

Astrebla Downs National Park Management Statement 2013

Park size:	176,000ha
Bioregion:	Mitchell Grass Downs Channel Country
QPWS region:	Central
Local government estate/area:	Diamantina Shire
State electorate:	Mount Isa



Bilby diggings on Astrebla Downs National Park. Photo: NPRSR

Legislative framework

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

Plans and agreements

✓	Bonn Convention
✓	China–Australia Migratory Bird Agreement
✓	Japan–Australia Migratory Bird Agreement
✓	Republic of Korea–Australia Migratory Bird Agreement
✓	Recovery Outline for Plains-wanderer (<i>Pedionomus torquatus</i>) 2000
✓	Recovery plan for the community of native species dependent on natural discharge of groundwater from the Great Artesian Basin 2010
✓	Recovery Plan for the Greater Bilby, <i>Macrotis lagotis</i> , 2006-2011

Thematic strategies

✓	Astrebla Downs Fire Management Strategy
✓	Diamantina Pest Management Plan

Vision

Astrebla Downs National Park will be managed for its special conservation values, particularly the state's most important wild population of the greater bilby (*Macrotis lagotis*).

Due to access constraints, recreation opportunities remain minimal and visitors will be encouraged to visit Diamantina National Park to gain similar and more diverse experiences as those found on Astrebla Downs.

Conservation purpose

The park will conserve a significant population of the greater bilby and animals of conservation concern including the Kowari *Dasyuroides byrnie* and plains-wanderer *Pedionomus torquatus*. The greater bilby recovery plan and plains-wanderer recovery plan will be implemented and monitored. Astrebla Downs National Park will conserve the most extensive protected Mitchell grass downs area in Queensland.

Protecting and presenting the park's values

Landscape

Astrebla Downs National Park is approximately 350 kilometres (km) west of Longreach, 300km south-west of Winton, 120km east of Bedourie and 200km north-west of Windorah (all as the crow flies). Access is via unsealed private property roads which are impassable after rain. A dirt airstrip is maintained adjacent to the barracks accommodation used by Queensland Parks and Wildlife Services (QPWS) Rangers. The park is bounded by extensive cattle grazing properties.

Nearby Diamantina National Park conserves one of the most biologically diverse areas of western Queensland. It offers visitors the opportunity to experience the arid zone and provides for camping, scenic driving, wildlife appreciation and fishing. These activities will primarily focus on Diamantina National Park as a destination.

Astrebla Downs National Park lies in the Eromanga Basin—a sub-basin of the Great Artesian Basin. Its topography consists of flat to undulating erosional plains dissected by minor drainage lines. It is covered with deep cracking clay soils derived from Cretaceous sediments. Exceptional landscape features include vistas across the downs that are uninterrupted by trees or other structures.

The landscape is largely undisturbed, however, some areas have undergone landscape change by past pastoral activities. These include the bore drain from Ingledoon No. 2 bore. This drain previously created an artificial wetland and area of increased shrub density. The bore was capped in 2012 allowing the drainage channel to return to a natural state.

The extreme eastern edge of the park takes in a portion of Mooradonka waterhole, which is part of Spring Creek. This waterhole provides the most reliable water feature on Astrebla Downs National Park.

Regional ecosystems

There are at least 14 regional ecosystems listed for this park. Eight are from the Mitchell Grass Downs bioregion and six from the Channel Country bioregion. There are two of concern regional ecosystems—*Eucalyptus coolabah* and *E. camaldulensis* open woodlands along drainage lines or fringing billabongs (Table 1). Ten regional ecosystems have low representation in other protected areas.

Astrebla Downs National Park lies predominantly in the South western Downs subregion of the Mitchell Grass Downs bioregion. This subregion is the most arid area of the Mitchell Grass Downs bioregion and the systems are dominated by barley mitchell grass (*Astrebla pectinata*) with other herbs and grasses occurring during wetter periods. Due to the unreliable rainfall, large areas may be bare during dry periods.

Native plants and animals

Significant vegetation features include barley mitchell grass, with other *Astrebla* spp. occurring during wetter periods, bottleshiners *Enneapogon* spp. and chenopods on Cretaceous sediments forming open-tussock grasslands dominated by short grasses with forbs co-dominating in favourable seasonal conditions.

Astrebla Downs National Park is a site of State and National significance for a number of species of conservation concern listed under the NCA and/or EPBC including greater bilby *Macrotis lagotis*, plains-wanderer *Pedionomus torquatus*, kowari *Dasyuroides byrnei* and western taipan *Oxyuranus microlepidotus* (Table 2). In addition, seven bird species are recorded in international agreements (Table 3).

Aboriginal culture

Aboriginal peoples have an affiliation with places in the park. Astrebla Downs National Park represents an area significant to the Maiawali and Karuwali People and contains material evidence of past occupation including artefact scatters and grinding stones. Mooradonka waterhole would be the focus of previous occupation by aboriginal people.

Shared-history culture

There is little evidence of post-contact occupation of the park except Ingledoon No. 2 bore and stock management fencing. The remnants of the drilling rig that sank Ingledoon No. 2 bore was buried beside the bore during a rehabilitation program in the mid 1990s.

Tourism and visitor opportunities

Currently, no formalised gazetted access is provided to the park and any access needs to be negotiated with the adjoining neighbours. As a result Astrebla Downs National Park is not managed for recreation or tourism. No visitor facilities or signs exist on park. Visitors wishing to experience a remote outback setting and more diverse experiences are encouraged to visit Diamantina National Park.

Education and science

The educational values of Astrebla Downs National Park lie within the research values of the ecosystems of the park. An array of rare and threatened plants and animals occur in a remote and generally undisturbed state providing an exceptional opportunity for research. Animals researched in the past include the greater bilby, Dasyurid carnivores and birds e.g. plains wanderer and letter-winged kite. Ongoing research is being undertaken on the greater bilby.

Partnerships

Astrebla Downs National Park has potential value to the local community as a benchmark example of environmental management. An opportunity exists for co-management with the Traditional Owners of the area, pending Native Title determination.

Pest management and joint fencing is undertaken with park neighbours.

Other key issues and responses

Fire management

The Mitchell grass plains are unlikely to carry fire due to low fuel loads occurring during fire seasons. Fires started by natural events (e.g. lightning strikes) are unlikely to burn large areas and are likely to naturally extinguish. This will create a natural burn mosaic.

A Level 2 fire management strategy has been developed.

Pest management

No weeds of national significance have been recorded. The potential of colonisation of the Mitchell grass downs by buffel grass *Cenchrus ciliaris* is of concern.

Pest animals on park include feral cats *Felis catus*, wild dogs *Canis lupus familiaris* and rabbits *Oryctolagus cuniculus*. These animals threaten native wildlife through predation and competition. Cats are a significant predator of the bilby, particularly at the end of rat plagues when their preferred food source is no longer available.

Stock incursions are a threatening process to the Mitchell grass downs ecosystem, the greater bilby, plains wanderer and cultural sites. The effect on the greater bilby is through competition for food and collapse of bilby burrows (note that old burrows are used by other rare and threatened species). Fences are in place to exclude stock.

References

Johnson R 1997, *The Vertebrate Fauna of the Mitchell Grass Downs Biogeographical Region of Queensland*, 'A Report to the Australian Heritage Commission', Department of Environment, Queensland.

Management directions

Desired outcomes	Actions and guidelines
<p>Landscape</p> <p>Natural integrity of Mitchell grass systems (including visual amenity) is retained.</p>	<p>A1. Assess landscapes to monitor natural condition (focussed on ground cover). Sites on-park should have 10% greater ground-cover than off-park areas.</p> <p>A2. Maintain the bore so it is functional for management use but doesn't leak.</p> <p>A3. Assess current erosion levels of management tracks and use run-off control measures to reduce the rate of erosion.</p>
<p>Regional ecosystems</p> <p>The integrity of native plant communities is maintained.</p>	<p>A4. Maintain the diversity and health of regional ecosystems through ensuring stock incursions are minimised.</p> <p>A5. Boundary fence inspection/repair should be undertaken at least six monthly.</p>
<p>Native plants and animals</p> <p>Knowledge of plant species and associated communities, and their ecological requirement is comprehensive.</p> <p>Species diversity and habitat requirements are well understood and documented.</p> <p>Populations of 'species of conservation concern' are maintained or enhanced through appropriate management regimes. Knowledge of park use by 'species of conservation interest' is improved.</p>	<p>A6. Maintain currency of plant and animal lists by reviewing WildNet records annually and incorporating new records.</p> <p>A7. Maintain herbaria for office and field use with specimens submitted to the Queensland Herbarium within two months of collection.</p> <p>A8. New staff induction to include local vegetation identification within six months of commencement.</p> <p>A9. Evaluate impacts of management actions on species and communities by undertaking an appropriate level of environmental assessment before actions commence.</p> <p>A10. Conserve a significant population of the greater bilby <i>Macrotis lagotis</i> and animals of conservation concern including the Kowari <i>Dasyuroides byrnei</i>, plains-wanderer <i>Pedionomus torquatus</i> and western taipan <i>Oxyuranus microlepidotus</i>.</p> <p>A11. Implement relevant sections of the 'Recovery Plan for the Greater Bilby, <i>Macrotis lagotis</i>, 2006-2011' to ensure the burrow counts of bilbies are maintained or improved over the 1990 aerial census estimation.</p> <p>A12. Undertake at least one formal animal survey every five years.</p> <p>A13. Implement relevant sections of the 'Plains-wanderer <i>Pedionomus torquatus</i> Recovery Plan' by 2015.</p> <p>A14. Encourage staff to become familiar with key species including CAMBA, ROKAMBA, JAMBA and Bonn Convention birds and to record and report sightings to WildNet within a month of observation.</p> <p>A15. Enter fence condition and location into the Strategic Asset Management System (SAMS) and ParkInfo within a month of inspection.</p>
<p>Aboriginal culture</p> <p>The guidelines in the Cultural Heritage Management Plan are implemented.</p> <p>The integrity of Aboriginal culture is retained.</p> <p>Aboriginal heritage is protected and respected during park management activities.</p>	<p>A16. Maintain the integrity of Aboriginal and non-indigenous cultural heritage values by minimising cattle incursions.</p> <p>A17. Assist Kirrendirri Aboriginal Corporation in the development of the Cultural Heritage Management Plan by 2015.</p> <p>A18. Train staff in cultural heritage awareness and identification within six months of commencement.</p> <p>A19. Conserve places of Aboriginal cultural significance by involving Traditional Owners in park management on an annual basis.</p> <p>A20. Follow guidelines for the management of significant cultural places in conjunction with Traditional Owners.</p> <p>A21. Identify and map Aboriginal cultural resources.</p> <p>A22. Using Traditional names for park features and facilities (e.g. roads and waterhole names where known) internally and registered as appropriate with the relevant authorities.</p> <p>A23. Follow the Native Title notification process when initiating works.</p>

Desired outcomes	Actions and guidelines
<p>Shared-history culture</p> <p>Historical cultural values identified and recorded.</p>	<p>A24. Document historical features and assess for safety by 2015.</p> <p>A25. Enter heritage related structures on the Strategic Asset Management System (SAMS) and ParkInfo within six months of first records.</p>
<p>Tourism and visitor opportunities</p> <p>Astrebla Downs National Park remains a remote destination, known for its threatened species protection.</p>	<p>A26. Public access will be limited to well-prepared groups that have made prior arrangements.</p> <p>A27. Promote Diamantina National Park as 'the' recreation (tourist) destination in the area.</p> <p>A28. Promote and continue the 'Take your rubbish with you' management approach for all visitor, staff and research groups.</p>
<p>Education and science</p> <p>A reputation as a site of research excellence is achieved—enhanced by appropriate research.</p> <p>Information gathered from research is available for management decisions.</p> <p>Research is conducted on species of conservation concern with outcomes that enable improved park and species management.</p> <p>All research on park is conducted in a professional manner.</p>	<p>A29. Maintain and enhance research opportunities.</p> <p>A30. Develop an off park system to display park values to the general public.</p> <p>A31. Ensure management related information is integrated into park information systems.</p> <p>A32. Assess on park research facilities and undertake actions to attain a safe environment and minimum accommodation standard.</p> <p>A33. Researchers to adhere to policies and protocols:</p> <ul style="list-style-type: none"> • call in procedures while at Astrebla Downs barracks • clean-up base • comply with agency remote area policy • provide notice prior to activities. <p>A34. QPWS staff to be involved in greater bilby program annually.</p>
<p>Partnerships</p> <p>Successful co-management with Traditional Owners.</p> <p>Relationships with neighbours are positive and cooperative.</p> <p>The park is appreciated by the community for its role in catchment, greater bilby and biodiversity protection.</p> <p>Clear roles and responsibilities are established in the funding, usage and maintenance of the base.</p>	<p>A35. Foster and maintain relationships to encourage participation in management by Traditional Owner and science based groups.</p> <p>A36. Further explore the option of developing partnership agreement/s with Traditional Owners.</p> <p>A37. Consult and/or liaise with park neighbours to address cross-boundary management concerns including livestock, pest animal, plant control, maintenance of boundary fences and wildfire management.</p> <p>A38. Monitor the effects of de-stocking by working cooperatively with neighbours on monitoring sites, on and off park.</p> <p>A39. Promote pest plant and animal management on an ecosystem scale.</p> <p>A40. Implement the good neighbour policy.</p> <p>A41. Clear guidelines on facility usage established and displayed on park and in information given to researchers prior to visits.</p>
<p>Fire management</p> <p>Fire regime is appropriate to maintain natural condition.</p>	<p>A42. Consider the creation of a fire management strategy as a component of the Diamantina National Park Fire Management Strategy.</p> <p>A43. Maintain fire lines along boundaries, inspect annually.</p>

Desired outcomes	Actions and guidelines
<p>Pest management</p> <p>Astrebla Downs National Park retains its pest plant free status.</p> <p>Pest animals are controlled or eliminated and do not affect park values.</p> <p>Pest animals are unable to access artificial surface waters.</p>	<p>A44. Integrate the Pest Plant Management Plan with Diamantina National Park and Elizabeth Springs Conservation Park by 2014.</p> <p>A45. Monitor and control pest plant outbreaks in the Mooradonka waterhole area twice yearly by visual inspection. All sightings and control programs should be recorded on ParkInfo within one month.</p> <p>A46. Ingledoon No. 2 bore is maintained by ensuring the integrity of the cap to reduce the availability of free water to feral predators.</p> <p>A47. Produce and implement a pest animal management plan by 2014 to provide a guide to:</p> <ul style="list-style-type: none"> • minimising the impact of pest animals and guide monitoring programs • emphasising reduction in the numbers of feral cats • monitoring for the introduction of new pest species focusing on Mooradonka waterhole.

Tables – Conservation values management

Table 1: Endangered and of concern regional ecosystems

Regional ecosystem number	Description	Biodiversity status
4.3.3	<i>Eucalyptus coolabah</i> , <i>E. camaldulensis</i> +/- <i>Lysiphyllum gilvum</i> open woodland on drainage lines.	of concern
5.3.20	<i>Eucalyptus coolabah</i> +/- <i>E. camaldulensis</i> open woodland fringing billabongs and permanent waterholes.	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
Animals				
<i>Dasyuroides byrnei</i>	kowari	vulnerable	vulnerable	high
<i>Macrotis lagotis</i>	greater bilby	endangered	vulnerable	critical
<i>Oxyuranus microlepidotus</i>	western taipan	near threatened	-	low
<i>Pedionomus torquatus</i>	plains-wanderer	vulnerable	vulnerable	data deficient
Plants				
<i>Austrobryonia argillicola</i>	a melon vine	endangered	endangered	low

Table 3: Species listed in international agreements

Scientific name	Common name	Bonn	CAMBA	JAMBA	ROKAMBA
<i>Acrocephalus australis</i>	Australian reed-warbler	✓	-	-	-
<i>Apus pacificus</i>	fork-tailed swift	-	✓	✓	✓
<i>Calidris acuminata</i>	sharp-tailed sandpiper	✓	✓	✓	✓
<i>Charadrius veredus</i>	oriental plover	✓	-	✓	✓
<i>Egretta alba</i>	great egret	-	✓	✓	-
<i>Merops ornatus</i>	rainbow bee-eater	-	-	✓	-
<i>Rostratula australis</i>	Australian painted snipe	-	✓	-	-

BONN: Bonn Convention

CAMBA: China–Australia Migratory Bird Agreement

JAMBA: Japan–Australia Migratory Bird Agreement

ROKAMBA: Republic of Korea–Australia Migratory Bird Agreement