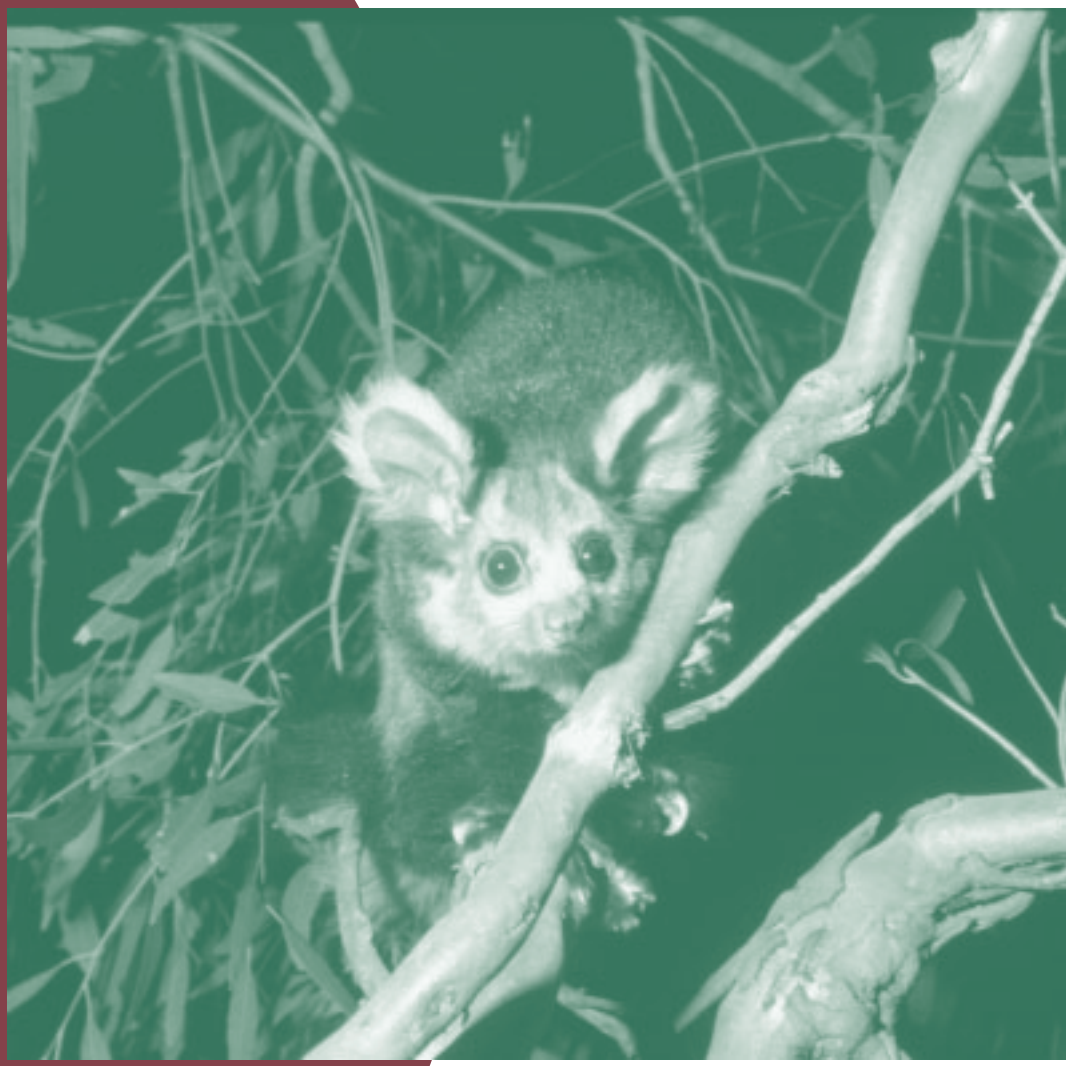
Carbrook Wetlands Conservation Park
Serpentine Creek Conservation Park

Management plan



South East Queensland Biogeographic Region

November 1999

QUEENSLAND GOVERNMENT

QUEENSLAND PARKS AND WILDLIFE SERVICE

Summary

This management plan provides the framework and guidelines on how Carbrook Wetlands and Serpentine Creek Conservation Parks will be managed. It sets out the considerations, outcomes and strategies that are proposed to form the basis on which day-to-day management decisions are made.

The draft management plan for Protected areas in the Carbrook Wetlands was released for public comment in March 1999 for a period of 2 months in accordance with s 115 of the *Nature Conservation Act 1992*. Ten submissions were received from organisations and individuals including comments received in response to notification under the *Native Title Act 1993*. All submissions were considered in the drafting of this final management plan by the Minister in accordance with s 116 of the *Nature Conservation Act 1992*.

This plan was prepared in July 1999, in accordance with s 125 of the *Nature Conservation Act 1992* (Act). In 2023 the plan was extended, in keeping with s 120G of the Act. Minor amendments have been made. There has been no change to the plan's original management intent and direction. For further information on this plan or the planning process, please contact the Department of Environment and Science at ParkManagementPlans@des.qld.gov.au.

This management plan was prepared by Queensland Parks and Wildlife Service staff. Thanks are due to those groups and individuals who made submissions in response to the draft plan.

Cover photograph: Greater glider

Contents

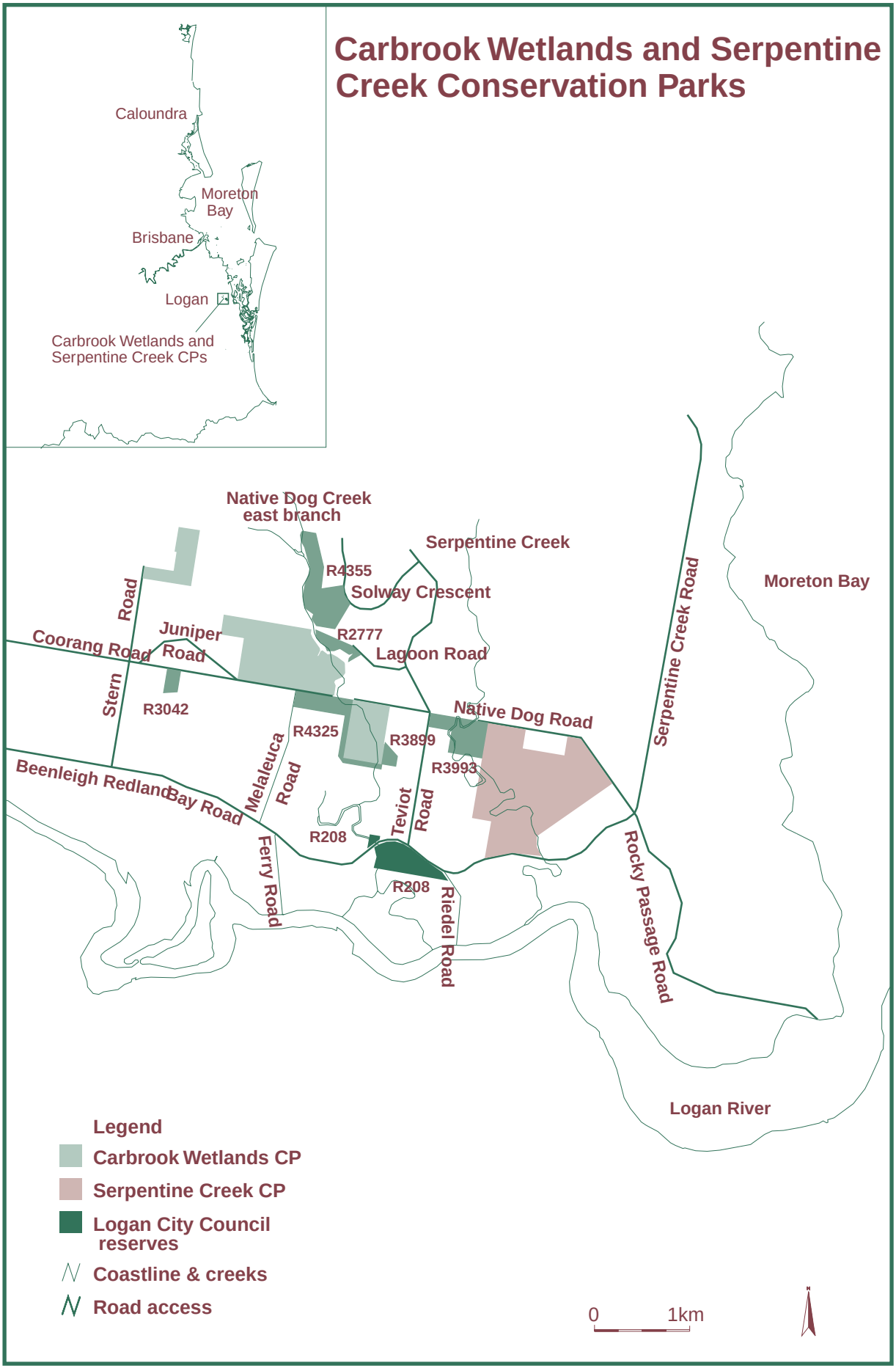
Part A

Part A covers both protected areas in the Carbrook Wetlands.

Part B

Part B includes specific management strategies and outcomes for each protected area and should be read with reference to Part A.

Carbrook Wetlands and Serpentine Creek Conservation Parks



Map produced by Conservation Resource Unit
Qld Parks & Wildlife Service, May 1999.

1 Introduction

This document contains the management plans for Carbrook Wetlands Conservation Park and Serpentine Creek Conservation Park. The management plans for these parks have been linked into one document as they have very similar natural and cultural resource values and shared management resources. A location map for the parks is included in the document.

2 Management directions and purposes

2.1 Management directions

The protected areas in the Carbrook Wetlands will be managed primarily for conservation of the plant and animal communities within the catchments of Serpentine Creek and Native Dog Creeks. The parks lie in the Logan City and Redland Shire Councils and are part of the Koala Coast region. They contain paperbark communities of regional significance and bird species which are protected under the Japan Australia Migratory Bird Agreement and the China Australia Migratory Bird Agreement.

The park management plans call for regulation in vehicle traffic and horseriding activities. Serpentine Creek Conservation Park will allow four-wheel-drive management access and pedestrian access only. Carbrook Wetlands Conservation Park will provide for low key nature-based recreational use including horseriding under a permit.

2.2 Management purposes

The major purposes of management will be to ensure that:
- the diversity and integrity of the plant and animal communities is maintained;
- threatened communities and species requirements are reflected in management programs;
- appropriate fire management regimes retain the diversity of plant communities;
- adverse changes to water quality and drainage patterns is minimised;
- scientific and educational studies focus on monitoring and gathering baseline information;
- visitor use is predominantly limited to low-key nature based recreation;
- horseriding where permitted is regulated through commercial activity permits and regulatory notices;
- neighbours are aware of the impact of residential development on the parks and the necessity for fire management, feral animal management and weed control programs; and
- the park reserves are consolidated where possible.

3 Basis for management

The protected areas in Carbrook Wetlands are dedicated under the *Nature Conservation Act 1992* as conservation parks and will be managed in accordance with s 20 of the Act which sets out the following principles for management:
- to conserve and present the area's cultural and natural resources and their values;
- to provide for the permanent conservation of the area's natural condition to the greatest possible extent; and
- to ensure that any commercial use of the area's natural resources, including fishing and grazing, is ecologically sustainable.

The *Native Title Act 1993* places obligations on the management of areas designated under the *Nature Conservation Act 1992*. In relation to Serpentine Creek Conservation Park however native title has been extinguished as the park was previously freehold tenure prior to gazettal in 1983. The majority of Carbrook Wetlands Conservation Park was freehold prior to gazettal in 1983. However the recent

addition of R1151, which was part of an early Beaudesert-Cannon Hill stock route, requires that notification be given to native title holders on actions undertaken on this addition.

The parks are part of the Koala Coast, a region considered to be the largest urban koala habitat in Australia. This area is covered by the State Planning Policy 1/97 (Conservation of Koalas in the Koala Coast) under the *Local Government (Planning and Environment) Act 1990*. This State Planning Policy addresses planning issues in relation to the conservation of koalas and their habitat across parts of Redland Shire, Logan and Brisbane City Councils.

The *Integrated Planning Act 1997* gives opportunity for the interests of State Government to be incorporated into land use and development. This occurs through providing input into Local Government Planning Schemes and through input into development assessment. The level of input is dependent on the relevance of State Government legislation and policies and/or types of development proposed. The Environmental Protection Agency participates in this process as well as liaising with local government on broad planning issues.

The requirements of other legislation administered by the Service and other State agencies will be met where necessary.

3.1 Location and planning area

The parks are located approximately 40-45km south-east of Brisbane within Logan City and Redland Shire. Carbrook Wetlands Conservation Park covers 103ha of paperbark teatree *Melaleuca quinquenervia* open forest and mixed Eucalypt open forest along Native Dog Creek. It is a recent amalgamation of a former Logan City Council reserve of 16ha and the previous Native Dog Creek Conservation Park.

Serpentine Creek Conservation Park covers 122ha of paperbark teatree *Melaleuca quinquenervia* forest with river mangrove *Aegiceras corniculatum* along the lower reaches of Serpentine Creek. In 1983 the late Mr E. Corbould donated both parks to the Service for conservation purposes.

Logan City Council is currently negotiating with the Service to transfer management of a further seven local council reserves into the parks. These reserves contain relatively intact vegetation communities representative of the Carbrook Wetlands and four of them adjoin existing conservation parks. Carbrook Wetlands Conservation Park would then total approx 168ha while Serpentine Creek would increase in size to 138ha.

3.2 Regional context

The parks are found within the southern coastal lowlands of the South East Queensland biogeographic region. They form part of an area known generally as the 'Carbrook Wetlands' which contain a variety of *Melaleuca* communities and ephemeral wetlands within the floodplain of the Logan River and catchments of Serpentine and Native Dog Creeks. The Carbrook Wetlands form part of a larger vegetation mosaic extending north to Mount Cotton, west to Cornubia/Venman Bushland National Park, south to the Logan River and east to Redland Bay via the Sheldon-Mount Cotton corridor. Surrounding land in the Carbrook Wetlands is dominated by primary production and rural residential land uses.

Serpentine Creek Conservation Park is included as part of the Moreton Bay Ramsar site - wetland sites recognised of international importance under the Ramsar Convention. The Ramsar Convention aims to conserve remaining wetlands which are one of the most threatened groups of habitats worldwide.

Australia's obligations under the Ramsar convention are primarily met through Commonwealth, State and Local Government legislation and administrative arrangements. The Environmental Protection Agency and the Queensland Parks and Wildlife Service will implement the Convention through their legislative responsibilities for land and water management.

A Directory of Important Wetlands in Australia has been compiled as part of Australia's obligations and commitments with respect to the Ramsar Convention. The area known as Carbrook Wetlands which includes Carbrook Wetlands Conservation Park has been listed as a site of national importance in this Directory. The QPWS will manage Carbrook Wetlands Conservation Park consistent with this recognition as a site of national importance.

3.3 Values of the protected areas in Carbrook Wetlands

Plants and animals

One of the park's primary values lies in its conservation of representative samples of the largest remaining coastal area of paperbark *Melaleuca* species forest between Noosa and the Queensland/New South Wales border. The extent of Melaleuca communities in south-east Queensland has been drastically reduced due to clearing for rural and residential development.

Melaleuca quinquenervia open forest communities growing on alluvial soils are considered to be a vulnerable regional ecosystem in south-east Queensland. Therefore remaining communities in protected areas have considerable regional significance. The *Melaleuca* communities and the unusual flora association of *Eucalyptus microcorys* and *E.racemosa* are also not well reserved in the Brisbane, Logan and Redland regions and are therefore of local conservation significance.

The parks conserve some plant species which are uncommon in these regions and in south-east Queensland. These include the flaxleaf paperbark *Melaleuca linariifolia*, narrow leaved red gum *Eucalyptus seeana*, *Enydra fluctuans*, buttonwood *Glochidion sumatranum*, *Acronychia wilcoxiana*, and a hybrid of *Eucalyptus robusta* and *Eucalyptus tereticornis*. A local government reserve to be transferred to conservation park protects the vulnerable *Acacia perangusta*. One of the southern most occurrences of Planchon's stringybark *Eucalyptus planchoniana* is conserved on Serpentine Creek Conservation Park. It is found in only a few locations in Queensland.

The parks wetland systems are good examples of their type within the South East Queensland biogeographic region. The Carbrook Wetland system supports and allows for the movement of a variety of animals particularly during dry seasons. These include:

- bird species protected by the Japan Australia Migratory Bird Agreement and the China Australia Migratory Bird Agreement;
- the vulnerable powerful owl *Ninox strenua*, and rare black-necked stork *Ephippiorhynchus asiaticus*;
- common species of cultural significance such as the koala *Phascolarctos cinereus* and short beaked echidna *Tachyglossus aculeatus*; and
- locally threatened yellow-bellied glider *Petaurus australis* and greater glider *P. volans*, red-necked wallaby *Macropus rufogriseus*, swamp wallaby *Wallabia bicolor* and the grey headed flying fox *Pteropus poliocephalus*.

The park areas and adjacent forested habitats provide a refuge for a variety of reptile species unable to exist in cleared or urban areas including the frill-neck lizard *Chlamydosaurus kingii* and the skink *Lampropholis delicata*. The vulnerable wallum froglet *Crinia tinnula* has been recorded in the area.

Scenic and aesthetic

The naturally vegetated areas of the parks have green space and scenic values providing a natural break between built up residential areas.

Scientific and educational

The Carbrook Wetlands are nationally recognised for their educational value as they include ecologically diverse areas. Aspects of scientific and educational interest include:

- hydrological processes, biology, ecology and natural history, and
- impacts of human activities on natural ecosystems.

Recreation

The natural environment of the parks provides for nature based activities which include walking, horseriding on designated tracks and nature appreciation such as bird watching.

4 Carbrook Wetlands Conservation Park management strategies

Current situation	Desired outcomes	Proposed policies, guidelines and actions
Native plants The preservation of natural areas outside the park is necessary to assist in the long term survival of park flora and fauna communities. Liaison with adjacent land holders is required to establish an understanding of the value of remnants and their ecological linkages with the park. Major impacts which threaten the integrity of the park plant communities include: • clearing of adjacent vegetation which isolates the park from other naturally vegetated areas; • changes in water quality and drainage patterns; • too frequent fires in adjacent areas; • weed invasion; and • grazing by cattle. The *Melaleuca quinquenervia* trees have had large portions of bark stripped off for use as hanging basket linings.	Protection of the integrity of the plant communities and species.	Map the locations of noteworthy plant species and undertake measures to ensure their continued presence on the park including investigating the need for monitoring. Liaise with local councils and other adjacent landholders to: • retain continuous areas of *Melaleuca* and *Eucalypt* forest within the catchment of Native Dog Creek; • minimise adverse changes to drainage patterns or water quality within the Native Dog Creek catchment; and • minimise impacts of future urban developments on the park environment. Liaise with adjacent landowners on the value of protecting native vegetation. Survey and fence the boundaries of the park as a high priority to control inappropriate park uses. Develop park fire management strategies to address vegetation requirements in relation to fire frequency and intensity. Consider further land acquisitions as opportunities arise.
Native animals In 1994 a survey of the Carbrook Wetlands area found 171 birds including protected migratory waders listed under JAMBA and CAMBA, 28 species of native mammals including 10 bat and 10 frog species and 18 species of reptile. The Service's Koala Research Unit surveyed the park three times in 1996-97. The average density of koalas per hectare was 0.16 which equates to 14 koalas on the park. The biggest long-term threat to the diversity of animals using the park is the destruction and fragmentation of vegetated areas surrounding the park.	Diversity and abundance of animal species is maintained. Migratory waders and birds protected under international agreements continue to use the area.	Carry out incidental observations and park specific fauna surveys to gather baseline information. Undertake regular fauna surveys on the wetland areas in association with the Queensland Ornithological Society, NatureSearch and other conservation groups. Ensure the protection of trees containing habitat hollows and liaise with surrounding land owners on the value of such trees. Implement any Service approved recovery plans for fauna. See also **Wetland protection** section.

Current situation	Desired outcomes	Proposed policies, guidelines and actions
Wetland protection Carbrook Wetland Conservation Park lies within the floodplain of the Logan River and covers vegetation on both sides of the east branch of Native Dog Creek. The effects of off-park activities on the water quality and integrity of Native Dog Creek are a serious concern. These include disturbance to the creek beds; erosion and sediment deposition from land use upstream; disturbance to tidal flows and freshwater flushing; saltwater intrusion and use of ground water and creek water for irrigation during dry periods. Six Logan City Council Reserves are to be incorporated into Carbrook Wetlands Conservation Park to enhance the protection of the wetlands along Native Dog Creek. These reserves are: R4355, R2777, R4325, R3899, R208 and R3402. (refer to map) Griffith University has on-going water quality and soil monitoring studies along the east branch of Native Dog Creek on R208 and R2777. Their findings show the water pH is generally acidic with very high concentrations of iron and manganese indicating acid sulphate soils. The park is part of a wetland which is registered in the Directory of Important Wetlands in Australia. The Environmental Protection Agency has a responsibility to manage these wetlands through a total catchment approach involving the community, industry and government departments.	Protection of the Carbrook Wetlands and in particular Native Dog Creek.	Liaise with Local Governments in relation to environmental outcomes for Carbrook Wetlands and in particular Environmental Management Plans for developments. In relation to Native Dog Creek liaise with Logan City Council and Redland Shire Council to: • prevent deterioration in the water quality from urbanisation runoff in the catchment; and • ensure the natural form and alignment of the creek bed is maintained. Maintain the six new additions in a natural state and rehabilitate any degraded areas. Liaise with Griffith University on obtaining water quality and quantity data as part of the scientific permit conditions. Support Griffith University on publishing their findings on soil and water quality monitoring in the press. Liaise with other state and local governments, local communities and industries to preserve the catchment of Native Dog Creek. Implement relevant strategies from the Regional Coastal Management Plan for South-east Queensland and the Shorebird Habitat Management Plan. Liaise with Griffith University, Logan City and Redland Shire Councils on addressing acid sulphate soil issues for the Carbrook Wetlands.

Current situation	Desired outcomes	Proposed policies, guidelines and actions
Introduced plants and animals Weeds of greatest concern within the park include the declared plants: groundsel and water hyacinth. The Melaleuca communities are prone to groundsel infestations while areas of standing water contain water hyacinth. Management of these species must reduce the numbers and/or distribution throughout the park areas. Small areas of lantana are also present in the drier open forest. Logan City Council weed strategies are in place which address community weed problems. Dumping of stolen vehicles and garden/domestic rubbish on road reserves adjacent to the park is a threat. The park is regularly monitored for pigs which seasonally move through to the creek systems. Unleashed dogs and wandering domestic cats are also found on the park.	The extent of declared noxious weeds is reduced within the park and no new weed species are established. The impact of feral animals on the park is reduced.	Prepare a park weed control action plan in consultation with Logan City Council and surrounding land owners which: • links into the South East Queensland Environmental Weeds Strategy; and, • outlines suitable methods for revegetation and the long term goals of the weed program. Continue to liaise with Logan City Council on public education in relation to the impact of weeds on native vegetation and the potential for garden plants to become weed sources. Continue liaison with: • Logan City Council on rubbish dumping adjacent to or in the park; and • Department of Natural Resources Land Protection Officer on the presence and monitoring of feral animals. Monitor the park for feral and domestic animals and undertake appropriate control.
Fire management The park has suffered from too frequent fires and although *Melaleucas* and *Eucalypts* are fire tolerant many of the understorey and ground cover species are sensitive to fire. Heath shrub species diversity has been reduced as plants have been unable to mature and set seed. Blady grass cover has increased. Fire history records have been kept since the Service acquired management of the park in 1994.	Fire management protects the diversity of flora and fauna. Adjacent properties, park visitors and infrastructure are protected from the impacts of fire.	Develop, in consultation with local governments and relevant land-owners, a fire management plan which gives consideration to the known requirements of plants and animals, access, boundaries, vegetation maps and firebreaks. Implement the fire management plan and establish fire monitoring points in accordance with current QPWS guidelines. Continue to map all prescribed and wildfires on the regional Geographic Information System.

Current situation	Desired outcomes	Proposed policies, guidelines and actions
Cultural heritage The majority of Carbrook Wetlands Conservation Park was freehold prior to gazettal in 1983 and does not require native title notification. However the recent addition to the park of R1151 (previously part of an early Beaudesert-Cannon Hill stock route) requires notification to be given to native title holders on actions undertaken on this addition.	The identification and protection of any sites of cultural significance.	Notify native title holders on actions undertaken on R1151 in relation to development of a fire management plan and undertaking prescribed burning where possible.
Recreation A small day-use area is located on the eastern end of R2777. This area has a post and rail barrier and a table and shelter shed. Recreational use of this area will be maintained by the Service once it has been gazetted as conservation park. There is an established history of horseriding in certain areas of the park. Horseriding may be permitted in a conservation park under a regulatory notice as defined in s 86 of the *Nature Conservation Act 1992 Regulation 1994*. Some areas of the park are damaged by horses, especially where creeks are crossed. Carparking and vehicular access on the park is inappropriate due to the small size of the park and the sensitive hydrology.	Low-key nature based recreational opportunities are compatible with protection of the nature conservation values.	Recreational vehicle access will be restricted to the park's boundary. Place regulatory notices at the park entrance specifying conditions for horseriding. Horseriding impacts on the park and the six Logan City Council Reserves to be incorporated into the park will be assessed and horseriding will be prohibited in certain environmentally sensitive areas and degraded areas will be rehabilitated. Ensure commercial activity permits are issued to commercial horseriding clubs. Boundary signs will be placed at strategic locations. Liaise with Department of Natural Resources on road reserve closures to prevent inappropriate horseriding and trailbike riding access. No camping facilities will be provided on the park.

Current situation	Desired outcomes	Proposed policies, guidelines and actions
Education and interpretation School groups study the urban bushland environment while university researchers and students gather baseline information on water quality, soils, flora and fauna. While Education and Interpretation Rangers located at Daisy Hill Koala Centre provide off-site programs, visitor interpretation is needed for the park. The Service encourages baseline monitoring studies for scientific purposes by Griffith University. A scientific permit will be required for Griffith University to continue scientific studies once the proposed additions are gazetted as conservation park.	Community awareness and appreciation of the park values and benefits is raised. Community support for the implementation of expressed management purposes and actions.	Establish an interpretation display in the day use area at R2777 once the reserve is gazetted as conservation park to foster community awareness of the wetlands and prevent inappropriate uses of the parks. Continue to provide off-site information to visitors and students. Produce a VIS for both Carbrook Wetlands and Serpentine Creek Conservation Parks to highlight the natural values and management issues. Continue to liaise with Griffith University on their studies for the area.
Plan implementation and monitoring Implementation of this management plan will be the responsibility of North Moreton District staff based at Daisy Hill with assistance from the Southern Region staff at Moggill.	Effective implementation of the management plan.	Develop a plan implementation schedule within 12 months of plan approval which includes resourcing guidelines and costing and: • considers the expertise and seasonal requirements for staffing and training; and • ties in with the annual works programs and the business plan for the Service. Conduct a review of the management plan within 10 years from approval as prescribed under s 125 of the *Nature Conservation Act 1992*.

References

Greenway, M. and Kordas, G.(ed) (1994). An Ecological Assessment of the Carbrook Wetlands, Logan City: their significance, threats and future management. Report prepared for East Logan Wildlife Preservation Society, Logan City Council. Australian Nature Conservation Agency.

5 Serpentine Creek Conservation Park management strategies

Current situation	Desired outcomes	Proposed policies, guidelines and actions
Native plants Major impacts which threaten the integrity of the park plant communities include: • clearing of adjacent vegetation isolating the park from other naturally vegetated areas; • changes in the water quality and drainage patterns; • too frequent fires in adjacent areas; and • weed invasion. The park boundary needs to be surveyed and fenced to control inappropriate uses. This is a high priority. On-park fire management strategies will need to address vegetation requirements in relation to fire frequency and intensity.	Maintenance of the integrity of the plant communities and species present.	Determine the location of noteworthy plant species and undertake measures to ensure their continued presence on the park including investigating the need for monitoring. Liaise with Redland Shire Council on a possible nature refuge proposal on the northern edge of the park along Native Dog Creek Road. Refer to strategies outlined in **Wetland protection**. Define park boundaries by surveying and fencing where appropriate. Refer to weed management and fire management sections. Consider further land acquisitions as opportunities arise.

Current situation	Desired outcomes	Proposed policies, guidelines and actions
Native animals The park has not been surveyed for fauna specifically but should be considered within the broader landscape of the Carbrook Wetlands area which was surveyed in 1994. The Koala Research Unit of the Service undertook three koala surveys on the park in 1996-97. The average density of koalas per hectare was .07 which equates to 8-9 koalas on the park. Serpentine Creek Conservation Park is included in the Moreton Bay Ramsar Site. It provides habitat for protected migratory waders listed under JAMBA and CAMBA agreements. The biggest long-term threat to the diversity of animals using the park is the fragmentation of surrounding vegetated areas.	Diversity and abundance of animal species is maintained. Migratory waders and birds protected under international agreements continue to use the area.	Conduct park specific fauna surveys to gather baseline information and in particular focus on amphibian searches. Undertake regular fauna surveys on the wetland areas in association with the Queensland Ornithological Society, NatureSearch and other conservation groups.

Current situation	Desired outcomes	Proposed policies, guidelines and actions
Wetland protection The park is included in the Moreton Bay Ramsar Site which is of international importance. The Queensland Government seeks to manage such wetlands in accordance with the objectives and principles set out in the National Strategy for Ecologically Sustainable Development (Commonwealth of Australia, 1992). In accordance with this strategy a Regional Coastal Management Plan for South-east Queensland and a Shorebird Habitat Management Plan are currently being prepared by the Environmental Protection Agency. The *Melaleuca quinquenervia* communities on the park are dependent on maintenance of the flow of water through the Serpentine Creek drainage channels. The river mangrove *Aegiceras corniculatum* is similarly dependent on the preservation of the tidal flow up the creek from the Logan River. Changes to the surface or sub-surface water flow regimes from land use activities upstream or downstream can have detrimental effects on the composition of these and other communities. Preliminary soil observation for the Carbrook Wetlands have indicated the potential to produce acid sulphate soils.	The integrity of the natural wetlands is maintained.	Liaise with Local Governments in relation to environmental outcomes for Carbrook Wetlands and in particular Environmental Management Plans for developments. Liaise with Logan and Redland Shire Councils to: • retain continuous areas of *Melaleuca* and *Eucalypt* forest within the catchment of Serpentine Creek; • minimise adverse changes to drainage patterns or water quality within the Serpentine Creek catchment; and • minimise impacts of future urban developments in the park vicinity. Liaise with other state and local governments, local communities and industries on preservation of the catchment of Serpentine Creek. Implement relevant strategies from the Regional Coastal Management Plan for South-east Queensland and the Shorebird Habitat Management Plan. Liaise with Griffith University, Logan City and Redland Shire Councils on addressing acid sulphate soil issues for the Carbrook Wetlands.

Current situation	Desired outcomes	Proposed policies, guidelines and actions
Introduced plants and animals The integrity of Serpentine Creek plant communities is threatened by significant infestations of the declared plant groundsel especially in and adjacent to the Melaleuca forests. Whisky grass is also creeping in around the open forest communities. Its increasing presence in south-east Queensland is becoming a serious management concern. Water hyacinth has been found on R208, R3042 and in sections of Serpentine Creek running through the park. It is a declared plant requiring its numbers and/or distribution to be reduced. The seasonal movement of pigs is a major problem.	The removal of weed species threatening the plant communities and waterways. The control of feral pigs on the park.	Prepare and implement a weed control action plan which links into the South East Queensland Environmental Weeds Strategy and outlines suitable methods for revegetation and the long term goals of the weed program. Initiate control methods for water hyacinth in conjunction with Logan City and Redland Shire Councils. Liaise with neighbouring property owners to impress on them their obligations to control weeds and the effect dumping garden rubbish has on the park's weed populations. Undertake feral pig control in consultation with Department of Natural Resources and surrounding neighbours.
Fire management The park has suffered from too frequent fires and although adult *Melaleucas* and *Eucalypts* are fire tolerant many of the understorey species and seedlings of large trees are not. This has led to a reduction in diversity of the shrub species present favouring species such as blady grass *Imperata cylindrica* and kerosene bush *Pultenaea villosa* and not enabling other shrubland ground species to mature and set seed.	Fire management protects the diversity of flora and fauna. Adjacent properties, park visitors and infrastructure are protected from the impacts of fire.	Develop, in consultation with local governments and relevant landowners, a fire management plan which gives consideration to the known requirements of plants and animals, access, boundaries, vegetation maps and firebreaks. Implement the fire management plan and establish fire monitoring points in accordance with current QPWS guidelines. Continue to map all prescribed and wildfires on to the regional Geographic Information System.

Current situation	Desired outcomes	Proposed policies, guidelines and actions
Cultural heritage Little is known of the cultural heritage significance of the park.	The identification and protection of any sites of cultural significance.	Establish the cultural values of the park through liaison with local historical societies.
Recreation Low key nature based recreation occurs on the park and includes walking and nature observation. The northern park boundary has been surveyed. Two short sections of road reserve have been closed along the northern boundary of the park and will be consolidated into the park. Uses which are in conflict with the management purposes of the park include trailbike riding, four-wheel-driving and horseriding.	Low-key nature based recreation opportunities are compatible with protection of the nature conservation values	Recreational vehicle access will be restricted to the boundary of the park. Boundary signs will be placed at strategic locations. Horseriding will not be permitted on the park. Recreational access will be restricted to walking and nature observation. Incorporate additional road reserves to be managed to control access.
Plan implementation and monitoring Implementation of this management plan will be the responsibility of North Moreton District staff based at Daisy Hill with assistance from the Southern Region staff based at Moggill.	The management plan is implemented effectively.	Develop a plan implementation schedule within 12 months of plan approval which includes resourcing guidelines and costing and ties in with the business plan for the Service and the annual works programs for the park. Consider the number, expertise and seasonal requirements for staffing and training. Conduct a review of the management plan within 10 years from approval as prescribed under s 125 of the *Nature Conservation Act 1992*.