

Blackbraes Aggregation Management Statement 2013

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| Park size: | Blackbraes National Park 35,877ha Blackbraes Resources Reserve 15,608ha Kennedy Road Gravel Resources Reserve 124 ha Moonstone Hill Resources Reserve 131 ha |
| Bioregion: | Einasleigh Uplands and Gulf Plains Bioregion |
| QPWS region: | Central |
| Local government estate/area: | Charters Towers Regional Council Etheridge Shire Council Flinders Shire Council |
| State electorate: | Dalrymple Mount Isa |



Blackbraes. Photo:NPRSR.

Throughout this document the term 'Blackbraes' is used to collectively refer to the above protected areas, unless an individual reserve is specifically mentioned.

Legislative framework

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| ✓ | <i>Aboriginal Cultural Heritage Act 2003</i> |
| ✓ | <i>Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)</i> |
| ✓ | <i>Fossicking Act 1994</i> |
| ✓ | <i>Mineral Resources Act 1989</i> |
| ✓ | <i>Mining and Quarrying Safety and Health Act 1999</i> |
| ✓ | <i>Native Title Act 1993 (Cwlth)</i> |
| ✓ | Nature Conservation Act 1992 |

Plans and agreements

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| ✓ | Bonn Convention |
| ✓ | China–Australia Migratory Bird Agreement |
| ✓ | Japan–Australia Migratory Bird Agreement |
| ✓ | Republic of Korea–Australia Migratory Bird Agreement |

Thematic strategies

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| ✓ | Level 1 Fire Management Strategy 2011 |
| ✓ | Blackbraes Artificial Waters Strategy 2008 |

Vision

Blackbraes will conserve diverse and healthy landscapes and provide examples of regional ecosystems. The head waters of the Einasleigh, Copperfield and Gilbert rivers will be managed to maintain their important role in providing ecosystem services to adjacent areas. The springs will be protected to ensure the habitat and refuge values are maintained.

Blackbraes maintains significant and disjunct communities of mammals. Management will focus on protecting habitat values significant to arboreal mammals and general groundcover condition for terrestrial mammals.

The visitor experiences, and recreational and tourism opportunities are largely self-reliant, in keeping with the undeveloped natural environment of the area.

Conservation purpose

The protected areas of this statement are managed in line with the management principles for national parks (*Nature Conservation Act 1992* (NCA), Section 17) and resources reserves (NCA, Section 21). The national park area will be managed for the permanent preservation of the area's natural condition and the protection of cultural resources and values. The national parks cultural and natural resources are to be presented to the public and use of the area is to be nature-based and ecologically sustainable.

The management principles of resources reserves enable the recognition and protection of the areas cultural and natural resources while providing for the controlled use of those resources. A resources reserve is to be maintained predominantly in its natural condition.

In 1998, sections of the former Blackbraes Pastoral Holding were dedicated as Blackbraes National Park (29,800ha) to conserve the significant landscapes and flora and fauna communities present on the edge of the Einasleigh Uplands and Gulf Plains bioregions. Within Blackbraes National Park a network of lava tubes, cracks and tunnels exist which accommodate Queensland's largest known breeding colony of the eastern bent-wing bat *Miniopterus schreibersii oceanensis*. In 2010, a further 6,077ha of Blackbraes Resources Reserve was added to the national park.

Areas covered by mineral exploration permits when the pastoral holding was acquired were dedicated as Blackbraes Resources Reserve (now 15,608ha). Quarrying and fossicking activities also occurred on the holding and these areas were dedicated as Kennedy Road Gravel Resources Reserve (124ha) and Moonstone Hill Resources Reserve (131ha).

Protecting and presenting the area's values

Landscape

Blackbraes spans the boundary between the Gulf Plains and Einasleigh Uplands bioregions. Some of the world's oldest and youngest geological formations can be found at Blackbraes. Sandstones of the Gilberton Plateau, granites, pre-Cambrian metamorphics, basalts and Quaternary outwash are conserved within Blackbraes.

Blackbraes is situated on the junction of the Gilbert Range (Einasleigh Uplands) and Gregory Range (Gulf Plains) and form the western outliers of the Great Dividing Range. The northern and western end is dominated by these ranges and the Juntala Plateau, which reaches an impressive altitude of 1062m above sea level.

The central and eastern section is dominated by swamps and woodlands situated on basalt flows and alluvial deposits. The basalt flow contains lava tubes, small volcanic cones and vents and isolated granite hills. Moonstone Hill, a small scoria cone on the eastern side of the Kennedy Development Road, contains significant deposits of moonstone crystal (anorthoclase feldspar).

The higher elevation of Blackbraes provides for a wetter and generally milder climate compared with the surrounding country and the two bioregions in general.

Over a century of use as a grazing property resulted in the damming of several creeks and springs. The most significant of these, Emu Swamp, provides visitors the opportunity to see and experience some of the resident and migrant birdlife.

Regional ecosystems

Twenty-six regional ecosystems (REs) have been mapped within the aggregation. Blackbraes provides the only representation of 10 of these regional ecosystems within Queensland's reserve system.

One endangered and four of concern regional ecosystems occur within Blackbraes (Table 1). The endangered ecosystem (RE 2.10.3) dominated by lemon-scented gum *Corymbia citriodora* and ironbarks *Eucalyptus* spp. is mainly associated with areas of the Gulf Plains Bioregion. This community remains very poorly represented in the protected area estate with Blackbraes providing the only representation.

Native plants and animals

Blackbraes is part of a broad climatic isolate and includes a number of disjunct populations of both plants and animals. Significant fauna include species like the Mount Cooper striped lerista *Lerista vittata*, the skink *Lerista cinerea*, the spectacled hare-wallaby *Lagorchestes conspicillatus* and a very high density of greater gliders *Petauroides volans*.

The sandstone plateau supports communities of northern cypress pine *Callitris intratropica* and the nationally vulnerable *Acacia ramiflora*. These species are considered to be susceptible to regular intense fires and northern cypress pine is considered to be in decline across northern Australia due to European fire management practices (Bowman and Panton 1993). Under current fire management practices, both species appear stable within Blackbraes.

The lava tunnels house several bat species and the largest known breeding population of the eastern bent-wing bat in Queensland. Potential exists for this ecosystem to also contain undescribed species of cave dwelling invertebrates.

Emu Swamp, a large permanent artificial wetland in Blackbraes Resources Reserve, supports a wide variety and large aggregations of wetland birds including more than one per cent of the bioregional population of the cotton pygmy goose *Nettapus coromandelianus* (Fisher 2003). Cormorants and the white-bellied sea-eagles breed at this site.

Blackbraes is currently known to protect four plant and eight animal species of state or national significance (Table 2). Twelve birds recorded from the park are listed in international agreements (Table 3). A further 21 species have been listed as being of local or regional conservation significance.

Aboriginal culture

Limited information is available about sites of cultural or historic significance or any other heritage values in the management area. No cultural survey has been undertaken in the management area; however, it is reasonable to expect that heritage sites and artefacts occur. In the absence of information the precautionary principle should be applied in respect to the potential presence of heritage sites.

It is important for the Department of National Parks, Recreation, Sport and Racing (NPRSR) to continue to work with the Traditional Owners to identify cultural connections and ensure appropriate measures are taken to protect known sites in the area. NPRSR will work towards ensuring Traditional Owners are actively participating in the day-to-day management and that cultural heritage is protected by maintaining relationships with the Traditional Owners.

Three Indigenous Land Use Agreements (agreement areas QI2003/044, QI2005/004 and QI2011/024) and one native title application (QC99/13) exist over the very northern corner of Blackbraes Resources Reserve. A native title application (QC05/6) exists to the eastern side of the aggregation.

Shared-history culture

Relics of European pastoral heritage that demonstrate the practices of pastoral settlers, graziers and miners occur across Blackbraes. They include buildings and huts, cattle yards and dips and old internal fences. The majority of these structures are progressively deteriorating and will be left to decay.

A number of artificial water sources including bores and dams and their associated infrastructure were established on the property prior to acquisition. A strategy for the retention or removal of artificial waters in accordance with departmental policy has been developed for Blackbraes.

Tourism and visitor opportunities

Blackbraes National Park is situated on an unsealed section of the Kennedy Developmental Road which is subject to temporary closure after heavy rain periods. The normal visitor access period occurs from June to September (dry season), although very few visitors use the area during this period. Annual visitor use is estimated to be between 100–200 day visitors and less than 50 campers.

Although the national park can be reached by conventional vehicle, access around the park management roads and tracks is limited to high clearance four-wheel drive vehicles and motorcycles.

Lookout Hill, at the junction of Kennedy Developmental Road and the entrance to Blackbraes Homestead, provides visitors with wide views across the area and has the potential to be a location for interpretive material. The main recreational activities that occur are fossicking on Moonstone Hill Resources Reserve, bird watching and spotlighting. Although no designated camping facilities are provided bush camping is permitted.

Significant potential exists to promote Blackbraes for its scenic value and to provide the opportunity for remote four-wheel drive and mountain bike experiences around the western and northern sections. Bush camping may be encouraged on the Copperfield or Einasleigh rivers. Planning for these new opportunities will take into consideration the intent for Blackbraes to remain a park for self-reliant visitors.

Education and science

The management of Blackbraes has benefited from information gained from several different organisations who have conducted surveys on the estate. Birds Australia and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) have undertaken several visits, contributing greatly to the baseline knowledge of the fauna and flora present.

There has been a close relationship with a North Queensland volunteer group, the Tree-Kangaroo Mammal Group, who has taken a keen interest in the welfare of greater gliders and has contributed by glider proofing barbed wire fences on the boundary of Blackbraes.

The location of Blackbraes, the presence of the isolated populations and the richness of the fauna provide significant potential for research. Relationships should be fostered with research organisations and educational institutions to encourage research useful to the ongoing management of the area.

Partnerships

NPRSR is directly responsible for planning, managing and regulating activities in the management area. NPRSR will work with neighbours, Traditional Owners, councils, user groups and individuals to achieve the vision. Efficiencies in resource sharing, improved communication, decision making and enhanced on-ground outcomes will be facilitated, where possible, through working partnerships.

A working relationship with the Traditional Owners is essential so that their views and aspirations for the land can be included in planning and management. Traditional Owners have a role to protect cultural heritage in the management area and a role to educate NPRSR and visitors on cultural heritage management.

Good working relationships have been developed with neighbouring pastoralists with a strong focus on fire management, boundary fencing and access.

Queensland Parks and Wildlife (QPWS) staff works with State agencies and local government, particularly in relation to road development and maintenance and with Northern Gulf NRM Region for top of catchment projects.

Other key issues and responses

Pest management

A pest strategy for the management area exists. This strategy helps to prioritise pest plant and animal controls, guide operational work plans and evaluate the effectiveness of control actions on QPWS estate. Pest plant and animal surveys and monitoring have been limited in the management area. Further information is required to understand the impacts of pests on the integrity of the area.

Introduced grasses such as grader grass *Themeda quadrivalvis* and Indian couch *Bothriochloa pertusa* are spread throughout the basalt derived ecosystems. They have the potential to increase fire intensity and have a detrimental impact on fire sensitive communities such as the small pockets of dry rainforest (vine thickets). Park maintenance and management activities should consider the locations of these infestations and minimise further spread.

One class 2 pest plant, giant rat's tail grass *Sporobolus* sp., is present within the aggregation. Control activities have occurred since 2006 and the current population level has been greatly reduced. Previous distribution areas are monitored and control is targeted to new outbreaks.

In 2001 as cattle were removed, monitoring plots were established to assess the recovery of ecosystems post grazing. Monitoring has shown that at highly disturbed sites such as springs, water points and licks, there is a general improvement from the reduction in grazing pressure and reduction in certain weed species (e.g. thorn apple *Datura* sp.) following initial treatment. Of concern is an increase in pest plant species that were previously suppressed by cattle and have the potential to impact spring communities. These pest plants include para grass *Urochloa mutica*, sesbania pea *Sesbania* sp., Indian couch grass and stinking roger *Tagetes minuta* (Ahmet 2006 and monitoring photos 2001 to 2008).

Feral pigs *Sus scrofa* are a declared class 2 pest under the *Land Protection (Pest and Stock Route Management) Act 2002*. Feral pigs have the potential to impact most significantly within the springs and wetland environments. Past management programs to control feral pigs included trapping and shooting; however effectiveness was low. The potential to include targeted baiting will be explored to improve management outcomes.

Feral horses *Equus caballus* also have the potential to cause considerable environmental harm. The current low horse numbers and impacts should be monitored and a plan for control developed and implemented if impacts are determined as unacceptable.

Fire management

NPRSR has a statewide fire management system. NPRSR is the primary agency for fire management on protected areas and State forests. Fire strategies provide the overall framework and direction for fire management and are the foundation from which planned burn programs are developed.

Blackbraes contains a diversity of habitats, some that benefit from frequent fire, mixed with habitats that are damaged by intense or frequent fire. To accommodate fire management within this complex environment, a Level 1 Fire Management Strategy has been developed.

The objective for fire management is to ensure a diversity of post fire ages are maintained and unplanned fire has minimal impact on this diversity and is of minimal threat to neighbouring properties.

Other management issues

Mineral exploration

Exploration permits and mineral development licences are assessed in accordance with the *Environmental Protection Act 1994* and *Mineral Resources Act 1989*. All mining and exploration permits and licences issued on NPRSR estate are assessed by the Department of Natural Resources and Mines with advice from NPRSR in relation to management of sensitive areas and protection of significant species, habitat and biodiversity values.

Transport

There are six gazetted road easements within Blackbraes including one situated on the alignment of Kennedy Developmental Road which runs north–south through the eastern section. Two more provide access to the Blackbraes Homestead and continue through to the southern boundary, then through the western section to provide access to Gorge Creek Station. The remaining easements have no actual road or are used only for park access (Werrington Road). Their closure and inclusion into the protected area estate should be pursued.

Gravel extraction

There are four separate parcels of land gazetted as Kennedy Road Gravel Resources Reserve. These parcels are used by the Department of Transport and Main Roads and the Etheridge Shire Council to maintain Kennedy Developmental Road and the Gorge Creek Station Road. Currently only one, the airstrip pit, is actively used. Historical use at this location and the gazetted boundary of the reserve do not align. Adjustments to the resources reserve boundary will be required to resolve this anomaly.

Lookout Hill Section of the Kennedy Road Gravel Resources Reserve provides a gravel resource which may potentially be required for future upgrades to Kennedy Developmental Road. Future extraction from Lookout Hill will conflict with its potential use as a day visitor site and with the value that this area provides as a vantage point to monitor fire on and around the estate.

The remaining parcels have little value as gravel resources are situated next to alternatives. Negotiation should occur to convert these to national park.

Boundary alignments

In several locations the historical fence lines and the gazetted boundary are considerably different. Anomalies occur where departmental and neighbour management activities follow the logistical constraints of the landscape and physical environment and not the gazetted boundary.

References

Ahmet M 2006 and monitoring photos 2001 to 2008, Department of Environment and Resource Management, Internal report.

Bowman D M J S and Panton W J 1993, Decline of *Callitris intratropica* R T Baker and H G Smith in the Northern Territory: Implications for Pre- and Post-European Colonization Fire Regimes, *Journal of Biogeography*, 20, : 373–381.

Fisher K 2003, *Bird Survey at Blackbraes National Park 7–9 June 2003*, Birds Australia North Queensland Group.

Management directions

| Desired outcomes | Actions and guidelines |
|--|---|
| <p>Landscape</p> <p>Landscape and regional ecosystem values are protected.</p> <p>The health and integrity of watercourses, perennial springs, groundwater and catchments are maintained.</p> | <p>A1. Implement fire regimes that maintain and improve the current health and diversity of regional ecosystems that are unique and significant to Blackbraes.</p> <p>A2. Implement pest management programs that target species that impact riparian, spring and wetland communities.</p> <p>A3. Where possible exclude stock from the national park by maintaining effective boundary fences and implementing fencing agreements with neighbours.</p> |
| <p>Native plants and animals</p> <p>Protect the special habitat values including old growth lemon-scented gum open forests, integrity of lava tubes and their entrances and the active spring outflows.</p> | <p>A4. Implement fire regimes to maintain the abundant mammal fauna population within the open forests, woodlands and grasslands.</p> <p>A5. Focus pest management activities on minimising impacts on uncommon regional ecosystems, habitat of significant species and spring communities.</p> |
| <p>Aboriginal culture</p> <p>Traditional Owners are identified and involved in collaborative park management.</p> | <p>A6. Encourage and support Traditional Owners in conducting a comprehensive cultural heritage survey including recording sites, stories, language names and cultural heritage places.</p> |
| <p>Shared-history culture</p> <p>Sites of cultural significance are appropriately protected and presented or permitted to decay where appropriate.</p> | <p>A7. Allow relics of pastoral history to deteriorate naturally, where they have no feasible management use or other significance.</p> <p>A8. Remove old internal fencing, with priority given to areas of glider habitat.</p> <p>A9. Blackbraes Homestead cattle yards will be maintained for holding stray stock with minimal maintenance sufficient to keep the yard and the area safe for staff and visitors.</p> <p>A10. Blackbraes Homestead will be managed as a heritage ruin. Options for adaptive reuse consistent with the purpose of the management area will be considered.</p> <p>A11. Map and register dip sites and remediate as per prescribed procedures.</p> <p>A12. Retain 13 bores and dams for departmental management purposes.</p> |
| <p>Tourism and visitor opportunities</p> <p>Blackbraes remains as a remote destination for self-reliant visitors.</p> | <p>A13. Visitor access and activities are environmentally and culturally appropriate to protect the Blackbraes area and are in keeping with a remote, self-reliant experience.</p> |
| <p>Education and science</p> <p>Research and monitoring programs increase understanding of values and provide information to improve management decisions.</p> | <p>A14. Encourage and allow access for the implementation of research programs, particularly those that will benefit conservation management. Incorporate new information about threatened plants, animals or communities into plans and strategies and WildNet.</p> <p>A15. Maintain existing departmental photo monitoring sites as these have the potential to track ecosystem changes since cattle removal and incorporate information into management directions.</p> |
| <p>Pest management</p> <p>The integrity of native plant and animal communities is maintained through strategic, sustained pest management.</p> | <p>A16. Develop and implement a Level 2 Pest Management Strategy.</p> |

| Desired outcomes | Actions and guidelines |
|---|---|
| <p>Fire management</p> <p>The integrity of native plant and animal communities is maintained through strategic, sustained fire management.</p> | <p>A17. Ensure a diversity of post fire ages is maintained and unplanned fires have minimal negative impact on forest structural diversity.</p> <p>A18. Regulate the frequency and intensity of fire to maintain the composition, structure and ecological dynamics of regional ecosystems.</p> <p>A19. Park access tracks are maintained to appropriate standard to facilitate fire response.</p> <p>A20. Undertake cooperative fire management with neighbours and lease holders.</p> |
| <p>Partnerships</p> <p>Relationships with neighbours are maintained and collaborative management occurs across the landscape.</p> | <p>A21. Adjust boundary between resources reserve and national park at the airstrip pit to reflect historical gravel extraction.</p> <p>A22. Establish protocols with Etheridge Shire Council to ensure approvals are obtained for gravel and water extraction.</p> |

Tables – Conservation values management

Table 1: Endangered and of concern regional ecosystems

| Regional ecosystem number | Description | Biodiversity status |
|---------------------------|---|---------------------|
| 2.10.3 | Ironbark <i>Eucalyptus</i> spp., lemon-scented gum <i>Corymbia citriodora</i> and white mahogany <i>Eucalyptus acmenoides</i> open forest on high plateaus on earths and sands | Endangered |
| 9.3.3b | Mixed woodland dominated by <i>Corymbia</i> spp. and <i>Eucalyptus</i> spp. on alluvial flats, levees and plains | Of concern |
| 9.3.5 | <i>Eucalyptus brownii</i> open woodland to woodland +/- <i>Eucalyptus</i> spp. +/- <i>Corymbia</i> spp. on alluvial plains | Of concern |
| 9.3.22a | <i>Eucalyptus crebra</i> (sens. lat.) or <i>E. cullenii</i> dominated woodland +/- <i>Corymbia</i> spp. or <i>Eucalyptus</i> spp. on alluvial plains | Of concern |
| 9.3.26a | Mixed grassland to open grassland including <i>Eragrostis</i> sp., <i>Aristida</i> sp., <i>Enneapogon</i> sp., <i>Iseilema</i> sp., <i>Chloris</i> sp., or <i>Dichanthium</i> sp. on non-basalt derived alluvial deposits | 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 |
|-----------------------------------|------------------------------|-------------------------------------|--|----------------------|
| Plants | | | | |
| <i>Acacia ramiflora</i> | - | Least concern | Vulnerable | Low |
| <i>Dichanthium setosum</i> | - | Near threatened | Vulnerable | Low |
| <i>Peripleura scabra</i> | - | Near threatened | - | Low |
| <i>Zornia pallida</i> | - | Near threatened | - | Data deficient |
| Animals | | | | |
| <i>Acanthopis antarcticus</i> | common death adder | Near threatened | - | Medium |
| <i>Egernia rugosa</i> | yakka skink | Vulnerable | Vulnerable | Medium |
| <i>Ephippiorhynchus asiaticus</i> | black-necked stork | Near threatened | - | Low |
| <i>Lerista cinerea</i> | - | Near threatened | - | Low |
| <i>Lerista vittata</i> | Mount Cooper striped lerista | Vulnerable | Vulnerable | Low |
| <i>Lophoictinia isura</i> | square-tailed kite | Near threatened | - | Low |
| <i>Nettapus coromandelianus</i> | cotton pygmy-goose | Near threatened | - | Low |
| <i>Sminthopsis archeri</i> | chestnut dunnart | Near threatened | - | Low |

Table 3: Species listed in international agreements

| Scientific name | Common name | Bonn | CAMBA | JAMBA | ROKAMBA |
|-------------------------------|---------------------------|------|-------|-------|---------|
| <i>Acrocephalus australis</i> | Australian reed-warbler | ✓ | - | - | - |
| <i>Ardea ibis</i> | cattle egret | - | ✓ | ✓ | - |
| <i>Ardea modesta</i> | eastern great egret | - | ✓ | ✓ | - |
| <i>Calidris acuminata</i> | sharp-tailed sandpiper | ✓ | ✓ | ✓ | ✓ |
| <i>Coracina tenuirostris</i> | cicadabird | - | ✓ | ✓ | - |
| <i>Gallinago hardwickii</i> | Latham's snipe | ✓ | ✓ | ✓ | ✓ |
| <i>Haliaeetus leucogaster</i> | white-bellied sea-eagle | - | ✓ | - | - |
| <i>Hirundapus caudacutus</i> | white-throated needletail | - | ✓ | ✓ | ✓ |
| <i>Merops ornatus</i> | rainbow bee-eater | - | - | ✓ | - |
| <i>Plegadis falcinellus</i> | glossy ibis | ✓ | ✓ | - | - |
| <i>Tringa nebularia</i> | common greenshank | ✓ | ✓ | ✓ | ✓ |
| <i>Tringa stagnatilis</i> | marsh sandpiper | ✓ | ✓ | ✓ | ✓ |

Bonn – Bonn Convention

CAMBA – China–Australia Migratory Bird Agreement

JAMBA – Japan–Australia Migratory Bird Agreement

ROKAMBA – Republic of Korea–Australia Migratory Bird Agreement