

# Glass House Mountains National Park

**Management Statement**

2013



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

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The Glass House Mountains National Park Management Statement 2013 has been extended in 2024 in line with the Queensland *Nature Conservation Act 1992* (s120G). Minor amendments have been made. There has been no change to the statement's original management intent and direction.

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Park size:	3,037 ha
Bioregion:	South Eastern Queensland
QPWS region:	Sunshine and Fraser Coast
Local government estate/area:	Sunshine Coast Council
State electorate:	Glass House / Caloundra

### Legislative framework

✓	<i>Aboriginal Cultural Heritage Act 2003</i>
✓	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)</i>
✓	<i>Native Title Act 1993 (Cwlth)</i>
✓	<i>Nature Conservation Act 1992</i>
✓	<i>Queensland Heritage Act 1992</i>

### Plans and agreements

✓	Action plan for Australian freshwater fishes
✓	Bonn Convention
✓	China–Australia Migratory Bird Agreement
✓	Japan–Australia Migratory Bird Agreement
✓	Jinibara People and the State Protected Areas Indigenous Land Use Agreement Q12012/129
✓	Oxleyan pygmy perch <i>Nannoperca oxleyana</i> : recovery plan and background papers
✓	National recovery plan for the Mount Emu she-oak <i>Allocasuarina emuina</i>
✓	National recovery plan for wallum sedge-frog and other wallum dependent frog species
✓	Republic of Korea–Australia Migratory Bird Agreement

### Thematic strategies

✓	Level 2 Fire Strategy
✓	Level 2 Pest Strategy

## Vision

Glass House Mountains National Park protects the nationally iconic volcanic plugs of the Glass House Mountains, rainforest remnants on the Blackall Range, eucalypt forest on the slopes and ridges and heath communities on the coastal plain. The area has extremely high cultural values and will be managed in cooperation with Traditional Owners.

Conserving the biological diversity and integrity of the plant and animal communities will be a primary management objective in this highly fragmented landscape. A key component of securing ecological function and diversity will be to secure additional areas and linking corridors of native vegetation to assist movement of species, dispersal of genetic plant material and reduce edge effects.

With the expansion of urban development in this region, the Queensland Parks and Wildlife Service (QPWS) will concentrate on providing recreational opportunities which allow visitors to appreciate the diverse natural landscapes and provide an alternative to the more developed range of opportunities available elsewhere in the Sunshine Coast region.

## Conservation purpose

Glass House Mountains National Park was originally gazetted in 1954 as four separate national parks surrounding the four major peaks—Mount Ngungun, Mount Beerwah, Mount Tibrogargan and Mount Coonowrin. An addition of 48.7ha was made to Mount Beerwah National Park in 1979. In 1994 the four national parks were amalgamated to become Glass House Mountains National Park with an area of 692ha. In that same year the Nature Conservation Amendment Regulation saw the inclusion of three environmental parks into the national park—Mount Saddleback, Mount Miketebumulgrai and Blue Gum Creek. Coochin Hills was added in 1995 and additions to the Coonowrin section in 1999 increased the size of the park to 920ha.

The South East Queensland Forest Agreement transfer process in 2003 saw State forests in Beerwah and Beerburum transferred to forest reserve tenure and then to national park tenure in 2010.

The purpose of all the additions over the years has been to protect the significant natural and cultural values of the Glass House Mountains and their surroundings.

## Protecting and presenting the park's values

### Landscape

The mountains of the national park represent the best example of an eroded central volcano complex in Australia. Formed around 24 million years ago, they are a distinctive example of intrusive volcanic bodies. Advances in geological research show that the Glass House peaks were part of a separate and smaller chain of volcanoes that preceded the main volcanic chain down the east coast of Australia. This research has contributed to more accurate measurements of the rate of movement of sections of the Australian plate (Commonwealth Gazette, 2006).

The mountains are among the most visually impressive landmarks in South East Queensland and can be seen from as far away as the Scenic Rim on the Queensland–New South Wales border. They are often featured in Queensland tourist promotions. The summits provide a broad vista of the coastal and sub-coastal landscapes and the various patterns of surrounding land use.

The native vegetation assists with maintaining water quality in major creek systems, such as Tibrogargan, Coochin, Hussey and Glass Mountain creeks which drain into the Pumicestone Passage. The passage and its environs contain important fishery, floristic and habitat areas and is the last relatively undisturbed coastal area in the Sunshine Coast Region.

Points of geological interest include the Organ Pipes and well-developed cooling columns on Mount Beerwah's north side. Vertical columnar jointing is well displayed in Mt Coonowrin and Mt Ngungun. Several caves have developed on mounts Tibrogargan, Beerwah, Ngungun and Coonowrin, predominately as a result of local weathering.

Naturally occurring erosion and rock falls from the peaks are an ongoing management concern. A significant rock fall occurred at Mount Beerwah from the overhang above the summit access in June 2008. The viewing platform at the base of the mountain was significantly damaged and access to the summit was immediately closed. With ongoing erosion from significant wet weather events in 2010 and 2011, and further instability at the site, Mount Beerwah summit track continues to be closed for public safety. The summit walks on all peaks continue to experience erosion impacts from visitor access, causing detrimental effects on the vegetation communities.

## Regional ecosystems

The national park is located in the riparian zones of Southern Coastal Lowlands and Southeast Hills and Ranges of the South Eastern Queensland bioregion. The Southern Coastal Lowlands across the bioregion are of state significance as they have continued to be cleared for urban development. Remaining patches of native forest are consequently a high priority for the conservation of threatened regional ecosystems, native plants and animals.

The park protects 24 regional ecosystems covering many different landscapes from hinterland rainforests, rocky summits and eucalypt open forest to the coastal heath communities. Four of these regional ecosystems are endangered and nine are of concern (Table 1) and, when combined, cover almost 80 per cent of the park. This makes the park highly significant in its contribution to regional biodiversity conservation. The vegetation is also considered essential habitat under the *Environment Protection and Biodiversity Conservation Act 1999*, that is vegetation that includes a species listed as endangered, vulnerable or near threatened under legislation.

It is important to retain connective vegetation corridors between sections of the park as the Glass House area undergoes human population growth and development. In general, only thin patchy remnants of vegetation connect some sections, while other sections are completely isolated. This isolation makes the impacts of surrounding land uses a constant concern. Threats include unplanned fires, pest plants, increased nutrients, impacts from vehicle use and illegal access. The impacts of fragmentation may be improved by negotiating corridors on adjacent land with neighbouring landholders and land management agencies, as well as acquisition of suitable connective land parcels.

## Native plants and animals

There are 23 plant species of conservation significance recorded on the park (Table 2). The five endangered plant species require specific management efforts if they are to continue to remain viable in their recorded locations. Three of the five plants have management actions outlined in conservation reports.

- national recovery plan for the Mount Emu she-oak *Allocasuarina emuina*
- conservation research statement and proposed recovery plan for swamp stringybark *Eucalyptus conglomerata*
- QPWS species management profile *Leucopogon recurvisepalus*.

The park is essentially a series of islands of habitat for fauna in an otherwise highly modified landscape. These isolated fragments act as stepping stones between the coastal ecosystems and those on the sub-coastal hills and ranges. Twenty-one animals of conservation significance have been found on the park (Table 2), although not all sections have been surveyed and a number of additional species of conservation significance may yet be recorded.

The fragmentation and disappearance of habitat as a result of agriculture and urban development has diminished numbers of the larger arboreals, macropods and some threatened bird species. Other species of ground dwellers have also suffered from exposure, predation and habitat loss. Records of particular interest include:

- the whiptail wallaby *Macropus parryi* at the Twins section. In general their numbers have been observed to have declined or disappeared from previously recorded areas possibly due to habitat loss, predation and inappropriate fire regimes
- a museum record for the vulnerable water mouse *Xeromys myoides* in Scientific Area 1 section in 2000. Research needs to be undertaken to establish if they still occur in the heath
- a 1976 record of the vulnerable long nosed potoroo *Potorous tridactylus tridactylus* in Scientific Area 1. No sightings have been recorded on the park since, even with considerable trapping efforts by the University of the Sunshine Coast
- the endangered Coxen's fig parrot *Cyclopsitta diophthalma coxeni* has been recorded from sites in the Beerburum area, though not specifically on park estate
- the vulnerable eastern glossy black cockatoo *Calyptorhynchus lathami lathami* is reliant on *Allocasuarina littoralis* and *Allocasuarina torulosa* woodlands as a source of food and large hollow bearing eucalypts for nesting. Currently only small stands of Casuarinas occur in Glass House Mountains National Park. Individual trees off-park play a role in assisting the conservation of this cockatoo.

Only one endangered animal species has been formally recorded on the park—the giant barred frog *Mixophyes iteratus*. It was recorded in the late 1990s early 2000s from Ewen Creek which flows through the Maleny section.

## Aboriginal culture

The Glass House Mountains area is of deep spiritual importance for the Jinibara, Gubbi Gubbi and Kabi Kabi Traditional Owners. Protection of this culturally significant landscape is important to assist them to retain their

connection with their country. The Jinbara people have had a successful Native Title determination, Federal Court number QUD6128/98 over the western sections of Glass House Mountains National Park and parts of the conservation park. An Indigenous Land Use Agreement, Q12012/129 has been made between the State of Queensland and the Jinibara People Aboriginal Corporation in March 2013.

The spiritual significance of the mountains to the Traditional Owners is well known to the non-aboriginal community in the area. Protective management of the cultural landscape requires collaborative consultation with the Traditional Owners to ensure places are protected.

Traditional Owners are concerned with the current visitor use on the peaks. Erosion, damage to vegetation, impacts on native animals and the perceived lack of respect for the cultural values has prompted Traditional Owners to request QPWS to undertake management measures to control these impacts. The mountains have great significance to Aboriginal people who believe that the spirits of their dead reside in them. Aboriginal culture has protocols for who may access the peaks. For them, it is not appropriate for the general public to have access to the peaks. Public education is required to inform visitors of their beliefs and of the behaviours which are considered to be appropriate.

QPWS will take opportunities to improve relationships with local Traditional Owner groups and involve them in park management.

## Shared-history culture

One of the most significant cultural values of this park lies in the fact that it has been designated to protect the ecosystems and biological diversity, which are important for future generations on a scientific, social, aesthetic and spiritual level. The mountains have great visual appeal and significance to many people including the local community and those who travel to the Glass House Mountains to visit. The importance to the nation as part of Australia's natural and cultural history has been recognised with their listing in the Queensland Heritage Register (*Queensland Heritage Act 1992*) and the National Heritage List (*Environment Protection and Biodiversity Conservation Act 1999*).

Shared-history cultural sites recognised for their significance relate to the early forestry days, to areas set aside as feature protection areas under the *Forestry Act 1959* and to the soldier settlements established after the First World War.

Scientific Area 1 was reserved in 1968 during a period of widespread exotic pine plantation establishment. It has been nominated for heritage listing as its reservation represents the importance of preserving an area of coastal wallum vegetation. The site has been a valuable resource for many scientific studies.

Reminders of early settlers around the peaks include timber trails and campsites of the timber-getters on the eastern side of Mount Beerwah, parts of an old trigonometry station on Mount Tibrogargan, and wooden and steel pitons left behind by early rock climbers at Mount Coonowrin. Rock climbing was practised in the Glass House Mountains from the early 1900s. The first ascent of Mount Coonowrin in 1910 by a local man, Henry Mikalsen aged 23 years, is a significant milestone for modern climbing in Australia (Meadows, 2012).

Quarries dating from the early 1950s can be seen at Mount Ngungun and Mount Miketeebumulgrai while Mount Coochin and Mount Elimbah show evidence of more recent quarry activity. Right-angled trenches used for the Second World War infantry training can be found on the lower slopes of Mount Elimbah.

Five sites have been identified in the Mount Beerburum section—the Beerburum Fire Tower and Mount Beerburum day-use area and, most significantly, the Beerburum Soldier Settlement Complex, the Beerburum hospital site and cemetery which represent remnants of support provided to returned servicemen and their families involved in the First World War. The settlement was established in 1916 and lasted until the late 1920s. Local history groups are considering organising some events to commemorate the centenary in 2016.

Management of cultural resources occurs in accordance with principles in the Charter for the Protection and Management of the Archaeological Heritage and in The Burra Charter through the protective management guidelines from the QPWS Cultural Heritage Manual.

## Tourism and visitor opportunities

The Glass House Mountains Region provides a unique setting and a diverse range of recreational opportunities, making it an important tourist focal point for the Sunshine Coast. The national park provides a specific attraction that contributes to the economies of the Sunshine Coast and hinterland communities. The Glass House Mountains National Park is the focus of several actions in the Tourism and Events Queensland's Sunshine Coast Tourism Opportunity Plan 2009–2017.

The park provides a network of trails for walking and nature appreciation, day-use facilities and access to areas for rock climbing and abseiling. Horse riding is currently permitted in the nearby Glass House Mountains Conservation

Park, forest reserve trails through Dularcha National Park near Landsborough and in Beerburrum State Forest. Four-wheel driving and trail bike riding are not permitted in the national park due to the trails being short and having steep erodible gullies. These activities are provided for in nearby Beerburrum State Forest.

Mount Coonowrin was designated as a restricted access area in 1999 on the recommendation of an engineer's report due to ongoing instability and public safety concerns (Coffey, 1999). Tourist access to Mount Beerwah summit is also closed to public access due to a high level of site instability. There is currently a very high risk of rock fall which may result in injury or death at the Mount Beerwah tourist access. QPWS continues to monitor the site.

The future provision of recreational opportunities and facilities on the park has been considered in the broader recreation landscape of the Sunshine Coast region to ensure a range of opportunities is provided in different settings. Some sections, such as Mount Miketeebumulgrai and Blue Gum Creek, protect highly sensitive plant communities and have minimal recreational opportunities due to their location and landscape. No further development is envisaged for these sections.

The expanding urban development in the Caloundra and Caboolture region and the escalating numbers of people seeking outdoor experiences, particularly on weekends, has increased both legitimate and illegal recreational use on the park. This increased recreational use is impacting heavily on highly sensitive sites, with particular emphasis on the major peaks of the Glass House Mountains. It is reasonable to expect that demand for visitor use of the protected areas in this region will continue to grow. The mitigation of impacts, balanced with the popularity of the Glass House Mountains and the need for active recreation in a growing South East Queensland population, presents an ongoing management challenge for QPWS.

## Education and science

Continuous improvement in park-based knowledge and information contributes to all facets of park management; therefore education and science are vital for achieving management objectives.

In the Glass House Mountains National Park various formalised activities occur including wildflower walks conducted by Sunshine Coast Council in the scientific areas during the Sunshine Coast Wildflower Festival. An educational site at Mt Beerburrum is used by school groups in the region. The University of the Sunshine Coast is establishing a field study centre in the adjacent pine plantation.

Traditional Owners have an interest in providing interpretive, cultural tours and education around the Glass House Mountains area.

The scientific areas in Glass House Mountains National Park have been highly valued for ecological research since the 1970s by the Forestry Department, the Zoology Department of the University of Queensland and more recently by the Commonwealth Scientific and Industrial Research Organisation and the University of the Sunshine Coast.

Scientific Area 1 (SA1) was the first scientific area to be declared in the state and has the longest running fire records in Australia. Scientific Area 24 (SA24) represents an important reference site for studying the effects of various burning regimes on wallum heath vegetation. It was reserved in 1976 as it had remained unburnt since 1927–28. In 1999 an intense hot fire burnt the whole site and research plots were set up to monitor ecosystem re-establishment and the regeneration of *Eucalyptus conglomerata*. Scientific Area 59 (SA59) has geological values based on the Landsborough soil profile studies carried out there. It has additional conservation value as a scientific control if SA1 is damaged by wildfires.

Other research projects involving the park's natural resources include *Eucalyptus conglomerata* and *Allocasuarina emuina* regeneration monitoring by QPWS, and ecological and genetic effects of fragmentation, fire and disturbance on *Acacia baueri* and *Blandfordia grandiflora* by the University of the Sunshine Coast.

Conservation management of these species relies on undertaking actions and recommendations outlined as a result of these studies. More research is needed on the effects of fragmentation on the ecological function and species diversity in these small park remnants.

## Partnerships

QPWS has established important management relationships with a number of government agencies, Traditional Owners, interest and community groups.

Active partnerships on the park include regular patrolling and enhanced compliance activities with the Queensland Police Service and Forest Plantations Queensland. A strong working relationship also exists with Forest Plantations Queensland for joint fire management, joint access infrastructure roads and cross tenure permit assessment.

QPWS undertake joint management programs with the Sunshine Coast Council on wild dog baiting.

Community groups such as Glasshouse Mountains Advancement Network actively promote the natural values of the Glass House Mountains and have collected resources which QPWS may utilise in the future.

A number of local recreational groups would like more involvement in park management.

The Glass House Mountains have a significant value to the rock climbing community and a history of rock climbing use dating back to the early twentieth century. It is important for QPWS to develop and maintain positive relationships with this and other outdoor recreational groups and associations.

## Other key issues and responses

### Pest management

The national park consists of many isolated parcels of protected area resulting in a substantial interface with surrounding land uses. Pest plants tend to dominate along park edges and have a detrimental effect on the integrity of plant communities, by changing fire patterns, impeding germination and growth of native plants, and invading where there is disturbance to the plant community.

One of the biggest pest threats to the natural integrity of the vegetation communities and visual amenity are the climbing legumes. They are smothering large areas along park edges and disturbed areas in the park. Vegetation communities particularly suffering from weed infestations are the *Eucalyptus pilularis* communities on the Glass House peaks and the vine and palm forest communities in mounts Beerwah and Beerburrum.

QPWS has a responsibility to control declared pests under the *Land Protection (Pest and Stock Route Management) Act 2002* on protected areas. Pest management is undertaken in accordance with the QPWS Pest Management System. A Level 2 pest management strategy for the Glass House Mountains management area details the nature and extent of threats, strategy and operations including monitoring and containment procedures.

The park has recorded sightings and evidence of foxes *Vulpes vulpes*, feral cats *Felis catus*, pigs *Sus scrofa*, wild dogs *Canis familiaris* and cane toads *Rhinella marinus*. The Level 2 pest management strategy outlines the management control of these species. One of the highest priorities in this management area is for wild dogs. QPWS remains actively involved in bi-annual dog baiting programs in conjunction with Sunshine Coast Council and neighbours. In relation to pigs, feral cats and foxes the pest management program focuses on reducing the numbers and impacts through baiting or trapping.

### Fire management

Fire management in the Glass House Mountains is essential to protect people and property, biodiversity, natural ecological processes, cultural heritage and pine plantation. Planned burns are important to maintain vegetation structure and diversity, stimulate seed dispersal, help species germinate and maintain tree hollows for animal habitat.

A coordinated approach to fire management is in place between Forest Plantations Queensland and QPWS. This involves undertaking wildfire mitigation in plantation areas as well as conducting fire management in native vegetation in State forest and protected areas.

QPWS utilises a comprehensive Fire Management System that sets standards and operational aspects of planned burns and wildfire responses on protected areas and forests. Currently the Glass House Mountains management area has a Level 2 fire strategy.

Consideration is given to the placement of fire breaks and the use of fire mitigation zones, surrounding land being a source of wildfires and increased fire frequency, community pressure to burn more frequently as the surrounding urban development expands and unlawful use of firebreaks by four-wheel drives and motorbikes causing erosion and difficulties for access.

QPWS will maintain a continuous improvement and adaptive approach to its fire management practices.

### Resource use

Utilities in the planning area include mobile phone towers, power line easements, water reservoirs and fire towers. Mobile phone towers are authorised under federal legislation while the other utilities require occupation permits.

Sunshine Coast Council has an occupation permit for a water reservoir on Mount Beerburrum.

A number of power line easements also have occupation permits. These easements are increasingly fragmenting the vegetation communities on the park and are becoming infested with weeds which then start to invade the vegetation on either side. Unlawful activities are also occurring along these easements, including trail bike riding and rubbish dumping. These issues take considerable effort and resources to manage. Power companies responsible for the infrastructure development must provide ongoing funding for the sites conservation



management.

## References

Coffey Geosciences Pty Ltd 1999, *Queensland Department of Environment and Heritage Stability Assessment, Mount Coonowrin*. Glass House Mountains National Park.

Commonwealth of Australia Gazette Special. 3 August 2006.

Meadows M 2012, *The living rock: the origins of climbing in Australia*. Australasian Climbing Journal, Crux Number 2.

## Management directions

Desired outcomes	Actions and guidelines
<p><b>Landscape</b></p> <p>The landscape and scenic features are protected and presented with minimal impact to their natural and cultural values.</p>	<p>Prioritise and undertake the protection, natural recovery and active rehabilitation of degraded landscapes and erosion areas.</p> <p>Maintain positive relationships with neighbouring land holders and land management agencies with a view to increasing the corridor values of adjacent land parcels.</p> <p>Investigate the possibility of acquisition of suitable land parcels to improve connectivity between park sections.</p>
<p><b>Native plants</b></p> <p>Vegetation communities and species, especially those of conservation significance are protected.</p> <p>Vegetation surveys, mapping and monitoring contributes to a better knowledge base for ecological management.</p>	<p>Identify any threatening issues to the integrity of the endangered and of concern regional ecosystems and carry out management actions to improve their integrity.</p> <p>Continue broad scale condition assessment of the extent and health of Mount Ngungun's rocky pavement community.</p> <p>Identify the location of conservation significant native plants.</p> <p>Implement actions in the conservation reports for the endangered plants, where feasible.</p>
<p><b>Native animals</b></p> <p>Native animal surveys, mapping and monitoring contributes to a better knowledge base for ecological management and securing viable populations.</p>	<p>Undertake native animal surveys for the new park sections of Beerwah and Beerburrum.</p> <p>Implement relevant actions in recovery plans and other conservation documents for conservation significant species where feasible.</p> <p>Survey and monitor the population of the endangered giant barred frog in the Maleny section and determine if any active management is required.</p> <p>Liaise with Sunshine Coast Council on their initiatives for the protection of threatened species through their pest, fire and habitat management programs.</p>
<p><b>Aboriginal culture</b></p> <p>Traditional Owner connections to the area are recognised and respected.</p>	<p>Consult with Traditional Owners regarding decisions on any works on the park.</p> <p>Work with Traditional Owners to identify and document values, sites, artefacts and places of cultural heritage significance which they can share so that management strategies and decisions relating to fire regimes, access and track maintenance minimise potential threats to these values.</p> <p>Consider limiting access to areas with significant aboriginal cultural heritage values.</p>
<p><b>Shared-history culture</b></p> <p>Shared heritage places and landscapes are identified and protected from visitor impacts and management activities.</p>	<p>Implement protective management guidelines from the QPWS Cultural Heritage Manual conservation profiles.</p> <p>Consider limiting access to areas with significant cultural heritage values and monitor them to provide information on the impacts of activities.</p>
<p><b>Tourism and visitor opportunities</b></p> <p>The national park is valued as a natural area where visitors enjoy diverse nature-based recreation opportunities.</p> <p>Recreational activity in the park does not compromise the natural integrity or diminish the quality of visitor experience.</p>	<p>Investigate the need to develop a Visitor Management Strategy.</p> <p>Work with commercial tourism operators to ensure their clients receive information regarding the park values and which encourages visitor behaviours which support these values.</p> <p>Monitor the Mount Beerwah summit area for stability and assess whether any practical measures are feasible to improve the safety of the area.</p>
<p><b>Education and science</b></p> <p>Park visitors are aware of and supportive of the protection of natural and cultural values and park management actions.</p>	<p>Develop increased awareness and understanding of the cultural heritage significance of the park with the local community and user groups through education and interpretation programs.</p> <p>Consult with Traditional Owners to determine appropriate sites and themes for interpretation of Aboriginal values.</p> <p>Foster positive relationships with key user and community groups to assist with ongoing management.</p>
<p><b>Pest management</b></p> <p>The integrity of native plant and animal communities is improved, and the impacts of pests are minimised through strategic, sustained management.</p>	<p>Review and implement the Level 2 pest management strategy for the park.</p> <p>Coordinate the approach to pest management with Sunshine Coast Council, land protection officers and neighbours.</p>
<p><b>Fire management</b></p> <p>Fire management enhances the diversity</p>	<p>Finalise and implement the Level 2 fire management strategy for the Glass House Mountains management area which identifies fire management zones</p>

Desired outcomes	Actions and guidelines
and structure of communities and protects life and property.	and priorities for fire management activities. Work with Forest Plantations Queensland to progress the joint management approach to wildfire response and prescribed burning.
<b>Resource use</b> Resource use of the park does not compromise the natural and cultural integrity.	Locate any new services along existing use sites or corridors where possible.

## Tables – Conservation values management

**Table 1: Endangered and of concern regional ecosystems**

Regional ecosystem number	Description	Biodiversity status
12.3.1	Gallery rainforest (notophyll vine forest) on alluvial plains	Endangered
12.3.2	<i>Eucalyptus grandis</i> tall open forest on alluvial plains	Of concern
12.3.4	<i>Melaleuca quinquenervia</i> , <i>Eucalyptus robusta</i> open forest on or near coastal alluvial plains	Of concern
12.3.5	<i>Melaleuca quinquenervia</i> open forest on coastal alluvial plains	Of concern
12.3.13	Closed heathland on seasonally waterlogged alluvial plains near coast	Of concern
12.3.14	<i>Banksia aemula</i> woodland on alluvial plains near coast	Of concern
12.5.3	<i>Eucalyptus tindaliae</i> , <i>E. racemosa</i> open forest on remnant Tertiary surfaces. Deep red soils	Endangered
12.5.6	<i>Eucalyptus siderophloia</i> , <i>E. propinqua</i> , <i>E. microcorys</i> and/or <i>E. pilularis</i> open forest on remnant Tertiary surfaces. Usually deep red soils	Endangered
12.8.8	<i>Eucalyptus saligna</i> or <i>E. grandis</i> tall open forest on Cainozoic igneous rocks	Of concern
12.8.19	Heath and rock pavement with scattered shrubs or open-woodland on Cainozoic igneous hills and mountains	Of concern
12.8.20	Shrubby woodland with <i>Eucalyptus racemosa</i> or <i>E. dura</i> on Cainozoic igneous rocks	Of concern
12.9-10.16	Araucarian microphyll to notophyll vine forest on sedimentary rocks	Endangered
12.9-10.22	Closed sedgeland/shrubland on sedimentary rocks. Coastal parts	Of concern

**Table 2: Species of conservation significance**

Scientific name	Common name	Nature Conservation Act 1992 status	Environment Protection and Biodiversity Conservation Act 1999 status	Back on Track status
<b>Plants</b>				
<i>Acacia attenuata</i>		Vulnerable	Vulnerable	High
<i>Acacia baueri</i> subsp. <i>baueri</i>	tiny wattle	Vulnerable	-	Medium
<i>Allocasuarina emuina</i> *	Mount Emu she-oak	Endangered	Endangered	Low
<i>Allocasuarina filidens</i>	Mount Beerwah she-oak	Near threatened	-	Low
<i>Arundinella montana</i>	mountain reed grass	Near threatened	-	Low
<i>Banksia conferta</i>		Vulnerable	-	-
<i>Blandfordia grandiflora</i>	Christmas bells	Endangered	-	High
<i>Dodonaea rupicola</i>		Vulnerable	Vulnerable	Low
<i>Eucalyptus conglomerata</i>	swamp stringybark	Endangered	Endangered	Medium
<i>Eucalyptus curtisii</i>	Plunkett mallee	Near threatened	-	Low
<i>Eucalyptus kabiana</i>	Mount Beerwah mallee	Vulnerable	Vulnerable	Low
<i>Gonocarpus effusus</i>		Near threatened	-	Low
<i>Grevillea hodgei</i>		Vulnerable	-	Low
<i>Hernandia bivalvis</i>	cudgerie	Near threatened	-	Low
<i>Leptospermum luehmannii</i>		Vulnerable	-	Low
<i>Leptospermum oreophilum</i>		Vulnerable	-	Low
<i>Leucopogon recurvisepalus</i>		Endangered	-	Low
<i>Marsdenia coronata</i>	slender milkvine	Vulnerable	Vulnerable	Low
<i>Melaleuca groveana</i>		Near threatened	-	Low
<i>Maundia triglochinosides</i>		Vulnerable	-	Medium
<i>Pararistolochia praevenosa</i>		Near threatened	-	High
<i>Ricinocarpos speciosus</i>		Vulnerable	-	Medium
<i>Westringia grandifolia</i>		Endangered	-	Low
<b>Animals</b>				
<i>Accipiter novaehollandiae</i>	grey goshawk	Near threatened	-	Low
<i>Adelotus brevis</i>	tusked frog	Vulnerable	-	Medium
<i>Calyptorhynchus lathami lathami</i>	glossy black-cockatoo (eastern)	Vulnerable	-	High
<i>Crinia tinnula</i>	wallum froglet	Vulnerable	-	High
<i>Erotoscincus graciloides</i>	elf skink	Near threatened	-	Medium
<i>Kerivoula papuensis</i>	golden-tipped bat	Near threatened	-	Medium
<i>Litoria brevipalmata</i>	greenthighed frog	Near threatened	-	Medium
<i>Litoria freycineti</i>	Freycinet's frog	Vulnerable	-	Medium
<i>Litoria olongburensis</i> *	wallum sedgefrog	Vulnerable	Vulnerable	Medium
<i>Litoria pearsoniana</i>	cascade treefrog	Vulnerable	-	Low
<i>Mixophyes iteratus</i>	giant barred frog	Endangered	Endangered	Medium
<i>Nannoperca oxleyana</i> *	Oxleyan pygmy perch	Vulnerable	Endangered	Critical

Scientific name	Common name	Nature Conservation Act 1992 status	Environment Protection and Biodiversity Conservation Act 1999 status	Back on Track status
<i>Numenius madagascariensis</i>	eastern curlew	Near threatened	-	Low
<i>Ornithoptera richmondia</i>	Richmond birdwing butterfly	Vulnerable	-	Critical
<i>Phascolarctos cinereus</i> (southeast Queensland bioregion)	koala	Vulnerable	-	-
<i>Podargus ocellatus plumiferus</i>	plumed frogmouth	Vulnerable	-	Low
<i>Potorous tridactylus tridactylus</i> *	long-nosed potoroo	Vulnerable	Vulnerable	Medium
<i>Pseudomugil mellis</i> *	honey blue-eye	Vulnerable	Vulnerable	Critical
<i>Pteropus poliocephalus</i>	grey-headed flying-fox	-	Vulnerable	Critical
<i>Tyto tenebricosa tenebricosa</i>	sooty owl	Near threatened	-	Low
<i>Xeromys myoides</i>	water mouse	Vulnerable	Vulnerable	High

\* Species with a recovery plan.

**Table 3: Species listed in international agreements**

Scientific name	Common name	BONN	CAMBA	JAMBA	ROKAMBA
<i>Apus pacificus</i>	fork-tailed swift	-	✓	✓	✓
<i>Ardea ibis</i>	cattle egret	-	-	✓	✓
<i>Ardea modesta</i>	eastern great egret	-	✓	✓	-
<i>Coracina tenuirostris</i>	cicada bird	-	-	✓	-
<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle	-	-	-	✓
<i>Hirundapus caudacutus</i>	white-throated needletail	-	✓	✓	✓
<i>Merops ornatus</i>	rainbow bee-eater	-	-	✓	-
<i>Monarcha melanopsis</i>	black-faced monarch	✓	-	-	-
<i>Myiagra cyanoleuca</i>	satin flycatcher	✓	-	-	-
<i>Rhipidura rufifrons</i>	rufous fantail	✓	-	-	-
<i>Symphoricarphus trivirgatus</i>	spectacled monarch	✓	-	-	-

BONN (CMS) – Bonn Convention

CAMBA – China–Australia Migratory Bird Agreement

JAMBA – Japan–Australia Migratory Bird Agreement

ROKAMBA – Republic of Korea–Australia Migratory Bird Agreement