening processes at state and national levels. All are identified as regional priority species under the Western LLS strategic pest plan.

In western New South Wales, goat densities are among the highest for any arid region in Australia. Grazing by feral goats can severely impact the regeneration of native plant species, including mallee, particularly where plants are already stressed by drought and other threatening processes. Sustained use of an area by goats can also lead to erosion.

Feral cats are generalist predators capable of killing a broad suite of fauna and are one of the primary causes of declines and extinctions of Australian native mammals and birds in the last 250 years. Feral cats have been implicated in the extinction of several species. Predation by feral cats is recognised as a threat to over 100 species of threatened fauna in New South Wales.

The control of foxes, cats, goats and rabbits has been a focus for management of the reserves over many years. This work will continue in partnership with neighbours and will be complemented by the construction of a predator-free area in Yathong Nature Reserve, the eradication of feral predators from within the fenced area and the reintroduction of native species.

Prior to reservation, a network of ground tanks was established to supply bore water for sheep. In an effort to reduce water available to pest species, the majority of these tanks have been decommissioned, and sealed concrete water tanks have been installed to provide an alternative supply for fire mitigation. These strategic measures, when combined with ongoing operations, have helped to improve the success of pest management efforts.

National Parks and Wildlife Service (NPWS) has responsibilities to protect life, property and community assets from the adverse impacts of fire. Fire management in the Central Mallee reserves is carried out in accordance with reserve fire management strategies. The majority of the reserves are within a land management zone, with the objective of conserving biodiversity, in accordance with biodiversity thresholds defined for vegetation communities, and protecting cultural and historic heritage. Asset protection zones are identified around homesteads and management infrastructure. Linear strategic fire advantage zones occur adjacent to the fire trail network.

Although the ground layer of mallee vegetation does not usually form a continuous layer of fuel that will carry fire, the growth and drying of ephemeral grasses after La Niña weather conditions can greatly elevate fire risk. Large landscape-scale fires have affected the reserves and surrounding lands on several occasions over the last 60+ years. Implementing a strategic approach to hazard reduction burning helps to avoid large expanses of mallee vegetation being burnt during a wildfire, so as to provide suitable unburnt refuge and food resources for native animals. This also allows a 'mosaic' of different age classes of vegetation to develop.

Climate change projections for western NSW predict an increase in the number of hot days over 35°C, drier soil conditions and an increase in severe fire weather. Larger areas will be vulnerable to increased erosion by wind and by heavy downpours during more frequent intense storms. This increases the risk to protective microbiotic soil crusts, Aboriginal cultural heritage sites and species that are already under pressure from other threatening processes.

1.1 Returning threatened and declining species

Australia has the worst mammal extinction in the world. Over 30 Australian mammal species have been driven to extinction since European settlement, with feral cats and foxes the main drivers for at least two-thirds of these losses. Land clearing, livestock grazing and other pest animals have also contributed to species decline and extinction. The decline in biodiversity is ongoing. In New South Wales, around 50-60% of surviving mammals are threatened with extinction. A general pattern of long-term biodiversity decline is evident in reductions to the range or abundance of many native vertebrate species. The number of native animal species considered at risk of extinction continues to rise.

Feral cats are found throughout mainland Australia and are estimated to kill 1.7 billion native animals every year. They have contributed to most of the small mammal extinctions in Australia over the last 250 years and continue to have a significant impact on native mammals, reptiles, amphibians and birds. The loss of native mammals in the Western Division has been exceptionally high. Despite extensive and ongoing efforts, there is currently no effective strategy for landscape-scale control of feral cats, and landscape-scale fox control has had mixed results.

The effective control of feral predators, particularly cats and foxes, is essential for the recovery of many threatened animal species, especially mammals and ground-dwelling birds. To this end, there is strong scientific support for the establishment of feral predator-free areas using conservation fencing, as an essential component of any overall strategy to prevent further mammal extinctions and promote the recovery of our most susceptible species. This reflects a consensus that other feral predator control measures, such as baiting, can deliver significant ecological benefits but are generally not able to reduce feral cat densities to a level that will promote the sustained recovery and reintroduction of our most susceptible mammals.

A network of feral predator-free areas, including islands and enclosures, has been recognised by the Australian Government's National Environment Science Program as a necessary complement to the conventional reserve system, and is required in the short to medium-term to prevent extinction of predator-susceptible threatened mammal species.

The establishment of a network of feral predator-free areas in the NSW national parks system will complement existing threatened species conservation strategies which will continue to be implemented across the State. Yathong Nature Reserve has been selected for the establishment of a feral predator-free area based on the following considerations:

- A multi-criteria analysis undertaken by scientists has highlighted Yathong Nature Reserve as a location with the greatest number of potential rewilding species. This is derived from distribution models of species' former ranges.
- An analysis of the past and present distribution of important native animal species has confirmed Yathong Nature Reserve as a site able to maximise the number of species that will benefit from feral animal exclusion, including species that will be reintroduced and extant species that are currently suppressed but will increase in population after feral animals are removed.
- This reserve contains high-quality semi-arid habitat which is suitable for a number of critical weight range species (native animals between 35 and 5500 grams).
- It protects one of the largest areas of intact mallee vegetation within the Western Division of New South Wales and the Murray Darling Depression Bioregion.
- It has topography that is suitable for the construction of a feral predator-proof fence.
- Experience gained from predator control activities over many years in this area indicates that the eradication of cats and foxes within a suitably fenced area is likely to be feasible.

- As a nature reserve it does not support high levels of recreation or commercial activities that could be compromised through the establishment of a feral predator-free area.
- NPWS has a significant existing onsite management presence within the nature reserve, including permanent staff living in the park, workshop and office facilities, barracks accommodation for visiting staff and researchers, an airstrip and one of the best equipped baiting facilities in New South Wales.

Yathong Nature Reserve is reserved under the National Parks and Wildlife Act to 'identify, protect and conserve areas containing outstanding, unique or representative ecosystems, species, communities or natural phenomena'. Typically, the protection and conservation of nature reserves is achieved by avoiding major forms of unnatural disturbance such as vegetation clearance. While the establishment of a feral predator-free area within the reserve is expected to result in disturbance, this project will also reverse the long term impact of feral predators and have significant benefits to the conservation of threatened animal species in this part of the State.

Moreover, the establishment of a feral predator-free area is expected to provide improved biodiversity outcomes more widely in the Central Mallee reserves for both plants and animals by applying research and knowledge outcomes from inside the feral predator-free area to those parts of the reserve outside the predator-free area. Other 'beyond the fence' biodiversity outcomes will include, for example, reduced feral animal impacts as a result of intensive feral animal control across the conservation landscape in which the proposed feral-free area is embedded and, in time, through future releases of small-medium sized mammals beyond the fence.

Overall, establishment of a feral predator-free area in Yathong Nature Reserve will strengthen the role this reserve plays in meeting two key management principles for nature reserves: conserving biodiversity; and maintaining ecosystem function. Therefore, the proposed feral predator-free area is consistent with the purpose of nature reserves and complementary to their management principles under the National Parks and Wildlife Act.

The proposed feral predator-free area will:

- restore the ecosystem processes such as turning over the soil and the spreading native seed and fungal spores which have largely been lost from the landscape as a result of the decline of native species
- enable the reintroduction of a number of species currently listed as extinct in New South Wales, such as burrowing bettong, brush-tailed bettong, western quoll, greater stick-nest rat, greater bilby, Mitchell's hopping mouse, bridled nailtail wallaby and western barred bandicoot
- support the establishment of new populations of the desert mouse, which is locally extinct
- improve the trajectory, or reduce extinction risk, for other threatened extant animal species including kultarr, southern ningauai, striped-faced dunnart, malleefowl, striated grasswren, red-lored whistler and southern scrub-robin
- provide secure long-term protection for the abovementioned threatened species
- through research and innovation, generate knowledge which can be applied to mitigate the impact of feral predators and other threats across the landscape (i.e. improve conservation outcomes beyond the fence)
- establish insurance populations of threatened species until effective landscape control of cats and foxes is developed
- provide source populations for the restoration of species, when feasible, across the landscape
- promote public awareness of, and appreciation for, the value of native wildlife.

All species proposed for reintroduction will be subject to detailed assessments and approval in line with the Department of Planning, Industry and Environment's *Translocation Operational Policy* and in consultation with relevant state and national species experts.

The alignment of the feral predator-proof fence will be designed to follow existing roads where feasible, however, the realignment of some existing trails or the construction of some new management trails will be necessary for ongoing predator control, monitoring of reintroduced species and improved fire management capability. Trails that are no longer required for management purposes may be closed and, where appropriate, rehabilitated. Additional accommodation for staff, storage facilities and major upgrading of essential services may be also required.

Once constructed, the fence has potential to alter the movement of species across the landscape. The eradication of feral predators could also affect the dynamics between native plant and animal species, and the abundance of existing large macropods, emus and other species within the feral predator-free area.

In response to the scale of the project and the considerable challenges associated with the eradication of feral predators, the project is likely to be implemented in stages using an adaptive management approach. Adjustments to fence alignment and the incorporation of alternative or additional areas may be considered as the project progresses.

An indicative location for the feral predator-free area is depicted in Figure 1. The final configuration of the feral predator-free area will be determined after the consideration of practical constraints and potential impacts. Appropriate measures to minimise or mitigate impacts will be identified in the environmental assessment of the proposal and implemented during its construction and operational phases.

Acknowledging the NPWS management approach of avoiding impactful disturbances in nature reserves, it is apparent that – despite the anticipated impacts – the establishment of a feral predator-free area in Yathong Nature Reserve is, together with complementary rewilding projects either underway or proposed elsewhere in New South Wales, part of the most significant threatened fauna restoration project in the State's history.

2. Looking after our culture and heritage

The Central Mallee reserves are part of Ngiyampaa Country which is roughly bounded by the Darling, Barwon, Bogan and Lachlan rivers. This area largely aligns with the Cobar Penepplain. Along these river corridors there is shared Country, for example with Wailwan Country to the east, Paakantji (Baakantji) Country to the north-west, and Wiradjuri Country to the south and south-east. A native title claim over an area that encompasses the reserves was lodged by Ngemba, Ngiyampaa, Wangaaypuwan and Wayilwan in 2012 (NC2012/001) and is yet to be determined.

The Ngiyampaa have been actively involved with the Central Mallee reserves and have held regular culture camps under a statement of joint management agreed to with NPWS in 2007. In 2012, a keeping place was established in Yathong Nature Reserve to receive Aboriginal remains repatriated from overseas. Fifty-six Aboriginal cultural sites have been recorded in the Central Mallee reserves, including art sites in rock shelters on the Merrimurriwa Range, campsites and artefacts along Keginni Creek, and modified trees. Surveys are likely to identify additional sites.

More recently, a property adjoining Yathong Nature Reserve to the south, 'Mawonga', was purchased and dedicated as an Indigenous protected area in 2019. It is administered by the Winangakirri Aboriginal Corporation and plays an important role in connecting Ngiyampaa with Country. There may be potential for some combined operations between NPWS and the Winangakirri Board.

European settlement of western New South Wales in the 19th century proceeded along inland rivers as natural transport routes and the source of good grazing land. At its largest, 'Yathong Station' covered 250,000 acres (101,172 hectares), but its size fluctuated as sections of property were bought and sold. Remaining relics of this era include ground 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.

Each of the former pastoral properties that are now within the Central Mallee reserves had their own self-sufficient homestead complex supporting an isolated sheep station, but relatively little remains of these. The homesteads on 'Yathong' and 'Irymple' are new buildings on the site of older dwellings and provide accommodation for NPWS staff. A particularly good condition timber slab-and-frame stable and adjoining tack room survive at 'Yathong', but most other outbuildings have been removed. Glenlea Homestead is a ruin and nothing visible remains of Lysmoyle Homestead.

Most standing buildings are considered to have local heritage significance. The Yathong Shearers Quarters were restored and modified around 2004 to provide accommodation for visiting staff, researchers and approved visitor groups. The adjoining Cookhouse has also been restored and adaptively re-used to provide office facilities. These buildings will continue to be maintained.

All works in the vicinity of standing heritage will be subject to an appropriate level of heritage assessment (including the potential for archaeological values to be disturbed). However, no further detailed heritage assessment or restoration work is planned for the shared heritage remaining in the reserves.

3. Providing for visitor use and enjoyment

The primary purpose of nature reserves is to conserve ecosystems, species, communities or natural phenomena. Nature reserves differ from national parks and state conservation areas in that there is no requirement to provide for visitor use in nature reserves. Research, educational use, nature study and enjoyment are appropriate uses where they do not conflict with conservation.

The Central Mallee reserves include Nombinnie State Conservation Area, but on the basis of the significance of their natural values, this group of reserves is being managed primarily for nature conservation and related activities such as research, environmental education and nature appreciation. Several discrete locations are nationally recognised in birdwatching publications as sites for specialist mallee birds.

There are currently no facilities for visitors other than roads and basic signage. Visiting the Central Mallee reserves is constrained by their remoteness, harsh summer conditions, risk of fire, reliance on unsealed roads, absence of water and lack of mobile phone reception.

Once established, the feral predator-free area will provide a unique visitor opportunity to learn about and observe a variety of small native mammals inhabiting a healthy ecosystem. It is important that people have such environmental education opportunities and the experience of seeing iconic animals such as bilbies, bettongs and other species in the wild. The siting and installation of low-key visitor facilities and interpretive signage will be considered after the feral predator-free area has been established.

Several public roads allow public vehicle access through the reserves, including Yathong Road, Merri Road, the Kidman Way and Round Hill Road (see Figure 1). Restrictions on public access to the feral predator-free area will be necessary during fence construction, feral predator eradication and the initial stages of reintroductions. Opportunities to provide visitor access to the area may be considered in the future.

Apart from the opportunity to experience the largest feral predator-free area in New South Wales and the restoration of threatened species, the Central Mallee reserves are otherwise best suited to low levels of visitor use for self-reliant, nature-based activities. Camping by approved groups at Whoey Tank in Round Hill Nature Reserve is permitted with prior permission.

Visitors are not permitted to drive on management trails without prior arrangement. Driving off-trail is not allowed. The park use regulations table in Section 7 sets out the recreational activities that are permitted in the reserves and any requirements to undertake these activities.

As the largest mallee remnants in the State, the Central Mallee reserves offer opportunities for research that are unmatched elsewhere in New South Wales. Monitoring of mallee ecosystems, their biodiversity and responses to management interventions in the Central Mallee reserves continues to inform the management of mallee values broadly and supplement research conducted in other mallee remnants.

NPWS encourages environmental research and student fieldwork training projects in the reserves, provided they benefit management and do not cause undue disturbance to reserve values or management operations. The Yathong Shearers Quarters are available for use by researchers and approved groups by prior arrangement with NPWS.

4. NPWS infrastructure and services

NPWS manages and maintains a range of infrastructure in the reserves.

- The existing network of management trails (including fire trails) are used for NPWS and other authorised access.
- Yathong and Irymple homesteads are used by NPWS for staff accommodation and reserve management.
- Yathong Shearers Quarters precinct provides a helipad, accommodation and facilities for visiting staff, researchers and approved groups. Consideration may be given to relocating the helipad and fuel store to the airstrip.
- An unsealed airstrip located 500 metres from Yathong Shearers Quarters supports park management. Consideration may be given to upgrading the airstrip in the future to provide all-weather access to support aerial baiting operations.
- Lysmoyle, Glenlea and Nombinnie homestead precincts are managed as ruins.
- Boundary fencing is provided and maintained in cooperation with neighbours, consistent with NPWS policies.
- Three ground tanks provide a domestic water supply at Yathong and Irymple homesteads, and Yathong Shearers Quarters.
- Sealed water tanks installed throughout the reserves provide a source of water for firefighting and domestic supply.
- A gravel pit (quarry) is located in Yathong Nature Reserve. Gravel from the pit is used periodically by NPWS for maintenance of management trails. Cobar Shire Council accessed the site in the past and stockpiled gravel that remains in the pit. Removal of these stockpiles and rehabilitation of the site is necessary.
- There is a second small former quarry on the eastern side of the Kidman Highway, partly within Nombinnie State Conservation Area, which is no longer in use.

New infrastructure associated with the establishment and management of the feral predator-free area is expected to include, but not be limited to, the following:

- approximately 100 kilometres of feral predator-proof fencing in Yathong Nature Reserve
- management facilities, including accommodation, workshop, power supply, storage and associated services
- management trails adjacent to the feral predator-proof fence and within the feral predator-free area as required
- visitor and related infrastructure, including public vehicle access for visitors inside and beyond the feral predator-free area.

5. Non-NPWS infrastructure and services

Mineral and petroleum exploration and production are permissible uses in state conservation areas. Although mineral deposits have not been found in the area, the basement rocks are highly prospective, particularly for volcanic-hosted-style mineralisation. Three mining exploration licences are current in Nombinnie State Conservation Area. NPWS works closely with the state government authorities responsible for mining and petroleum activities, including mineral exploration, to ensure that exploration and production proposals in state conservation areas comply with all statutory requirements, including any necessary environmental impact assessments and approvals.

The Orange – Broken Hill Railway passing through the Nombinnie reserves and Round Hill Nature Reserve is part of the transcontinental railway line linking Sydney and Perth. The railway line and service trails are excised from the reserves and maintained by Transport for NSW.

Two 19.1 kV overhead transmission lines are located in Yathong Nature Reserve. They provide power for NPWS staff accommodation and management facilities. These lines are not covered by formal easements. In the absence of an access and/or maintenance agreement, the provider must comply with the National Parks and Wildlife Act and Regulation when carrying out maintenance or replacement work and may require NPWS consent for certain works.

A parcel of former Crown land (3201 hectares) held as travelling stock reserve along the Merri Road (adjoining Yathong Nature Reserve) was added to the reserve in 2020. A small portion remains at the intersection of Merri Road and Bruce Cullenward Drive. Three small parcels of Crown land on the Kidman Way (adjoining Nombinnie State Conservation Area) are held under licence by NPWS and have not been reserved.

A licensed bee site is located near the southern boundary of Yathong Nature Reserve on land which was formerly Yathong State Forest. This bee site is an 'existing interest' and allowed to continue in the reserve under the NPWS Beekeeping Policy.

Unauthorised activities known to occur in the reserves from time to time include illegal access for hunting, broombush-cutting and poaching of goats. Minor boundary encroachments have also occurred. Law enforcement is ongoing. NPWS also works with neighbours and the police where necessary to control unauthorised activities and their negative impacts on the values of the reserves.

6. Scheme of operations

The scheme of operations in Table 2 is consistent with section 72AA of the National Parks and Wildlife Act. It details the desired outcomes for the reserves' values and actions that NPWS proposes to undertake to achieve these outcomes.

A management priority has been assigned to each action to guide the allocation of resources:

- **Very high** – Loss or significant decline in the condition of the reserve value is likely if action is not taken or significant improvement in the condition of the value is likely if action is taken
- **High** – Decline in the condition of the reserve value is likely if action is not taken or improvement in the condition of the value is likely if action is taken
- **Medium** – Some decline in the condition of the reserve value is possible if action is not taken or some improvement in the condition of the value is possible if action is taken
- **Low** – While decline in the condition of the reserve value is not likely in the short term, the action would help build the long-term resilience of the reserve value.

NPWS' performance in meeting the **desired outcomes** in the scheme of operations will be measured through periodic assessments. Performance in delivering the **actions** in the scheme of operations will be measured through regular audits of plans of management.

The scheme of operations sets strategic goals and priorities. Subsidiary plans consistent with this plan of management may also be developed to guide actions at an operational level. Subsidiary plans enable adaptive responses to new information or changed circumstances, such as for pests, weeds, fire and recreational activities, as required by NPWS policy. Assessments of performance and review will be used to inform adaptive management in these subsidiary plans as well as any required adjustments and improvements to future plans of management for the reserves.

Conservation action plans will be prepared and implemented to manage and monitor assets of intergenerational significance declared under the National Parks and Wildlife Act.

The implementation of actions set out below may be subject to statutory responsibilities under the National Parks and Wildlife Act and other relevant state and Commonwealth legislation, including environmental impact assessments and approvals. Further community consultation on the proposed actions may be undertaken as part of these processes.

Information on recreational activities that are permitted in the reserves is provided in the park use regulations table in Section 7. More detailed information on other activities is available on the NPWS website.

Table 2 Scheme of operations

Desired outcome	Actions	Priority
Protecting the natural environment		
<p>1. Native ecosystems are maintained and improved. The health and distribution of significant vegetation communities and plant species is monitored and restored</p>	<p>a. Following environmental and cultural assessments, establish a feral predator-free area in Yathong Nature Reserve through the construction of a feral predator-proof fence, eradication of feral predators, ongoing effort to eradicate other pest animals and reintroduction of locally extinct species.</p>	Very high
	<p>b. Support regular monitoring of vegetation communities in the reserves. Maintain exclusion fencing for vegetation plots and establish new plots as required.</p>	High
	<p>c. Implement relevant actions in the Biodiversity Conservation Program, including actions at key management sites and recovery plans for nationally listed threatened plant species.</p>	High
	<p>d. Support restoration of degraded and/or regionally significant vegetation communities in the reserves, including eucalypt-pine woodlands.</p>	Medium
	<p>e. Monitor erosion in the reserves, including the existing former quarry on the eastern side of the Kidman Highway in Nombinnie State Conservation Area, and incised gullies in Yathong Nature Reserve. If required, implement mitigation measures and rehabilitate.</p>	Low
	<p>f. Revise the identification of plant community types for vegetation communities in the reserves and complete vegetation mapping in line with Vegetation Information System standards.</p>	Medium
<p>2. Fire is managed in the reserves to conserve and maintain semi-arid ecosystems while protecting natural and cultural values, reserve infrastructure and neighbouring assets</p>	<p>a. Implement the reserve fire management strategies with reference to fire regimes appropriate to extant threatened species, biodiversity thresholds and best practice for mallee ecosystems.</p>	Very high
	<p>b. Revise and adjust the reserve fire management strategies as needed to accommodate new infrastructure, including managing fire in relation to the feral predator-free area and to take account of new and emerging threats and information.</p>	High
	<p>c. Participate in fire planning for the region through the Far West and Murrumbidgee Irrigation Area bush fire management committees.</p>	High

Desired outcome	Actions	Priority
3. Populations of native animals and the diversity of native fauna overall are improved, with pest animals controlled and where possible eliminated from the reserves	a. Reintroduce locally extinct fauna species and support the recovery of extant fauna species within a feral predator-free area (see Action 1a).	Very high
	b. Implement relevant actions in the <i>Biodiversity Conservation Program</i> , including actions at key management sites and recovery plans for nationally listed threatened animal species.	High
	c. Increase knowledge of the effectiveness of park management in protecting park values through fauna surveys.	Medium
	d. Continue to undertake or support surveys and monitoring of threatened species inside and outside the feral predator-free area (Action 1a), including but not limited to malleefowl, red-lored whistler and striated grasswren.	Very high
	e. Conserve native fauna within and beyond the fenced area through the landscape-scale management of feral predators and pest animals, research, monitoring and adaptive management.	Very high
	f. Manage priority pest species in accordance with relevant regional and reserve-specific pest management strategies.	High
	g. Work with neighbours and other regional stakeholders to support coordinated pest animal and weed control across reserve boundaries.	High
	h. Monitor and manage populations of macropods and emus throughout the reserves to minimise their impact on reserve values.	High
4. Research improves understanding and management of semi-arid ecosystems to inform species reintroductions and reserve management more broadly	a. Develop and implement a monitoring and research strategy for the feral predator-free area and reintroduction program, in consultation with relevant stakeholders.	Very high
	b. Continue to support research effort in the reserves including partnerships and collaborations for priority research projects.	High
Looking after our culture and heritage		
5. The Aboriginal community has access to Country to maintain, renew or develop cultural connections and practices	a. Continue to support and collaborate with the Ngiyampaa community to manage cultural values in the reserves.	Medium
	b. Support cultural surveys to identify and record additional Aboriginal sites and cultural values in the reserves, targeting areas where information is lacking. Ensure all Aboriginal sites and cultural information is recorded appropriately in consultation	High

Desired outcome	Actions	Priority
	with the community. Implement measures to protect sites as necessary.	
	c. Support culture camps and other cultural activities proposed by the Ngiyampaa community in the reserves as NPWS priorities and resources allow.	Medium
6. Shared heritage values are managed consistent with their assessed level of significance	a. Manage former Lysmoyle, Glenlea and Nombinnie homestead sites as ruins.	Low
	b. Prepare a statement of heritage impact to assess the potential for Lysmoyle Workers' Quarters to be stabilised. If stabilisation is considered unfeasible, record all extant shared heritage values including drawings on interior wall panels and manage the site as a ruin.	Low
	c. Undertake condition assessments and provide an appropriate level of protection for Yathong Stables, Yathong Cookhouse and other standing shared heritage structures.	Low
Providing for visitor use and enjoyment		
7. Visitor use is allowed consistent with management of the reserves primarily for nature conservation	a. Investigate and implement options to enable public access to and interpretation of the feral predator-free area within Yathong Nature Reserve once established.	High
	b. Allow low-key visitor activities such as bushwalking, birdwatching and nature appreciation in accordance with Table 3.	Medium
	c. Allow self-supported camping at Whoey Tank (Round Hill Nature Reserve) for approved naturalist groups or researchers.	High
	d. Allow public vehicle access to management trails with prior consent for approved researchers and groups.	High
	e. Construct new and replace interpretative signage in the reserves including signage supporting the feral predator-free area.	High
NPWS infrastructure and services		
8. Management infrastructure is maintained to required standards to support protection of reserve values and assets	a. Manage access to the reserves to prevent unauthorised entry, including, where appropriate, in consultation with neighbouring landholders.	High
	b. Maintain and, where necessary, upgrade management trails in accordance with their designated fire classification, the reserve fire management strategies and the relevant Fire Access and Fire Trail (FAFT) plan.	Very high
	c. Establish cooperative fencing agreements with neighbours in line with NPWS policy.	Very high

Desired outcome	Actions	Priority
	d. Review the status of exclusion fencing for ground tanks throughout the reserves, including those managed by other stakeholders. Ensure those not required for NPWS management purposes are securely fenced to exclude access by animals or permanently decommissioned.	High
	e. Monitor decommissioned ground tanks and undertake works as necessary to prevent environmental impacts.	Very high
	f. Maintain, upgrade as required and provide new facilities at Yathong Shearers Quarters precinct to support management activities.	Very high
	g. Maintain and upgrade as required the baiting facilities, airstrip and helipad to support ongoing management programs.	High
	h. Continue to maintain staff accommodation in the reserves to a suitable standard. Investigate options for accommodation to support management of the feral predator-free area.	High
	i. Continue to allow use of Yathong Shearers Quarters and Yathong Cookhouse for short-term use by NPWS staff, researchers and approved groups.	Medium
	j. Investigate opportunities for removal of stockpiled gravel in Yathong Nature Reserve. Following its removal, seek to rehabilitate the site while maintaining availability of gravel for park management purposes.	Medium
9. Management infrastructure is constructed to allow the establishment of a feral predator-free area and reintroduction of approved animal species	a. Construct and establish a feral predator-free area and associated support infrastructure (see Action 1a).	Very high
	b. If required, establish and maintain additional management trails within the feral predator-free fenced area.	High
Non-NPWS infrastructure and services		
10. Non-NPWS infrastructure has minimal impact on reserve values and is appropriately licensed	a. Work with owners and managers of non-NPWS infrastructure to ensure that reserve values are adequately understood and protected.	Medium
	b. Manage exploration activities in Nombinnie State Conservation Area in accordance with access and licensing agreements and conditions.	Low
11. Unauthorised activities are appropriately addressed, and the level reduced	a. Implement appropriate compliance activities with neighbours and other relevant stakeholders as the need arises, targeting activities that are key threats to reserve values.	Medium

7. Park use regulations

7.1 Recreational activities









Conditions may be applied to ensure an activity is undertaken safely and to minimise environmental risks and risks to other users. Consent may be refused after consideration of the proposed activity and its likely environmental, visitor safety and park management impacts.







Activities may be subject to operating conditions or limits from time to time. For example, access to parts of the reserves may be closed during periods of bushfire risk, bad weather or maintenance or improvement works.

Activities not shown in Table 3 may also be regulated by signage within the reserves or by consent.

Information regarding activities that require consent and obtaining consent is available on the NSW national parks visitor website or by contacting the relevant NPWS office (contact details at the at the front of this plan).

Table 3 Park use regulations – Recreational activities

	Type of activity	Allowed	Note/Exceptions.
	Camping	Yes	At Whoey Tank in Round Hill Nature Reserve only, by naturalist groups and researchers with prior approval.
	Cycling	Yes	On management trails.
	Dog walking	No	Dogs that are not assistance animals are not permitted.
 	Public vehicle access	No	Public vehicle access is only allowed on management trails with prior consent where access is required to support approved research and group activities. Options that enable greater public access may be considered once the feral predator-free area is established within Yathong Nature Reserve. Off-trail driving is not permitted.
	Fossicking	No	Not permitted owing to potential environmental impacts.
 	Group gatherings – non-commercial	Yes	Consent is required for groups of all sizes.

Type of activity	Allowed	Note/Exceptions.
	No	
	No	
 	Yes	Consent required. Drones may be used for park management purposes and may be authorised as part of a commercial filming consent. The use of drones is subject to relevant civil aviation regulations.
	Yes	Access will be restricted or not permitted during construction of the fenced area in Yathong Nature Reserve and the eradication of feral predators, and at times when native species are being reintroduced/established.
	No	Approved campers may bring a portable fire pit for use at Whoey Tank as part of a group activity with prior approval, outside of total and park fire bans.

7.2 Events, function and commercial activities

Due to the remoteness and lack of services available, events, functions and commercial activities may only be considered on a case-by-case basis by application to NPWS.

More information

- [Central Mallee Reserves Planning Considerations](#)
- [National Parks and Wildlife Service](#)