



Dalrymple National Park

Management Plan

2011

Einiasleigh Uplands Bioregion

Prepared by:

Planning Services Unit, Department of Environment and Science (DES)

© State of Queensland 2023

The Department of Environment and Science acknowledges Aboriginal peoples and Torres Strait Islander peoples as the Traditional Owners and custodians of the land. We recognise their connection to land, sea and community, and pay our respects to Elders past, present and emerging.

The department is committed to respecting, protecting and promoting human rights, and our obligations under the Human Rights Act 2019.

This management plan does not intend to affect, diminish or extinguish native title or associated rights.

The Queensland Government supports and encourages the dissemination and exchange of its information. This work is licensed under a Creative Commons Attribution 4.0 International License.



Under this licence you are free, without having to seek our permission, to use this publication in accordance with the licence terms. You must keep intact the copyright notice and attribute the State of Queensland as the source of the publication.

For more information on this licence, visit <https://creativecommons.org/licenses/by/4.0/>

Disclaimer

This document has been prepared with all due diligence and care, based on the best available information at the time of publication. The department holds no responsibility for any errors or omissions within this document. Any decisions made by other parties based on this document are solely the responsibility of those parties.

The Dalrymple National Park Management Plan 2011 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.

If you need to access this document in a language other than English, please call the Translating and Interpreting Service (TIS National) on 131 450 and ask them to telephone Library Services on +61 7 3170 5470.

This publication can be made available in an alternative format (e.g. large print or audiotape) on request for people with vision impairment; phone +61 7 3170 5470 or email <library@des.qld.gov.au>.

Front cover photograph: Young Toomba basalt flow through the coralline limestone, Dalrymple National Park. Photo: DES.

Top right photograph: Woodlands showing *Corymbia terminalis*. Photo: DES.

Centre right photograph: Shared-heritage items such as stone walls as still evident on Dalrymple National Park. Photo: DES.

Bottom right photograph: Burdekin River's sandy bed in the dry season. Photo: DES.

Vision statement

Dalrymple National Park will conserve fascinating geological and ecological values. The landscape will take visitors on a journey through time with its ancient lava flows and coralline limestone concealing marine fossils. The dark basalt boulders and rough rock platforms will shelter plants and animals from extreme fire events and predators, protecting spectacled hare-wallabies and rufous bettongs.

The surrounding eucalypt woodlands will provide an important refuge for other native animals, including the white-rumped subspecies of the black-throated finch and echidnas, shuffling amid the leaf litter. The Burdekin River will meander through the park, a mighty torrent in the wet season and a stream in a wide bed of sand during the dry, offering a superb habitat for waterbirds, such as the magnificent white-bellied sea eagle and black-necked stork.

Contents

1. Management intent	1
2. Basis for management	1
3. Location and regional context	1
4. Protecting and presenting the park's values	2
4.1 Landscape	2
4.2 Native plants and animals	2
4.3 Indigenous culture	3
4.4 Shared-history culture	4
4.5 Tourism and visitor opportunities	4
4.6 Education and science	5
4.7 Partnerships	5
5. Other key issues and responses	6
5.1 Pest management	6
5.2 Fire management	7
5.3 Fencing	7
5.4 Climate change	7
6. References	9
7. Hyperlinks	9
8. Appendixes	10
Appendix A – Maps	11
Appendix B – Definitions	14
Appendix C – Regional ecosystems	15

1. Management intent

The purposes of management will be to permanently protect, to the greatest possible extent, the park's natural and cultural values by:

- conserving all native species and ecosystems through specific management strategies
- monitoring and controlling pests, where possible
- encouraging management arrangements that facilitate active Traditional Owners interests in the park
- providing recreation and tourism opportunities consistent with a low-intensity, nature-based recreational setting
- providing educational opportunities and scientific research that will enhance the long-term protection of the area.

2. Basis for management

The Queensland Parks and Wildlife Service (QPWS) is responsible for the on-ground day-to-day management of Dalrymple National Park. The park is managed in accordance with the *Nature Conservation Act 1992*, which sets out the management principles for national parks.

The Gudjala people have traditional links to Dalrymple National Park. Cultural heritage places are managed in accordance with the Queensland Heritage Act 1992 and the *Aboriginal Cultural Heritage Act 2003*. This plan does not affect, and is not intended to erode or extinguish, any Native Title rights. The Queensland Heritage Strategy of 2009 provides direction for managing Queensland's heritage and establishes a policy framework for heritage conservation and responsibilities.

Endangered and of concern regional ecosystems are described under the Department of Environment and Science (DES) biodiversity status. Endangered and vulnerable species are listed under the Nature Conservation (Wildlife) Regulation 2006 (Queensland). The *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth) provides for the listing of nationally threatened native species and ecological communities, native migratory species and marine species or those of conservation significance. The parks support migratory species listed under the Commonwealth Environment Protection and Biodiversity Conservation Act (that is, those species listed under the Bonn Convention, the China–Australia Migratory Bird Agreement, Japan–Australia Migratory Bird Agreement and Republic of Korea–Australia Migratory Bird Agreement).

QPWS is responsible under the *Land Protection (Pest and Stock Route Management) Act 2002* for controlling declared pest plants and animals on protected areas.

3. Location and regional context

Dalrymple National Park has no other national parks in its immediate vicinity but the fantastic Great Basalt Wall is only 35 km away, and Porcupine Gorge and White Mountains national parks lie slightly south-west, approximately 150 km away. North-east by approximately the same distance are the national parks of the wet tropics region. Most visitors camp off-park at the Fletcher Creek camping reserve, managed by the Charters Towers Regional Council. This is near the main track into Dalrymple National Park and beside the Gregory Developmental Road. Fletcher Creek camping area has picnic shelters, tables, toilets, cold showers and wood-fired barbecues. Another local council-owned and managed camp site is provided on the Big Bend Recreation Reserve. It is an easy day-trip from Dalrymple National Park (4WD access only) and offers bush camping with no facilities.

The park was established to protect the area's significant geological formations dating back 2.4 million years. Major geological features include ancient and recent lava flows, sandy deposits and coralline limestone containing extensive marine fossils. Their varied geology contributes to the diversity of ecosystems, plants and animals. It represents regional ecosystems of the Burdekin River catchment in the Einasleigh Uplands biogeographic region, including eucalypt woodlands and dry vine thickets.

Gainsford Homestead was built on the former township site in the 1920s and was used as a school in 1942. The homestead was relocated after a flood in 1946. Today, only gravesites, fences, pavements and old mine sites remain in the township area, and some blocks of the old township remain privately owned.

The area's climate is generally hot and dry, with seasonal heavy rains. Charters Towers has a mean minimum temperature of 21.9 °C and a mean maximum of 34.7 °C, with an average annual rainfall of 659.2 mm (Bureau of Meteorology 2008). Actual rainfall is highly variable from year to year.

4. Protecting and presenting the park's values

4.1 Landscape

Dalrymple National Park showcases significant geological features, such as lava flow and coralline limestone containing marine fossils.

Dalrymple National Park lies either side of a stretch of the Burdekin River, one of the largest rivers in Queensland (see Appendix A, Map 2). Normally the river is shallow and has a narrow flow in the wide, sandy riverbed. However, after rain in the catchment, the Burdekin River often breaks its banks.

The park is relatively flat and geologically interesting with contrasting basalt, limestone and sandstone formations close together. To the north of the river, Mount Keelbottom rises 130 m above the plain to an altitude above sea level of around 380 m. Three lava flows lie south-west of the river. The most recent was the Toomba basalt flow, about 13 000 years old and among Australia's youngest basalts, occurring in the late Pleistocene to Holocene. Due to its recent origins, it stands out above the older basalts that form the Great Basalt Wall. This 'wall' is only a few metres higher than the surrounding landscape, as can be seen from the jumble of dark basalt boulders and uneven rock platforms, with generally sparse vegetation. Below it is the birdbush flow of olivine basalt, dated at 1.3 million years. Further south is the Kangerong flow, dated at 2.4 million years (Whitehead and Stephenson 1988).

Fletcher Creek, a perennial stream, runs along the northern edge of the basalt and eastwards into the Burdekin River. Lolworth Creek runs along the southern edge. In some places it cuts sharply between basalt and limestone, revealing striking contrasts between basalt columns and boulders on one side of the creek, and flat, layered sheets of limestone on the other. Coralline limestone, containing extensive marine fossils from the Middle Devonian period (385 million years ago), occurs as outcrops amongst the basalt. Sandstone and sandy deposits range in age from the Devonian period to the present. The most recent deposits are the levee banks and flats of the Burdekin River and Keelbottom Creek. Some of these sediments are unstructured and erode readily.

Much erosion in the park has occurred naturally but cattle grazing and other land management activities, such as mining, impacted on the area before national park listing. Recent erosion problems caused by vehicles and cattle are being rehabilitated and work has been done to stabilise the main access track. There is also significant gully erosion in some creek sections and near the boundary with Marlow Station. Vehicle tracks are prone to erosion when not maintained correctly.

Desired outcomes 2021	Actions and guidelines
Prevent erosion and preserve natural water flows when undertaking development and maintenance works on the park. Eroded areas are stabilised and revegetated using endemic local provenance species, where appropriate.	A1. Rehabilitate eroded gullies, vehicle tracks and other areas of non-natural erosion, where possible. A2. If re-aligning vehicle tracks or constructing car parks, walking tracks or other visitor facilities, select alignments, sites and construction methods that minimise erosion and take account of seasonal flooding. A3. Work with neighbours on erosion control near park boundaries.

4.2 Native plants and animals

4.2.1 Native plants

Dalrymple National Park's vegetation communities are diverse due to the varied geology, land forms and waterways. The vegetation is primarily woodland dominated by eucalypt species.

The park is located on the north-eastern boundary of two widespread ecosystems—bloodwood *Corymbia terminalis* woodland on limestone, and gidgee *Acacia cambagei* forest. Six basic vegetation types are recorded following descriptions by Walker and Hopkins (1990)—bloodwood or ghost gum woodland, alluvial woodland, coolabah woodland, deciduous vine thicket, ironbark or box woodland, and fringing forest.

Of the 13 regional ecosystems found within the park, six are listed in DES's biodiversity status as of concern due to pest plant infestations (Sattler and Williams 1999) (Appendix C).

Of the 200 plant species recorded, no species are threatened but two particularly significant species occur here. The coolabah woodland *Eucalyptus coolabah* is at the north-eastern edge of its geographical range and the presence of lignum shrub *Muehlenbeckia florulenta* indicates a disjunct population to the north-east of its main distribution.

Six species of native aquatic plants, supported by spring-fed perennial water, have been recorded in Fletchers Creek (Bean 1992).

Pest plant control programs have improved the integrity of vegetation communities in many areas. There are vegetation monitoring plots in the park.

Desired outcomes 2021	Actions and guidelines
The range of plant communities and their requirements is understood and protected through active management.	<p>A4. Improve the condition of the park's regional ecosystems by rehabilitating with local provenance species, using strategic pest control and managing fires.</p> <p>A5. Refine vegetation mapping for the park.</p> <p>A6. Continue vegetation monitoring, focusing on monitoring the outcomes of management activities, such as prescribed fires and pest species control.</p>

4.2.2 Native animals

The park is an important refuge for native animals, with 48 bird, six reptile, four mammal and six bony fish species recorded. Rufous bettong *Aepyprymnus rufescens*, spectacled hare-wallaby *Lagorchestes conspicillatus* and echidna *Tachyglossus aculeatus* are unusually common in Dalrymple National Park.

The white-rumped subspecies of the black-throated finch *Poephila cincta cincta* is listed as endangered under the Nature Conservation (Wildlife) Regulation 2006 and endangered under the *Environment Protection and Biodiversity Conservation Act 1999*. It formerly occurred in this area but its range has decreased greatly with no sightings in recent years. The northern quoll *Dasyurus hallucatus* is listed as endangered under Commonwealth legislation and has been recorded on the park.

Other species of conservation significance that occur in the park include the squatter pigeon (southern subspecies) *Geophaps scripta scripta*, listed as vulnerable under both Commonwealth and state legislation, the death adder *Acanthopis antarcticus*, the black-necked stork *Ephippiorhynchus asiaticus* and the cotton pygmy-goose *Nettapus coromandelianus*, all of which are listed as near threatened under the Nature Conservation (Wildlife) Regulation.

Desired outcomes 2021	Actions and guidelines
The range of species and their habitat requirements are protected through active management, including the development of a comprehensive fauna list.	<p>A7. Maintain the abundance and diversity of native animals through active habitat management, including pest control and fire management.</p> <p>A8. Continue fauna monitoring, in particular focusing on the outcomes of management activities, such as prescribed fires and pest species control.</p> <p>A9. Record opportunistic fauna sightings and ensure they are incorporated into WildNet.</p> <p>A10. Implement the recovery plan for the black-throated finch (white-rumped subspecies).</p>

4.3 Indigenous culture

The Gudjala people have traditional links to the area, which includes Dalrymple National Park. Native title claim QC05/6 was lodged on 22 March 2005 over 19 167.8 sq km and is currently registered and before the Federal Court for determination. A second claim, QC06/8 and QUD147/06, was filed on 24 April 2006 but has not yet been registered for determination. Aboriginal cultural heritage places have not formally been identified in Dalrymple National Park

Desired outcomes 2021	Actions and guidelines
Indigenous people with traditional affiliations in the area are involved with managing cultural heritage issues.	<p>A11. Liaise with Gudjala people about identifying, managing and interpreting the park's Indigenous cultural heritage.</p> <p>A12. Conduct site surveys in consultation with Gudjala people before re-aligning any tracks or developing new visitor facilities.</p> <p>A13. In consultation with Gudjala people, protect any identified Indigenous cultural heritage places from damage, such as by wildfire or vehicles.</p>

4.4 Shared-history culture

This area holds interest for many local people because of its varied history. In 1845, the European explorer Ludwig Leichhardt camped on what is now part of the park's boundary. A memorial is erected just outside the park where a tree once stood, which had been blazed by Leichhardt with an 'L' to mark his campsite.

Charters Towers Regional Council is promoting the cultural values of the old Dalrymple township by developing and installing interpretive signs about some of this history at the Fletchers Creek campground.

Desired outcomes 2021	Actions and guidelines
Shared-history cultural heritage is protected from damage by wildfire, people or vehicles, and is interpreted appropriately for visitors.	<p>A14. Record all shared-history cultural sites on the park.</p> <p>A15. Conduct heritage assessments before re-aligning any tracks or developing any new visitor facilities.</p> <p>A16. Conduct prescribed burns, fencing and/or other measures as required to protect cultural heritage places from damage, such as by wildfire or vehicles, in consultation with neighbours and other stakeholders, where possible.</p>

4.5 Tourism and visitor opportunities

The park offers visitors opportunities for nature-based activities, such as walking, enjoying the scenery (the river, hills and bushland) and bird-watching. Information about Dalrymple National Park is available to park visitors on the DES website.

Dalrymple National Park is accessed from the Gregory Developmental Road (Lynd Highway) north of Charters Towers. A gazetted access road leads from the Gregory Developmental Road to the park boundary, where it becomes a QPWS road. A park road links the old Dalrymple township site on the western section of the park to the main entry point. There are no directional signs leading to, and no interpretive signs inside, Dalrymple National Park.

There are no formal walking tracks on the park, but visitors can walk along the management tracks, riverbanks and sandy riverbed. Rough trails follow the Burdekin River and Fletcher Creek, allowing visitors to explore the park's basalt flows. For experienced hikers, there is a walk to Mount Keelbottom but visitors need to be well prepared and responsible for their own safety.

Vehicle-based camping is not allowed on Dalrymple National Park. In the past, visitors have driven across the river when water levels are low, and camped on the eastern riverbank. Driving and camping on the riverbanks is spreading pest plants and contributing to riverbank erosion.

Fishing is not allowed in the park, including in Lolworth Creek.

Desired outcomes 2021	Actions and guidelines
Visitor facilities are limited to maintain a natural setting and provide access to and information about sites of interest to day visitors.	<p>A17. Develop a site plan to include visitor facilities, such as:</p> <ul style="list-style-type: none"> • closing and rehabilitating all current campsites • developing a car park on the main access track into the park • erecting barriers to prevent vehicle access beyond the car park to the riverbanks • developing short walking tracks from the main access track to sites of interest • building picnic tables or shelters at scenic points for day visitors. <p>A18. Encourage bush camping away from the infrastructure and do not allow vehicle-based camping on Dalrymple National Park.</p>
Visitor information and educational opportunities are provided in a low-intensity, natural setting.	<p>A19. Develop and implement a Statement of Interpretive Intent for the park, in consultation with stakeholders.</p> <p>A20. Ensure schools, outdoor education groups and educational tours are small and understand how to protect the historic integrity in the area.</p>

4.6 Education and science

The geology and ecology of Dalrymple National Park and its proximity to Charters Towers make this park suitable for educational and scientific excursions.

Historic relics and diverse geology provide an important educational resource for visitors and locals. Schools and outdoor education groups regularly use the park.

Universities, schools and outdoor education groups regularly use Dalrymple National Park for field trips involving geology, natural resource management, local history, orienteering and other outdoor education activities.

Regular fauna monitoring is conducted at seven sites established on the western side of the Burdekin River and there are 12 buffel grass monitoring sites. Vegetation surveys have been carried out in the dry season when herbs and grasses are dormant. The effect of fire on vegetation communities has been monitored and the information is guiding fire management reviews.

Desired outcomes 2021	Actions and guidelines
Research increases knowledge of the natural and cultural values and helps to refine management techniques.	<p>A21. Encourage research that will increase knowledge of natural and cultural heritage, and that can help to refine management techniques.</p> <p>A22. Continue to monitor buffel grass sites as required.</p> <p>A23. Continue to monitor and map fire regimes.</p>

4.7 Partnerships

Partnerships are important to effectively manage Dalrymple National Park, particularly for managing fires, controlling pests and interpreting cultural heritage values. Good working relationships are maintained with park neighbours and the Queensland Rural Fire Service for managing fire and pests, and the local council regarding visitor access and the Traditional Owners (Gudjala) for cultural heritage. QPWS staff work with Landcare groups, other members of the local community with interests in Dalrymple National Park, and natural resource management groups on specific issues.

Neighbouring properties include freehold properties within the old Dalrymple township, gazetted roads, land leases for grazing, unallocated State land of the Burdekin River channel, and a former mining lease in the eastern section of the park. The mining lease over some land in the centre of the eastern block once used for sandstone mining has expired and negotiations are continuing to include it in the national park.

A gazetted road runs through the eastern section and inappropriate use puts pressure on the national park. Hunting using firearms and unleashed dogs raises concerns about increased impacts on the park from continued use of this road.

Neighbours use this gazetted road, an old stock route, to access and move cattle between properties. This road loops up through the old township but no visible evidence of the township remains.

Desired outcomes 2021	Actions and guidelines
Good working relationships contribute to meeting park management objectives and desired outcomes.	<p>A24. Encourage the Traditional Owners to be involved in managing Dalrymple National Park.</p> <p>A25. Liaise and co-operate with neighbours to maintain and improve the condition of native habitats around the reserve.</p> <p>A26. In partnership with the local government, install directional signs to the park from the Gregory Developmental Road.</p> <p>A27. In partnership with neighbours, maintain fencing and locked gates to prevent unauthorised vehicle access beyond the gazetted road in the eastern section.</p> <p>A28. Work with the regional council to link the walking tracks in the park to a walking track to Fletcher Creek camping reserve.</p> <p>A29. Investigate acquiring the mining lease on the eastern section of the park and dedicating it as an appropriate protected area tenure.</p> <p>A30. Investigate acquiring and dedicating the old township in the eastern section as national park, and action if feasible.</p>

Desired outcomes 2021	Actions and guidelines
	<p>A31. Assess State lands and waters adjacent to the park to potentially acquire and dedicate as national park, and action where feasible.</p> <p>A32. Apply this management plan to any new extensions to Dalrymple National Park.</p>

5. Other key issues and responses

5.1 Pest management

Pest plant infestations are the main threat to the scenic values of the riverbanks, woodlands and other vegetation communities.

Dalrymple National Park has major infestations of the Class 2 declared plants bellyache bush *Jatropha gossypifolia*, rubber vine *Cryptostegia grandiflora*, parkinsonia *Parkinsonia aculeata*, Chinese apple *Ziziphus mauritiana* and parthenium *Parthenium hysterophorus*, and the Class 3 declared plant lantana *Lantana camara*. Infestations are more dense and extensive on the western side of the river than on the eastern side.

Rubber vine has infested much of the basalt area, is spread along the banks of the river and creeks, and extends into the woodlands, particularly on the western side. Buffel grass *Pennisetum ciliare* is extensive on the alluvial flats west of the river, but less established to the east of the river. Parthenium occurs along the watercourses and parkinsonia is mainly found beside Lolworth Creek and the Burdekin River.

Other pest plants in the park include the non-declared buffel grass, castor oil plant *Ricinus communis*, calotrope *Calotropis procera*, weedy species of rattlepod *Crotalaria* spp., prickly mimosa *Acacia farnesiana* and noogoora burr *Xanthium occidentale*.

For several years, integrated pest plant control programs have used fire, physical removal, chemical control and biological control. The old campsites have been closed to help control pest plants on the riverbank.

Small numbers of cane toads *Rhinella marina*, pigs *Sus scrofa*, feral cats *Felis catus*, rabbits *Oryctolagus cuniculus*, foxes *Vulpes vulpes*, wild dogs *Canis familiaris* and deer *Axis axis* occur in Dalrymple National Park. Tilapia *Oreochromis mossambicus*, a pest fish, has been present in the Burdekin River and adjoining creeks since around 2005.

Desired outcomes 2021	Actions and guidelines
<p>The integrity of native plant and animal communities is maintained.</p> <p>The impacts of pest plants and animals on natural and cultural values is minimised through strategic management.</p>	<p>A33. Develop and implement a Level 2 Pest Management Strategy for Dalrymple National Park and ensure to:</p> <ul style="list-style-type: none"> • manage pests in accordance with the QPWS operational policy Management of Pests on QPWS-managed Areas and prioritise long-term pest management measures to protect threatened vegetation communities and critical species habitat • use the QPWS Pest Management System and ParkInfo to plan, manage, record and monitor all pests and pest management • prioritise long-term control measures for threatened vegetation communities and critical species habitat • establish preventative hygiene measures for minimising pest introductions and outbreaks • participate co-operatively in pest management planning and implementation across the landscape with other land managers, government departments, local governments and utility providers to ensure landscape-level pest management is successful • any pest management must not adversely affect the natural integrity of the park and use the best available scientific and technical knowledge. <p>A34. Prioritise controlling pest plants by considering the location and abundance of species in key areas of the park and in regional ecosystems of concern, in particular:</p> <ul style="list-style-type: none"> • control rubber vine, particularly in gidgee woodland and regional ecosystems of concern

Desired outcomes 2021	Actions and guidelines
	<ul style="list-style-type: none"> control buffel grass, particularly in gidgee woodland and on the eastern side of the river aim to control parthenium and parkinsonia after they arise with flood events.

5.2 Fire management

Fire management programs are primarily conducted to control some pest species, regenerate fire-dependent species, such as the narrow-leafed red ironbark *Eucalyptus crebra* and Clarkson's bloodwood *Corymbia clarksoniana*, and to protect life and property.

As dry vine thicket is fire-sensitive, the management regime for this ecosystem is to exclude fire by using planned burns in the surrounding areas.

Desired outcomes 2021	Actions and guidelines
<p>Fire is used to protect life and property, to manage fuel loads and to maintain ecological processes on the park.</p> <p>Neighbouring landholders are encouraged to assist in co-operative management of fire to enhance and extend the outcomes of management programs.</p>	<p>A35. Maintain the Level Two Fire Strategy for Dalrymple National Park to guide future fire management and review it every five years.</p> <p>A36. Update the Level Two Fire Strategy to a Level One Fire Strategy once further detailed information on fire history has been obtained.</p> <p>A37. Focus management efforts on these key areas for managing fires:</p> <ul style="list-style-type: none"> plan burning around the former township area to protect it from wildfire continue use of fire as part of integrated control programs, to manage species including rubber vine, parkinsonia and parthenium. <p>A38. Work with other agencies, Traditional Owners and neighbours to co-ordinate fire management activities.</p>

5.3 Fencing

Under the Nature Conservation Act, grazing is not permitted in national parks. Cattle from neighbouring properties sometimes stray into the area. QPWS has replaced most of the old boundary fences with a stock-proof fence.

The park surrounds one private property in the former Dalrymple township site. QPWS has offered to have the boundary of the property surveyed and fenced to prevent unauthorised access.

Desired outcomes 2021	Actions and guidelines
Cattle are excluded from the park.	<p>A39. Keep boundary fences in good repair and maintain firebreaks along the boundary fences.</p> <p>A40. Remove cattle from the park.</p>
Private property surrounded by the park is fenced and protected from wildfire.	A41. Liaise with the owner of private property in-holding and take action to minimise risk of wildfire and unauthorised access.

5.4 Climate change

Higher temperatures, drought and a consequent change in fire regimes are likely effects of a changed climate that would impact on the area's natural values. Although these impacts are hard to manage and are largely outside the scope of the plan, reducing stresses on the environment could make it more resilient to climate change.

Desired outcomes 2021	Actions and guidelines
<p>Understand potential impacts from climate change, particularly on the threatened species and ecosystems.</p> <p>Impacts of invasive species as a result of climate change are minimised.</p>	<p>A42. Encourage research that is associated with climate change impacts and that supports and informs management decisions.</p> <p>A43. Promote linking important habitats for climate change-affected species through establishing and maintaining corridors and connections.</p> <p>A44. Monitor the impacts of invasive species as a result of climate change and,</p>

	<p>where necessary, include actions in pest management and fire programs to minimise identified impacts.</p> <p>A45. Reduce unnecessary stresses on ecosystems by:</p> <ul style="list-style-type: none">• controlling pest plants that impact on their structure and composition• minimising risk of widespread damaging wildfires• undertaking planned burns for ecological purposes under conditions that promote ecosystem health and the retention of critical flora and fauna habitat values.
--	---

6. References

Bean A.R. (1992). Dalrymple National Park Vegetation Survey. Department of Environment and Heritage, Townsville.

Sattler, P. and Williams, R. (eds) 1999, *The conservation status of Queensland's bioregional ecosystems*. Environmental Protection Agency, Queensland Government, Brisbane.

Sub-regional Nature Based Tourism Strategy (2005). Protected Areas and Council Reserves in Dalrymple and Flinders Shires. Developed by representatives from Dalrymple Shire Council, Flinders Shire Council, Tourism Queensland and Queensland Parks and Wildlife Service.

Whitehead, P.W. and Stephenson, P.J. (1998). Lava rise ridges of the Toomba basalt flow, north Queensland, Australia, *Journal of Geophysical Research*, 103, B11, 27 371–27 382.

Walker, J. and Hopkins, M.S. (1990). Vegetation. In: The Australian Soil and Land Survey Handbook. 2nd edition (eds. McDonald, R.C. et al). Melbourne: Inkata Press.

7. Hyperlinks

Aboriginal Cultural Heritage Act 2003 <www.legislation.qld.gov.au>

Bureau of Meteorology <www.bom.gov.au>

DES website <www.des.qld.gov.au>

Land Protection (Pest and Stock Route Management) Act 2002 <www.legislation.qld.gov.au>

Nature Conservation Act 1992 <www.legislation.qld.gov.au>

Nature Conservation (Wildlife) Regulation 2006 <www.legislation.qld.gov.au>

Queensland Heritage Act 1992 <www.legislation.qld.gov.au>

Regional ecosystems <www.des.qld.gov.au>

8. Appendixes

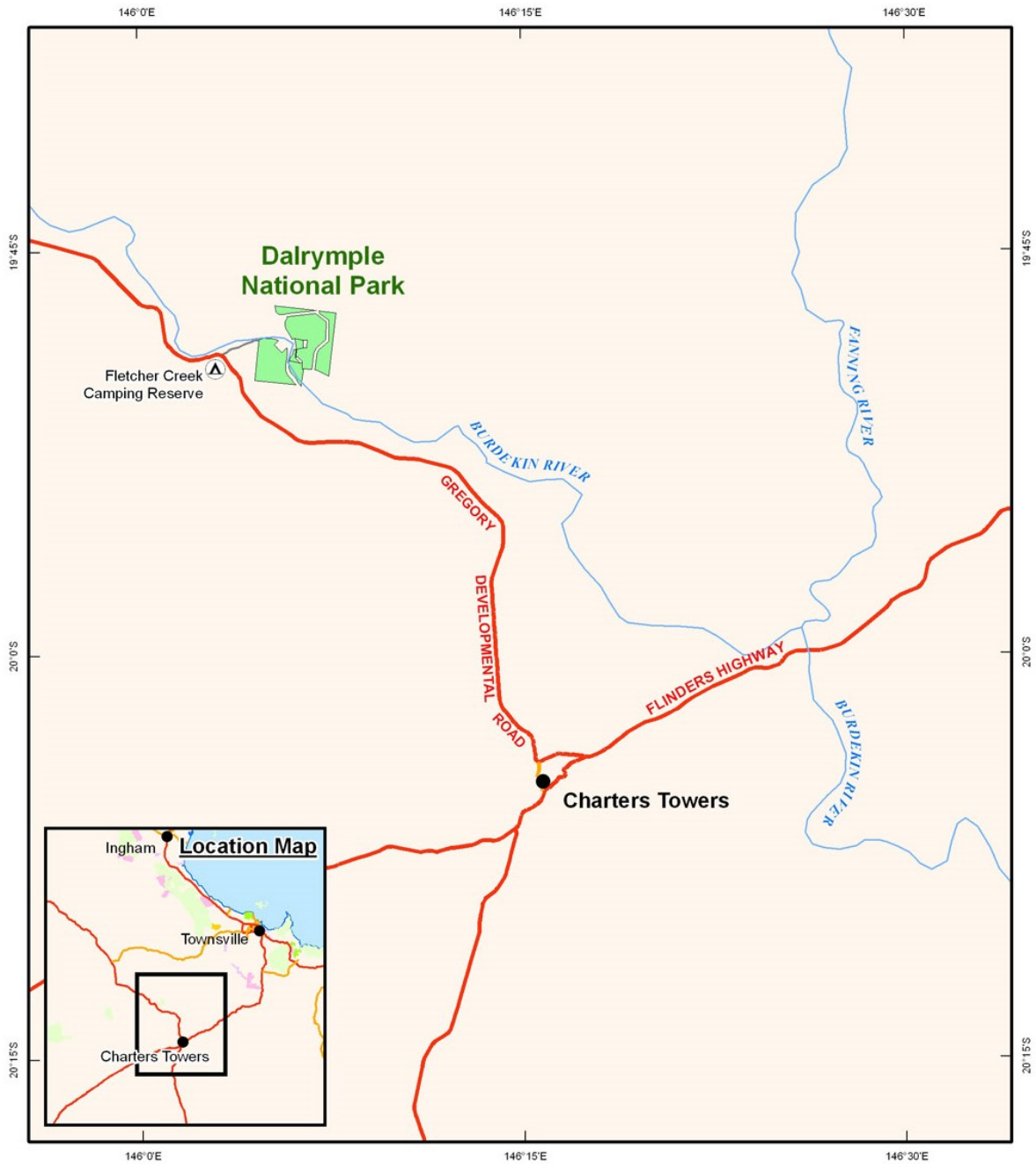
Appendix A – Maps

Appendix B – Definitions

Appendix C – Regional ecosystems

Appendix A – Maps

Map 1 Location

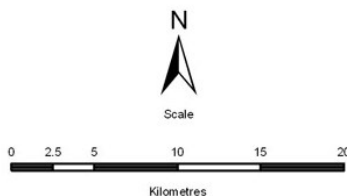


Map Projection:
 Universal Transverse Mercator (MGA) zone 55
 Horizontal Datum:
 Geocentric Datum of Australia 1994 (GDA94)

Map Production:
 Spatial Services - Brisbane,
 Queensland Parks and Wildlife Service,
 Department of Environment and Resource Management,
 10 December 2010

Disclaimer:
 This map has been produced for the purposes
 of discussion and comment. While the map
 has been prepared with care, neither the
 Queensland Government nor the Department
 of Environment and Resource Management
 accepts any liability for any decisions or actions
 taken by individuals or organisations on the
 basis of this map.

Accuracy statement:
 Due to varying source, accuracy or currency
 of data layers used in this map, the spatial locations
 of features may not coincide when overlaid.



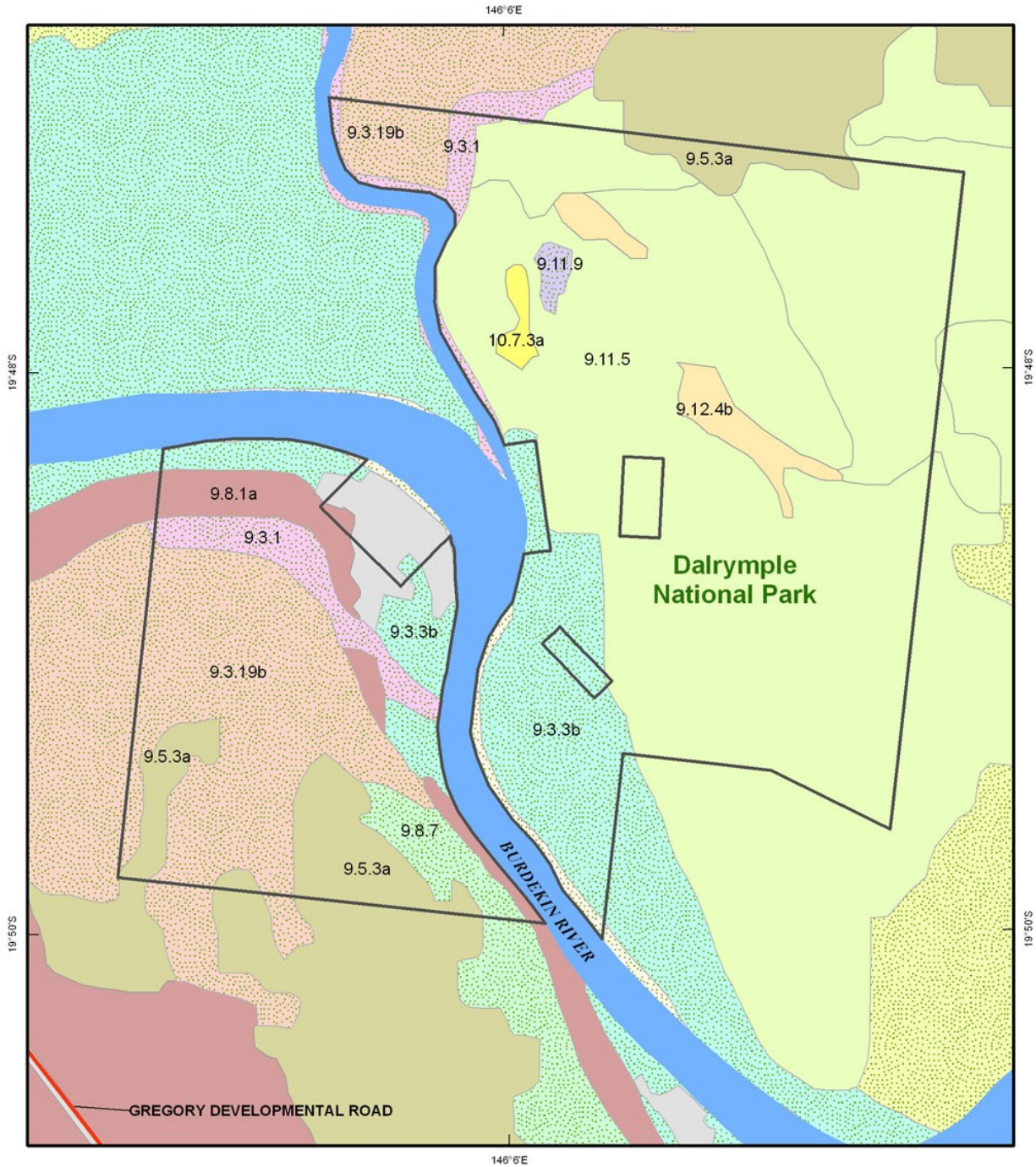
Source Material:
 • Protected Areas of Queensland, DERM; 2010
 • Drainage Network - Rivers QLD; 2010
 • Pitney Bowes Business Insight 2010
 • State Digital Road Network (SDRN); September 2010
 • Pitney Bowes Business Insight 2010
 • Major Towns of Queensland - NRM, 2008

Legend

- Major Centre**
- Town
- Drainage Network**
- River
- Road Network**
- Highway
- Secondary road
- Access Track
- Tenure**
- National Park
- Visitor Infrastructure**
- ▲ Camping Reserve

© The State of Queensland
 Department of Environment and Resource Management, 2010

Map 2 Regional ecosystems and biodiversity status

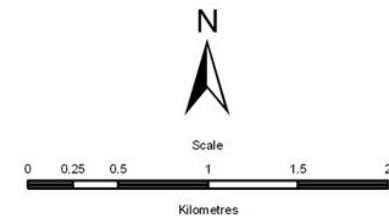


Map Projection:
Universal Transverse Mercator (MGA) zone 55
Horizontal Datum:
Geocentric Datum of Australia 1994 (GDA94)

Map Production:
Spatial Services,
Queensland Parks and Wildlife Service,
Department of Environment and Resource Management,
10 December 2010

Disclaimer:
This map has been produced for the purposes of discussion and comment. While the map has been prepared with care, neither the Queensland Government nor the Department of Environment and Resource Management accepts any liability for any decisions or actions taken by individuals or organisations on the basis of this map.

Accuracy statement:
Due to varying source, accuracy or currency of data layers used in this map, the spatial locations of features may not coincide when overlaid.



Source Material:
 • Regional Ecosystems Remnant Vegetation of Queensland; 2009
 • Protected Areas of Queensland, DERM; 2010
 • State Digital Road Network (SDRN); September 2010
 © Pitney Bowes Business Insight 2010

Legend

Regional Ecosystem

- | | |
|---------|-------------|
| 10.7.3a | 9.3.3b |
| 9.11.5 | 9.5.3a |
| 9.11.9 | 9.8.1a |
| 9.12.4b | 9.8.7 |
| 9.3.1 | Non Remnant |
| 9.3.19b | |

Tenure

National Park

Biodiversity Status

Of Concern dominant

Drainage Network

River

Road Network

Highway

Appendix B – Definitions

Endangered (species)

At the state level, endangered species are those species listed as endangered under schedule 2 of Queensland's Nature Conservation (Wildlife) Regulation 2006. At the national level, endangered species are those species listed as endangered under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999*.

Management principles for national parks

Under Section 17, *Nature Conservation Act 1992*:

- (1) A national park is to be managed to—
 - (a) provide, to the greatest possible extent, for the permanent preservation of the area's natural condition and the protection of the area's cultural resources and values
 - (b) present the area's cultural and natural resources and their values
 - (c) ensure that the only use of the area is nature based and ecologically sustainable.
- (2) The management principle mentioned in subsection (1)(a) is the cardinal principle for the management of national parks.

Near threatened (species)

Near threatened species are those species listed as near threatened under schedule 5 of Queensland's Nature Conservation (Wildlife) Regulation 2006.

Of concern (regional ecosystems)

For biodiversity planning purposes, regional ecosystems are assigned a DES biodiversity status of concern if 10–30 per cent of its pre-clearing extent remains unaffected by moderate degradation and/or biodiversity loss. Moderate degradation and/or biodiversity loss is defined as floristic and/or faunal diversity being greatly reduced but unlikely to recover within the next 20 years even with the removal of threatening processes; or soil surface is moderately degraded.

Regional ecosystems

Regional ecosystems were defined by Sattler and Williams (1999) as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. Readers should refer to this publication for background information about regional ecosystems and the bioregional planning framework used in Queensland.

Compilation of the information about regional ecosystems presented in Sattler and Williams (1999) was derived from a broad range of existing information sources including land system, vegetation and geology mapping and reports. However, the framework is dynamic and is regularly reviewed as new information becomes available. During the past few years the Queensland Herbarium has developed a program for explicitly mapping regional ecosystems across Queensland. This has resulted, and will continue to result, in updates to the descriptions and status of regional ecosystems. The descriptions are maintained in DES's Regional Ecosystem Description Database.

Vulnerable (species)

At the state level, vulnerable species are those species listed as vulnerable under schedule 3 of Queensland's Nature Conservation (Wildlife) Regulation 2006. At the national level, vulnerable species are those species listed as vulnerable under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999*.

Appendix C – Regional ecosystems

Table 1: Of concern regional ecosystems for Dalrymple National Park.

Regional ecosystem number	Regional ecosystem name	DES biodiversity status	Reason for status and the threats to ongoing sustainability
9.3.3	Mixed woodland dominated by <i>Corymbia</i> spp. and <i>Eucalyptus</i> spp. on alluvial flats, levees and plains.	Of concern	High total grazing pressure and weeds, such as <i>Hyptis suaveolens</i> , are leading to degradation. Subject to minor clearing.
9.3.12	River beds and associated waterholes	Of concern	Rubber vine <i>Cryptostegia grandiflora</i> infestation, total high grazing pressures and alluvial mining are leading to degradation.
9.3.19	<i>Eucalyptus coolabah</i>	Of concern	Subject to degradation due to high total grazing pressure and the presence of weeds, such as rubber vine. In September 2003, remnant extent was >10 000 ha and >30 % of the pre-clearing area remained.
9.8.7	Semi-evergreen vine thicket on cones, craters and rocky basalt flows with little soil development.	Of concern	Weed infestation by <i>Lantana</i> spp. and rubber vine <i>Cryptostegia grandiflora</i> is degrading parts of this regional ecosystem. Wetlands within this ecosystem are subject to high total grazing pressure. In September 2003, remnant extent was >10 000 ha and >30 % of the pre-clearing area remained.
9.10.6	<i>Eucalyptus crebra</i>	Of concern	In September 2003, remnant extent was <10 000 ha and >30 % of the pre-clearing area remained.
9.11.9	Semi-deciduous vine thicket	Of concern	In September 2003, remnant extent was <10 000 ha and >30 % of the pre-clearing area remained.

