

Management plan



Brigalow Belt South Biogeographic Region

Southwood National Park



QUEENSLAND
NATIONAL PARKS
AND WILDLIFE
SERVICE



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Locality map



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Summary

This management plan provides the framework and guidelines on how Southwood National Park will be managed. It sets out the considerations, outcomes and strategies that are proposed to form the basis on which day-to-day management decisions are made.

This plan was prepared in May 1998 and, in accordance with s125 of the Nature Conservation Act 1992, will be reviewed not later than 10 years after its approval. For further information on this plan, or the planning process, please contact the Department of Environment's Southwestern Regional Centre in Toowoomba on (07) 4639 4599 during business hours.

This management plan was prepared by Department of Environment staff. Thanks are due to those groups and individuals who made submissions in response to the draft plan.

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Contents

I MANAGEMENT DIRECTIONS AND PURPOSE I

Purpose

2 BASIS FOR MANAGEMENT 2

- 2.1 Regional context 2
- 2.2 Values of Southwood National Park 2
 - Geology and landscape 2
 - Native plants and animals 2
 - Cultural values 3
 - Scenic 3
 - Recreation 3

3 MANAGEMENT STRATEGIES 4

- 3.1 Natural resource management 4
 - Native plants 4
 - Native animals 4
 - Feral plants and animals 6
 - Fire management 6
 - Soil and catchment protection 7
- 3.2 Cultural resources 7
 - Aboriginal interests 7
- 3.3 Recreation and tourism 8
 - Recreation opportunities and facilities 8
 - Education and interpretation 8

Maps

Map 1 Southwood National Park locality map

Map 2 Southwood National Park

Map 3 Vegetation

1 Management directions and purpose

Southwood National Park is designated under the *Nature Conservation Act 1992* as a national park and, as such, will be managed in accordance with s17 of the Act which sets out the following principles for management:

- to provide for the permanent preservation of the area's natural condition to the greatest possible extent;
- to protect the area's cultural and natural resources and their values; and
- to ensure that the only use of the area is nature-based and ecologically sustainable.

Southwood National Park encompasses some 7120ha of brigalow-belah and poplar box woodlands on the northern side of the Moonie Highway, approximately 26km west of Moonie. (Brigalow = *Acacia harpophylla*; belah = *Casuarina cristata*; poplar box = *Eucalyptus populnea*.) The primary purpose of the park is to conserve and present to visitors an example of natural brigalow-belah plant communities. These have largely been cleared in the region to make way for agriculture and grazing. Maintenance and protection of the brigalow-belah and poplar box woodlands are a high priority and programs required to achieve this, including weed and feral animal control, are important management considerations.

There is no permanent Ranger presence on the park. Department of Environment (DoE) Rangers from Warwick patrol it regularly.

Park visitors have access to a camping area located along a small dirt road. Visitors need to be self-reliant because no facilities are provided. The camping area is small and receives few visitors. The park is most suited to those who wish to birdwatch or engage in other minimal-impact, nature-based activities in a natural, undeveloped setting.

Interpretation information will be provided in a brochure which will also include information on other parks in the south-western Darling Downs.

Purpose

The major purposes of management will be to ensure that:

Conservation

- Natural plant and animal communities are conserved.
- Rare and threatened species are identified and conserved through specific management strategies if appropriate.

Recreation and tourism

- Provision is made for occasional, self-reliant camping in a completely natural setting.

Community involvement

- Neighbours, local government, Aboriginal groups and other interested parties are made aware of park management issues and are given opportunities to be involved in the process of managing the park, where appropriate.

2 Basis for management

2.1 REGIONAL CONTEXT

Southwood National Park is located 345 km west of Brisbane, 130 km south-west of Dalby and 26 km west of Moonie on the Moonie Highway. It was gazetted as a national park in March 1970 from 'Wild Horse Paradise', a pastoral lease of 'very poor grazing country' (as described in the original reports).

The park was set aside to conserve a remnant of brigalow-belah forest. This particular plant community has been extensively cleared within the region to make way for dryland cropping and grazing which are now the dominant land uses in areas adjoining the park.

The nearest towns are Moonie (26km), Dalby (130km) and St George (150km), all primarily service centres for the local agricultural and grazing industries.

Other parks in the Darling Downs area conserving similar habitat types are Alton National Park, on the Moonie Highway approximately 100km west of Moonie, and Bendidee National Park, 32 km north-east of Goondiwindi. Like Southwood, these parks provide for day visitor use without facilities, but they are relatively small and have no provision for camping.

Southwood National Park is well signposted and public access for conventional vehicles is provided to a small, unserviced camping area off Fabians Road. Fabians Road is of dirt, dry-weather construction only and roughly bisects the park. Visitor access to other parts of the park is by four-wheel-drive vehicle only via the boundary roads, or by walking.

2.2 VALUES OF SOUTHWOOD NATIONAL PARK

Geology and landscape

The park topography is flat to gently undulating with grey-brown cracking clay and deep texture contrast soils over Tertiary sandstones and conglomerates, with more open, texture contrast soils on sloping colluvial plains over older Jurassic and Cretaceous sandstones. Low ridges and rises in the park are overlaid by relatively recent Quaternary alluvial sands.

A dominant surface feature of the heavier grey-brown cracking clay soils in the park is the presence of 'gilgais', often referred to as melon-holes or crab-holes. Gilgai soils are characterised by a pattern of 2m mounds and depressions which are formed when the soils are subject to cyclic wetting and drying. When dry, the topsoil crumbles and falls into the deep cracks (self-mulching). When wet, the clay swells greatly and the lower layers push the weakened top layers upward, gradually forming mounds. Gilgais tend to collect water and, consequently, there are few drainage channels and very poor runoff from the area into the adjacent streams and the nearby Moonie River.

These dynamic soil forming processes are able to continue in a relatively undisturbed manner on the park and provide the environment required for the maintenance of natural plant and animal communities. They may therefore be considered as an important underlying value of the park.

Native plants and animals

The park contains a number of plant communities representative of those which were formerly more widespread in the region and are thus of high conservation value.

Brigalow-belah communities are found across much of the park on the heavier soils. Cypress pine *Callitris glaucophylla* and poplar box forests *Eucalyptus populnea* occur on the Quaternary alluvial deposits and in areas with intermediate soil characteristics.

In brigalow-belah communities, one species assumes dominance in any particular area. Wilga *Geijera ovata*, false sandalwood *Eremophila mitchelli*, lime bush *E. glauca*, fuchsia bush *E. maculata*, sandalwood *Santalum lanceolatum* and black teatree *Melaleuca pubescens* often occur as understorey plants.

Groundcover is relatively sparse in these communities, but small shrubs and herbaceous plants are common. The most abundant of these are currant bush *Carissa ovata*, prickly roly-poly *Salsola kahli*, creeping bush *Chenopodium trigonon* and cotton bush *Maireana decalvans*. In the more open parts, brigalow grasses are the dominant groundcover.

Southwood National Park provides a haven for a significant variety of birdlife and some 92 species have been recorded. Most of these species find refuge and breeding sites in the dense brigalow vegetation. Some species live permanently in the brigalow. However, most are transients.

Few mammals have been recorded on the park. Those present include the grey kangaroo *Macropus giganteus*, wallaroo *M. robustus* and a number of other wallaby species. Sugar gliders *Petaurus breviceps*, feathertail gliders *Acrobates pygmaeus* and koalas *Phascolarctos cinereus* also occur in the park.

Southwood is the largest conserved representative community of brigalow-belah on the southern edge of the Brigalow Belt South biogeographic region. It provides pasture and other biological science researchers with a relatively undisturbed benchmark environment that can be useful in assessing the degree of change in surrounding agricultural lands.

As a refugial area of brigalow forest, the park may contain a host of invertebrate and vertebrate life forms which are now rare or extinct elsewhere in the region. The park is thus of value to taxonomists and biologists wishing to study relatively intact brigalow communities.

Cultural values

Southwood National Park is in Bigambul country (Tindale 1974) and, although no specific sites have been identified on the park, the area may have important cultural values to Aboriginal people in terms of its intrinsic natural landscape values and its native plants and animals.

The pattern of European settlement in the Southwood district followed the general trends elsewhere in south-east Queensland. Early exploration of the area was carried out by Allan Cunningham in 1827–28 and Major Thomas Mitchell in 1831. Mitchell named the Moonie River which runs to the north of the park.

Pastoralism was slow to establish as the dense brigalow scrub was difficult to penetrate and laborious to clear. Early pastoralism in the area also received a setback when prickly pear *Opuntia stricta* became widely established. This weed was not successfully controlled until 1934 with the introduction of a biological control agent, the moth *Cactoblastis cactorum*.

Scenic

Southwood National Park's dense brigalow-belah forests stand in stark contrast to the surrounding open landscape of rural grazing and cropping. Aesthetic values derive from the relatively natural environs that the park presents and the abundant birdlife and other wildlife. As topographic relief is virtually nil, the park has no scenic vantage points.

Recreation

There are no developed visitor facilities on Southwood National Park and visitation is low. Day use and self-reliant camping are allowed. Low-impact, nature-based activities such as birdwatching and nature photography are currently the preferred uses for the area.

3 Management strategies

3.1 NATURAL RESOURCE MANAGEMENT

Native plants

Background information

Southwood National Park is one of the only brigalow-belah communities still remaining on the southern edge of the Brigalow Belt South biogeographic region. The plant communities occurring in the park are therefore of high conservation value, and their long-term ecological management is of prime concern to park management. As the park is relatively small, impacts from adjacent land may have quite severe and far-reaching effects on natural communities. For further discussion in relation to this topic, please see the sections Feral animals and plants and Fire management.

A vegetation survey of the park in 1991 identified a total of 149 species of plants, four of which were introduced species. No rare and endangered species are known to occur on the park.

Nine plant communities are described from the park. They are comprised of *Casuarina cristata*, *Acacia harpophylla*, *Eucalyptus populnea*, *Allocasuarina leuhmannii* and *Callitris columellaris*/*Eucalyptus spp.*/*Angophora* dominants. These communities appear to be maintained by variation in the park's underlying geology and associated soil type and possibly by long-term fire patterning.

Several seismic lines were put through the area a number of years ago, but with no use over the intervening period have now regenerated with native plant species. They appear to have no requirement for any special rehabilitation measures.

Desired outcomes

- The biological health and diversity of natural plant communities and the ecological processes underlying them are maintained.
- Degraded plant communities are rehabilitated.

Proposed guidelines and actions

- Monitoring programs will be established in order to assess long-term changes in the distribution and health of native plant communities. This will be carried out in order to establish whether current management regimes are providing the desired outcome of maintaining plant community health and diversity.
- Vegetation monitoring sites used in the 1991 survey will be relocated and permanently marked and a photographic record made of the vegetation at these sites.

Native animals

Background information

Native animals occurring on Southwood National Park are significant in that they represent a remnant sample of what was once a more widespread and dominant biota throughout the region before clearing for agriculture and grazing occurred. In this respect, the park provides a valuable refuge for sedentary species which still persist in the area and a sanctuary for transient species which may occur seasonally in the region.

The park preserves an island of natural vegetation in an area of otherwise developed grazing and agricultural land. It would thus be reasonable to assume that the area also contains a representative suite of fauna that naturally occurs in association with these plant communities and that some of these species are uncommon elsewhere in the immediate vicinity and may be quite rare in the region.

To date, no fauna surveys have been carried out, although incidental observations have yielded some interesting results. A number of macropod species including eastern grey kangaroos, wallaroos and several wallabies have been recorded, as have sugar gliders and feathertail gliders.

Other species of conservation significance are:

- the northern banjo frog *Limnodynastes terraereginae* which is possibly near the inland limit of its range in southern Queensland;
- the wonga pigeon *Leucosarcia melanoleuca* and brush turkey *Alectura lathami* which are possibly near the inland limit of their range in southern Queensland;
- the koala *Phascolarctos cinereus* which is significant in that many populations are under threat from continued habitat destruction; and
- the glossy black cockatoo *Calyptorhynchus lathami* which has a 'rare' conservation status.

Adjacent landholders have expressed concern that their crops are sometimes damaged by the larger species of macropods which seek daytime refuge in the park and feed in nearby pastures and crops at night. Although the park was originally enclosed with a marsupial- and dog-proof fence, all available evidence indicates that this has never been effective in preventing the movement of macropods in and out of the park. The erection and maintenance of a complete barrier, apart from being prohibitively expensive and time-consuming to maintain, is also contrary to the Department's management principles for national parks and is without precedent in the Department's Southwestern Region.

Kangaroo surveys conducted in the region as part of the Department's kangaroo population monitoring program have indicated that, on average, the distribution of kangaroos throughout the surrounding districts is quite uniform, with proportionately as many animals seeking daytime refuge in dense vegetation outside the park as in the park. It is, however, recognised that kangaroo numbers in the park may increase significantly when adjacent fields contain new crops and that this situation may be exacerbated during dry times or when crops are not grown elsewhere in the district. Kangaroo numbers may be controlled on private land through the issue of damage mitigation or wildlife harvesting licences. However, such permits are not issued for national parks.

Park management has a responsibility to monitor macropod activity on Southwood National Park and to assist in appropriate macropod management. To this end, Department staff will develop and maintain a close liaison with local landholders in order to identify the extent and nature of kangaroo damage to crops and pastures.

Desired outcomes

- Native animals and their associated habitats are protected.
- The long-term survival of threatened species and species of conservation significance is enhanced.

Proposed guidelines and actions

- A comprehensive fauna survey will be carried out on Southwood National Park with emphasis on threatened species and species of conservation significance.

Management actions will be developed for threatened species and species of conservation significance to enhance their continued presence in the park.

- A co-operative management strategy will be developed to address park neighbour concerns. This may include the issuing of damage mitigation permits to allow culling of macropods on land outside the park.
- Trees and shrubs growing on the current fence line will be removed and the fence will be subject to regular maintenance in order to ensure its reasonable working life. Since all past efforts to maintain the fence as marsupial- and dog-proof have failed, no further efforts will be made to maintain it to such a standard.
- When the current fence requires replacement, it will be replaced with a normal stock-proof fence and costs for this work will be apportioned in accordance with the guidelines set out in the Department's Good Neighbour Policy.

Feral plants and animals

Background information

Isolated remnants of natural vegetation, such as that contained in Southwood National Park, may be easily degraded by feral animals and plants. Feral animals may be particularly attracted to the area since it affords them a degree of cover and protection.

It is important, therefore, to address feral species management as a critical concern if the biological health of the park is to be maintained.

At present only one noxious weed, noogoora burr *Xanthium pungens*, has been recorded. This particular species has been identified around a dam in the western section of the park.

Tree pear *Opuntia tomentosa* and prickly pear *Opuntia inermis* also occur on the park. However, numbers of plants are relatively low and the population appears to be static.

Mother-of-millions *Kalanchoe tubiflora* has also been recorded from the park, but the current status of this weed is uncertain.

Pigs have been identified as a relatively common feral animal in the district although their use of the park is transitory. Pigs occur commonly around the park area only during wet conditions and when crops are available on adjacent properties. Under normal circumstances, no pigs, or very few pigs, are found on the park. Their numbers appear to be more concentrated around permanent water points on the Moonie River.

Other feral species recorded on the park include the house mouse *Mus musculus*, rabbit *Oryctolagus cuniculus*, fox *Vulpes vulpes* and feral cat *Felis catus*.

The movement of feral animals into and out of the park may also facilitate the spread of weed species into the park from adjacent roadsides and pastures.

Desired outcomes

- Introduced plants and animals are controlled and, where practically possible, eradicated from within the park.
- Areas degraded by feral animal activity are rehabilitated.

Proposed guidelines and actions

- The presence of weed species will be noted during routine patrols of the park and appropriate control action will be instigated to control or eradicate these species. Species which require close monitoring are prickly pear, tree pear and mother-of-millions.
- Noogoora burr will be eradicated from the vicinity of the dam through hand-pulling of plants. Since seed of this species can survive in the soil for up to seven years, it is anticipated that the control period will extend for at least this period.
- Feral pigs will be controlled through a baiting program undertaken in conjunction with the Rural Lands Protection Board and local landholders. The removal of dams will greatly assist in reducing the incidence of feral pigs in the park during dry seasons (see guidelines under Soil and catchment protection).

Fire management

Background information

While brigalow plant communities may be severely damaged by fire, other communities such as the eucalypts which also occur on the park may need fire in order to maintain their growth and vigour. Thus fire is to be considered a natural and essential element in the management of such communities rather than an unnatural threatening element that deserves total exclusion.

The incidence of fire in the park has been low, as most of the brigalow communities have insufficient ground storey and litter available to carry a fire in normal seasons. The last fire recorded in the park was in 1983.

Firebreaks approximately 9m wide have been graded around the perimeter of the park and are maintained in working order.

Currently no prescribed burns are carried out on the park due to the low threat of wildfires in the area. It is also unlikely that such burns would prevent the spread of a wildfire under extreme conditions.

The park is routinely patrolled from Warwick but has no permanent on-site staff. The Department relies to a large extent on park neighbours to detect fire outbreaks and to report them to a DoE office. Close liaison between DoE staff and park neighbours is thus a high priority for effective fire management.

Desired outcomes

- The biological diversity and integrity of native plant and animal communities are maintained through the responsible management of fire.
- Human life and park infrastructure are protected, as far as practically possible, from fire originating within the park or entering the park from neighbouring properties.

Proposed guidelines and actions

- All staff responsible for the park will receive appropriate fire training.
- Fuel build-up in eucalypt communities will be periodically assessed and prescribed burning will be carried out if feasible. Liaison with local landholders and co-operative fire suppression programs will be considered as a vital part of the fire management program for the park.
- A wildfire response procedure will be developed for the park and distributed to officers of the local bush fire brigade.
- In the event of an outbreak of fire on the park, neighbours are asked to contact the Ranger-in-Charge of the park or DoE District staff. No clearing of new firebreaks, clearing of vegetation or lighting of backburns should be undertaken on the park without the permission of the Ranger-in-Charge or other DoE District staff.
- Visitors to the park will be informed of fire conditions and appropriate behaviour under extreme fire hazard conditions.

Soil and catchment protection

Background information

Water runoff from Southwood National Park is minimal due to the characteristics of the gilgaied black soil and lack of topographical relief. Heavy rain may, however, provide surface runoff to the nearby Moonie River.

No erosion or soil compaction problems have been identified on the park.

There are four dams on the park, several of which were cleaned out in 1992.

Desired outcomes

- To have minimised the impact of park operations on the quality of ground and surface water in the national park catchment area.
- To have minimised soil erosion and compaction damage within the park.

Proposed guidelines and actions

- Dams built in the park will not be maintained and it is anticipated that they will slowly fill in over time through the action of cracking clay soil movements and sedimentation. This is consistent with the Department's intention to restore the park's ecology to as close as possible to its original state. The removal of permanent water may also facilitate the management of macropods and feral pigs which would find the area less habitable in dry periods.

3.2 CULTURAL RESOURCES

Aboriginal interests

Background information

As mentioned in the section Cultural values, the park falls within the Bigambul country area and may have important cultural values to Aboriginal groups, both in terms of specific sites and as a relatively intact natural landscape with its own inherent Aboriginal cultural values. No Aboriginal groups with interests in Southwood National Park have been identified.

No surveys to locate specific sites of cultural significance have been conducted in the park to date. It is possible that such sites exist, and in this particular type of landscape they may include scarred or modified trees, burials on alluvial deposits, artefact scatters, native wells, grinding stones and stone arrangements.

Desired outcomes

- To involve Aboriginal people who have traditional affiliations with the area in the management of the national park.
- To present Aboriginal cultural values of the park to visitors, if appropriate.

Proposed guidelines and actions

- Existing Aboriginal interests in the park will be identified, and relevant groups or individuals will be provided with the opportunity to participate in the planning and management of the park on a long-term basis.
- If significant Aboriginal cultural values are identified on the park, these may be included in visitor information sheets after consultation with the relevant Aboriginal groups.

3.3 RECREATION AND TOURISM

Recreation opportunities and facilities

Background information

The park adjoins the Moonie Highway and parts of the park are accessible by conventional vehicles travelling along this road. The park is thus well located to provide day and short-term camping visitors with a venue for nature-based recreational activities. The park, however, is relatively small and, at its current level of development, would suffer from the impact of more than a very small number of visitors.

A small, unserviced campsite exists off Fabians Road. Impacts at this site are low. The number of campers or visitors using this or other sites on the park is unknown.

Internal firebreaks and boundary tracks are intended for park management use only and may be difficult to negotiate in conventional or four-wheel-drive vehicles after rain due to the nature of the soil and pooled water.

Desired outcome

- To provide opportunities for nature-based recreation which are ecologically sustainable.

Proposed guidelines and actions

- The present low-key, primitive style of visitor facilities will be maintained.
- The camping site will be monitored periodically in order to assess visitation impacts and more intensive management of the site will be instigated if it is considered that impacts are becoming unacceptable.
- Boundary roads will be chained and closed to visitors and Service Road Only signs will be attached where appropriate.
- Consideration may be given to the development of a day use, roadside stop from the Moonie Highway, in order to cater for increased day use activities and to restrict day use visitor impacts to the edge of the park.

Education and interpretation

Background information

The education component of this plan seeks to involve and inform not only park visitors but also park neighbours about the intrinsic worth of the park environment. A complementary objective relates to the provision of information on important issues related to park management.

Southwood National Park currently has no on-site interpretation or signage, with the exception of the standard park name signs at the eastern and western ends of the park, facing the Moonie Highway.

No visitor information sheets are currently available for the park.

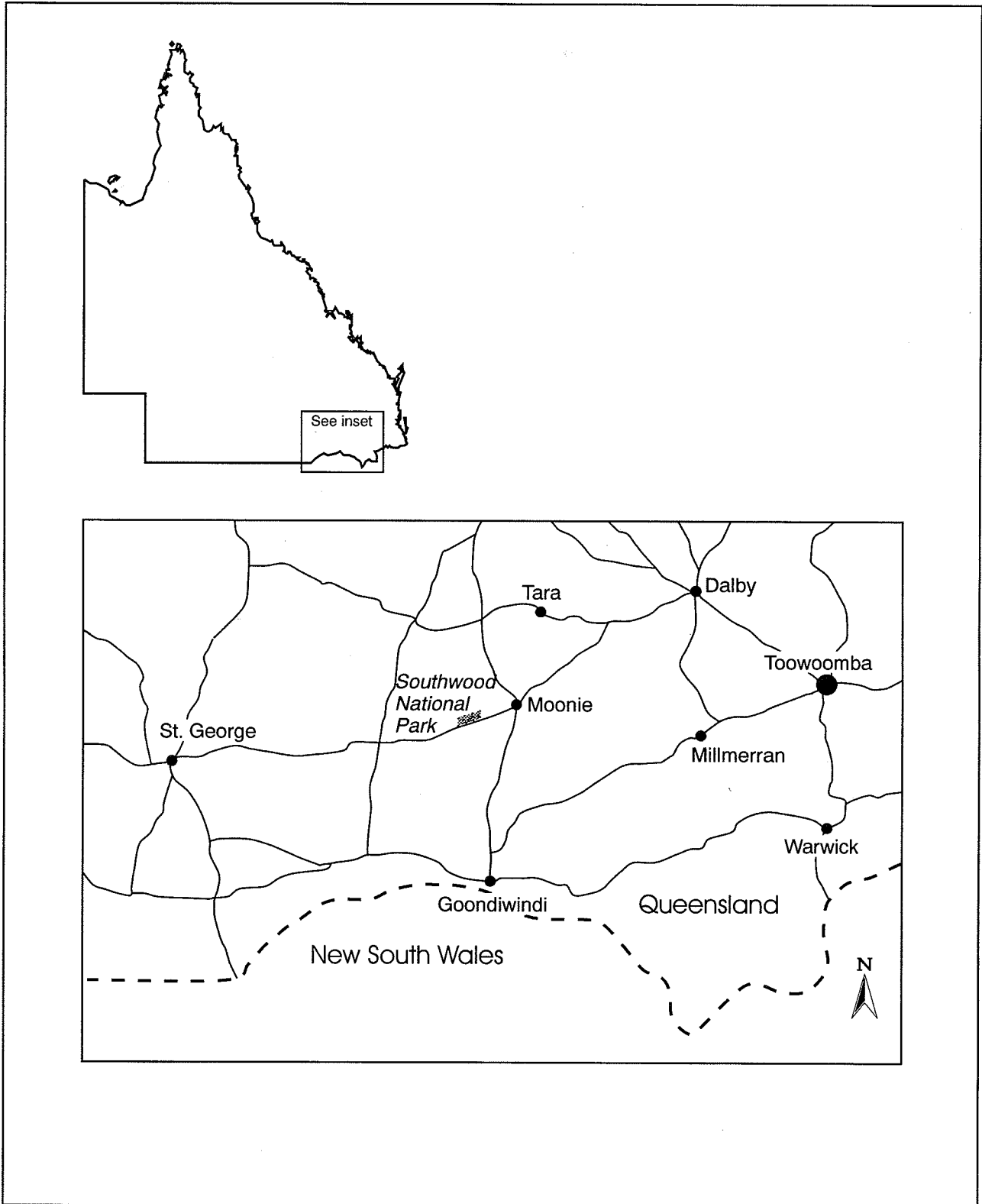
Desired outcomes

- To present the park's natural resources, values and management needs to the community and to develop in visitors behaviour consistent with the responsible and sustainable use of the park.
- To secure community support and involvement in park management.

Proposed guidelines and actions

- A visitor information sheet will be produced for parks of the western Darling Downs. It will include information on Southwood National Park.

Map 1 Southwood National Park locality map



Map 2 Southwood National Park

