Department of Environment and Science

Dwyers Scrub Conservation Park

Management Plan

1998

Queensland Government

Prepared by: **Queensland Parks & Wildlife Service (QPWS, Department of Environment and Science**

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The Dwyers Scrub Conservation Park Management Plan 1998 has been extended in 2023, in line with the Queensland *Nature Conservation Act 1992* (s120G). Minor amendments have been made. There has been no change to the plan's original management intent and direction.

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Summary

This management plan provides the framework and guidelines on how Dwyers Scrub Conservation 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, in accordance with s 125 of the *Nature Conservation Act 1992* (Act). In 2023 the plan was extended, in keeping with s 120 G of the Act. For further information on this plan or the planning process, please contact the Department of Environment and Science at ParkManagementPlans@des.qld.gov.au.

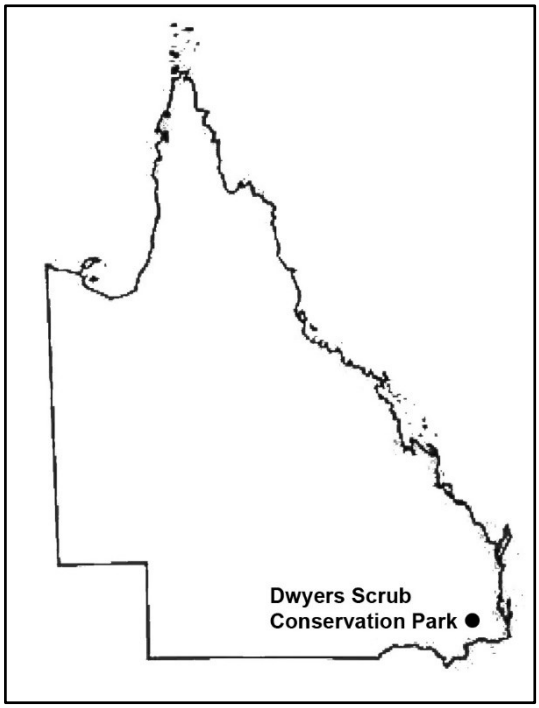
This management plan was prepared by Department of Environment and Science (DES) staff. Thanks are due to those groups and individuals who made submissions in response to the draft plan.

1. Management directions and purpose

1.1 Management directions

Dwyers Scrub Conservation Park is designated under the *Nature Conservation Act 1992*. It must be managed according to the principles set out under Section 20 of the Act to:

- conserve and present the area's cultural and natural resources and their values
- provide for the permanent conservation of the area's natural condition to the greatest possible extent, and
- ensure that any commercial use of the area's natural resources, including fishing and grazing, is ecologically sustainable.



The area of semi-evergreen vine forest located in the north-eastern corner of the park has very high conservation values. The tall to very tall open forest and woodland communities occurring over the remainder of the park contain species of significance as well as providing habitat for animals. Weeds, especially madeira vine, are posing a significant threat to the park. Management will aim to ensure the integrity of these communities is protected by implementing weed and fire management programs.

1.2 Purposes

The major purpose of management will be to ensure:

- the biodiversity of the conservation park is maintained in a natural state
- natural forest regeneration is encouraged in areas previously cleared for timber and grazing
- significant species and community types, such as those that are rare or threatened or those with an unusual distribution, are protected
- fire and weed management maintains the natural species diversity of the dry vine scrub
- opportunities are provided for environmental education and scientific research, and
- local community groups are able to participate in managing the park.

2. Basis for management

2.1 Bioregional context

Dwyers Scrub Conservation Park is on the eastern fall of the Great Dividing Range approximately 30km south-west of Gatton. It conserves an area of 259ha. A gazetted road runs diagonally from the north-western corner to the eastern boundary. It traverses a ridge that bisects the park.

The Lockyer Watershed Management Association (LWMA) was instrumental in having Dwyers Scrub gazetted as an environmental park in 1992. The Association was appointed as joint trustee of the environmental park with the Department of Environment and Science. In 1995, in accordance with the *Nature Conservation Act 1992*, many environmental parks, including Dwyers Scrub, were reclassified as conservation parks. Trusteeships for these areas then became void and the department became solely responsible for managing them. However, LWMA has maintained a strong interest in the management of Dwyers Scrub Conservation Park.

The section of dry vine scrub (semi-evergreen vine thicket) on Dwyers Scrub Conservation Park is significant, as extensive clearing for pasture and cropping means less than 10 per cent of this regional

ecosystem remains. Its conservation status is endangered—less than 1000 hectares of this forest type is protected in the bioregion.

Tall to very tall open forest and woodland communities, supporting a number of significant plant species, occur on about 75 per cent of the park. These community types have also been extensively cleared in the bioregion.

2.2 Values of Dwyers Scrub Conservation Park

2.2.1 Plants and animals

Dwyers Scrub is one of only two dry vine scrub areas protected in the Lockyer Valley. This vegetation type covered up to 20 per cent of the Lockyer Valley until it was cleared, largely for grazing and crops.

More than 260 species of native plants have been recorded on Dwyers Scrub Conservation Park. Of these, two-thirds are confined to the semi-evergreen vine forest/thicket—often referred to as scrub remnant—which covers about 40 hectares of the park. The scrub is largely comprised of microphyll everygreen and semi-evergreen species, with occasional taller emergents such as crows ash *Flindersia australis* and narrow-leaved bottletree *Brachichyton rupestris*. The exotic climber madeira vine is invading and degrading the scrub. Numerous native nice species are also prominent and create the ideal growing condition for small epiphytes such as orchids, which are common. The vulnerable trailing vine *Clematis fawcettii* and the rare, small epiphytic orchid *Sarcochilus dilatatus* occur in the dry vine scrub.

The rest of the park is dominated by eucalypt open forest and woodland communities. Ironbark open forest and woodlands are confined primarily to exposed ridges and upper slopes of Tertiary olivine basalts. Their canopy species include *Eucalyptus crebra, E. melanophloia, E. tereticornis* and *E. melliodora.* However, mixed eucalypt open communities predominate on lower slopes, gullies and drainage line. In these communities *Eucalyptus fibrosa* subsp. *fibrosa*, *E. moluccana*, *E. tereticornis*, *Corymbia intermedia* and *Angophora leigcarpa* are dominant and common canopy species. A small stand of cypress *Callitris glaucaphylla* that occurs in the ironbark open forest represents an eastern outlier of the species—it usually occurs west of the Great Dividing Range. The park is also the only known location of sticky wattle *Acacia ixiophylla* east of the Great Dividing Range. Ma Ma Creek wattle *Acacia loroloba* and *Keraudrenia collina* also occur as a small disjunct population—*K. collina* is more commonly found west of the Great Dividing Range. A recent discovery of *Mentha grandiflora* on the park is of considerable significance as it has previously only been recorded from the Queensland Central Highlands and north-west Burnet districts.

A detailed animal survey has not been conducted on Dwyers Scrub, although a provisional list of 72 bird species has been compiled by the Toowoomba Field Naturalist Club and Des staff. Birds identified on the park include the vulnerable black-breasted button quail, peregrine falcon, satin bowerbird, regent bowerbird, barred cuckoo-shrike and brown-headed honeyeater. These birds are not frequently recorded in the area. Although a comprehensive animal survey has not been completed, incidental sightings include the eastern grey kangaroo, red-necked wallaby and echidna. The park provides a variety of habitats for native animals, especially as much of the surrounding natural habitat has been drastically modified.

2.2.2 Drainage and relief

The park form part of the headwaters of Spinach Creek in the Ma Ma Creek catchment, which is a major tributary of Lockyer Creek. Park vegetation cover provides catchment protection by reducing soil erosion and subsequent stream siltation and improving rainfall infiltration and, therefore, water quality downstream.

2.2.3 Scientific and educational

The Lockyer Watershed Management Association (LWMA) has used Dwyers Scrub as an example of dry vine scrub to teach local people about the importance of preserving this vegetation type.

The park's proximity to the University of Queensland Gatton campus makes it an ideal location for providing educational and research opportunities to tertiary students interested in conservation.

Dwyers Scrub would provide the opportunity to gather information on the poorly studied plant and animal species occurring on the park including the black-breasted button quail.

3. Management strategies

3.1 Plant communities and species

Current situation

DES staff completed a comprehensive plant species checklist for Dwyers Scrub and the immediate environs in 1988. This was compiled from various field surveys and was updated in 1993. It appears weed invasion (especially by madeira vine, cats claw creeper and lantana) is severely threatening the integrity and species diversity of the park's vegetation communities. A small section of the park has been significantly disturbed by activities such as clearing and grazing. Currently the fences and thickness of lantana are enough to exclude stock but these fences need repair.

Desired outcomes

- The biological diversity and integrity of the ecosystems and communities are conserved.
- Rare or threatened species and other species of special significance occurring on the park are protected.

Proposed policies, guidelines and actions

- Develop an action plan for managing Dwyers Scrub vegetation particularly concentrating on the endangered semi-evergreen thicket. Actions will include:
  - Considering the ecological requirements of any significant species including those listed as rare or threatened.
  - Beginning a rehabilitation strategy for the park, incorporating weed control and using results of previous weed control efforts with similar weed problems.
  - Monitoring effectiveness of strategies.

3.2 Native animals

Current situation

A detailed survey of the park has not been conducted although a provisional list of 72 bird species has been compiled. There is evidence that the vulnerable black-breasted button quail *Turnix melanogaster* occurs on the park. The quail appears to use lantana on the perimeter of the scrub for shelter. This species might be considered for the Fauna Species Recovery Program.

Desired outcomes

- The long-term survival of the animal population especially that of any rare and threatened species, is ensured.

Proposed policies, guidelines and actions

- Prepare an action plan to effectively manage the animals. Action will include:
  - Conducting an animal survey on the park.
  - Recording incidental animal sightings.
  - Further encouraging local community groups, including the Toowoomba Birdwatchers Club and the Toowoomba Field Naturalists Club, to continue surveying the area.
  - Following any recovery plans produced for rare and threatened animals.
  - Considering needs of species of special significance in fire and weed management.

3.3 Pest plants and animals

Current situation

The endangered dry vine scrub is threatened by invading aggressive climbing weeds, especially madeira vine *Anredera cordifolia*. This vine is one of the most serious weeds threatening rainforest in eastern Australia. It is causing major problems in rainforests from northern New South Wales to Rockhampton. Controlling it will need to be part of a strategic approach. Cats claw creeper is another aggressive exotic vine of particular concern. It can grow in restricted light and has invaded parts of the dry vine scrub remnant. Experimental weed control work has been initiated by DoE staff and LWMA on cats claw creeper and other weeds on the park. Previous clearing and other disturbances has allowed lantana to invade, especially in the sheltered valleys and dry vine scrub surrounds. Lantana particularly threatens the open forest understorey. Experimental fire management is aiming to control this weed and allow native species to regenerate.

Desired outcomes

- The adverse effects of weeds and feral and domestic animals on the park are minimised.

Proposed policies, guidelines and actions

- Develop a weed action plan for Dwyers Scrub Conservation Park. The plan's priorities will be to:
  - Collate existing information on the biology of weeds and current control methods.
  - Target cats claw creeper, madeira vine and other invasive weeds in the dry vine scrub. Constantly review new control methods for these weeds. The control of madeira vine would need to form part of a strategic approach for the entire region.
  - Control lantana around the dry vine scrub perimeter to decrease the risk of a hot fire burning fire-sensitive scrub species.
- Minimise damage caused by domestic cattle by upgrading park boundary fences in conjunction with park neighbours.

3.4 Fire management

Current situation

The last wildfire recorded on the park was 30 years ago. Fire was historically used on this area to maintain cleared areas as open grassland. This caused the fire-sensitive dry vine scrub to retreat. To conserve this endangered regional ecosystem, management would aim to exclude fire from dry vine scrub areas. The scrub would be encouraged to spread into surrounding cleared areas. Fire would also be used to control lantana. The fire regime required by various open forest species, including the fire-sensitive *Calltiris glaucophylla*, will be studied. Prescribed burning undertaken in October 1997, aimed to protect the scrub remnant by creating a variable fire mosaic in the open forest communities.

Desired outcomes

- The biological diversity of the native plant and animal communities in maintained through responsible fire management.
- Human life and property are protected as far as possible from fire originating from within the park or entering the park from surrounding properties.

Proposed policies, guidelines and actions

- Develop and implement a fire management plan for Dwyers Scrub. The plan will include:
  - Collating existing fire history and monitoring information.
  - Continuing fire monitoring at specific sites to help determine the effect of fire on the vegetation communities and to help make decisions relating to fire management.
  - Liaising with neighbouring landholders to develop co-operative fire suppression programs.
  - Developing wildfire response plans and prescribed burning programs in co-operation with the local Rural Fire Brigade and other relevant authorities.
  - Conducting ecological based fuel reduction burns in open forest and woodland communities.
  - Excluding fire from the fire-sensitive and endangered dry vine scrub.

3.5 Landscape, soil and catchment protection

Current situation

Dwyers Scrub Conservation Park provides vegetative cover for the Ma Ma Creek catchment. Retaining this vegetation in the uplands will help to reduce topsoil runoff and subsequent stream siltation lower in the Lockyer Creek catchment.

Desired outcomes

- Minimise soil erosion compaction from within the park.
- Maintain catchment quality.

Proposed policies, guidelines and actions

- Maintain natural vegetation on the park through fire management which protects the scrub and erosion-prone steep slopes.

3.6 Cultural heritage

Current situation

The cultural heritage significant of the park has yet to be determined.

Desired outcomes

- Involve local communities in managing cultural heritage values.

Proposed policies, guidelines and actions

- Encourage interested groups to participate in park management.

3.7 Education and research

Current situation

LWMA is keen to continue using Dwyers Scrub as an educational tool to demonstrate the importance of applying LandCare principles to conserve natural resources and to provide a basis for sustainable future development.

Desired outcomes

- Provide research and educational opportunities that directly benefit the protection of native species and vegetation communities on the park.

Proposed policies, guidelines and actions

- Allow LWMA to use Dwyers Scrub as an educational tool to demonstrate to landholders the benefits of preserving native vegetation remnants.
- Use Dwyers Scrub as part of a broad strategy to investigate methods of controlling madeira vine, cats claw creeper and lantana. Encourage local groups, including tertiary students to participate in research on Dwyers Scrub, which will help protect the integrity of the park.

3.8 Recreation and tourism

Current situation

Other than discreet boundary signs marking the edge of the park, there are no other interpretive facilities at Dwyers Scrub. There is a track system on the park for ranger access. Only pedestrian access is permitted along the southern boundary, although there are no walking tracks or other visitor facilities. Overnight camping facilities and permanent water are not provided. The only visitors using the park are associated with LSMA or birdwatching groups.

Desired outcomes

- To provide for an ecologically sustainable use of the park for low impact nature-based recreation pursuits.
- To maintain the current low-level of visitor use whilst maintaining the conservation values of the park.

Proposed policies, guidelines and actions

- Maintain current low-level use of the park. Maintain existing signs but do not develop directional road signs or visitor information sheets.

3.9 Plan implementation and monitoring

Current situation

The management plan will be implemented by Central Moreton District staff with help from staff at the Conservation Resource Unit at Moggill. The LWMA and neighbours will also have the opportunity to play an important role in implementing the plan and protecting the park.

Desired outcomes

- To implement the management plan effectively.

Proposed policies, guidelines and actions

- Develop a schedule for plan implementation that identified priorities for park management.
- Liaise with neighbours and community groups about management issues and directions to increase protection of the park's conservation values.