



Managing Total Grazing Pressure in Reserves

Management plan draft amendments 2024



Government of South Australia
Department for Environment
and Water



Acknowledgement of Country

The South Australian Government acknowledges Aboriginal peoples as the state's first peoples and nations, and that Aboriginal peoples' deep knowledge and relationship with Country continues to be critical in sustainably caring for our lands and waters.

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Your views are important

Kangaroo numbers in South Australia have increased substantially since European settlement, with some populations now adversely impacting on biodiversity values. These impacts occur in reserves proclaimed by the *National Parks and Wildlife Act 1972* and the *Wilderness Protection Act 1992*, and in some circumstances they need to be strategically managed as part of a broader approach to addressing total grazing pressure management. Kangaroo protection and management is provided for under the *National Parks and Wildlife Act 1972* and associated regulations, and kangaroo management strategies for reserves are enabled by management plans.

In accordance with the *National Parks and Wildlife Act 1972* and the *Wilderness Protection Act 1992*, the Minister for Climate, Environment and Water may amend a management plan to facilitate a change in management to that which is set out in an existing plan.

This document has been prepared to seek the community's views about proposed amendments to several management plans. Many of the existing management plans included in this document already enable kangaroo management, whereas other plans do not refer specifically to kangaroo management or managing total grazing pressure. Management strategies included in plans differ for a variety of reasons such as the year in which the plan was written and the environmental opportunities and challenges observed at the time, which can then change in the years following adoption of the plan. To more clearly

reflect the considerations involved and to better provide an adaptive kangaroo management framework, an amendment is proposed to each of the following management plans:

Adelaide & Mount Lofty Ranges Region

- Newland Head Conservation Park Management Plan 2004
- Scott Creek Conservation Park Management Plan 1999
- Morialta and Black Hill Conservation Parks Management Plan 2001
- Porter Scrub Conservation Park Management Plan 2007
- Anstey Hill Conservation Park Management Plan 2006

Eyre & Far West Region

- Gawler Ranges National Park Management Plan 2017
- Parks of the Coffin Bay Area Management Plan 2004
- Venus Bay Conservation Park Management Plan 2006
- Lake Newland Conservation Park Management Plan 2003
- Calpatanna Waterhole Conservation Park Management Plan 1987
- Eastern Eyre Peninsula Parks Management Plan 2014
- Mallee Parks of the Central Eyre Peninsula Management Plan 2007
- Yellabinna and Warna Manda Parks Management Plan 2019



Riverland & Murraylands Region

- Danggali Wilderness Protection Area and Conservation Park Management Plan 2011
- Brookfield Conservation Park Management Plan 2005
- Reserves of the Billiatt District Management Plan 2011
- Conservation Parks of the Murraylands (Western Plains) Management Plans 1984
- Conservation Parks of the Murraylands (North West Zone) Management Plan 1994
- Maize Island Lagoon Conservation Park and Marne Valley Conservation Park Management Plan 1994
- Morgan Conservation Park Management Plan 1992
- Moorook-Loch Luna Game Reserve Park Management Plan 1994

Yorke & Mid North Region

- Mokota Conservation Park Management Plan 2003
- Bimbowrie Conservation Park Management Plan 2012
- Mount Brown Conservation Park Management Plan 1999
- The Dutchmans Stern Conservation Park Management Plan 1999

Limestone Coast Region

- Coorong National Park Management Plan 1991
- Naracoorte Caves National Park Management Plan 2001
- Piccaninnie Ponds Conservation Park Management Plan 1992
- Lake St Clair Conservation Park Management Plan 2011
- Bool Lagoon Game Reserve and Hacks Lagoon Conservation Parks Management Plan 2006
- Carpenter Rocks Conservation Park and Bucks Lake Game Reserve Management Plan 2007

Feedback received will assist in the development of the final amendments which will be submitted to the Minister for Climate, Environment and Water for adoption, together with a detailed analysis of submissions.

I encourage you to make a submission on the draft amendments. Guidelines for making a submission can be found on page 45.

Michael Williams

Director of National Parks and Wildlife



Why do we want to amend these management plans?

Managing Total Grazing Pressure

Since the adoption of the management plans under the *National Parks and Wildlife Act 1972* and the *Wilderness Protection Act 1992*, survey and monitoring data has shown that the effect of total grazing pressure is having a detrimental impact on the conservation values in protected reserves. Across South Australia's reserves system, excessive grazing, browsing and trampling by impact causing animals is damaging native vegetation, which affects ecosystem resilience and habitat availability, and puts further pressure on threatened flora and fauna. Other conservation impacts include, but are not limited to, damage to sensitive environments such as sand dunes, plant disease spread, and inhibited plant regrowth and recruitment which is particularly detrimental to bushfire impact remediation efforts and habitat restoration projects.

Western grey kangaroo (*Macropus fuliginosus*), red kangaroo (*Macropus rufus*¹), euro (*Macropus robustus*²), and eastern grey kangaroo (*Macropus giganteus*) populations along with other herbivores (native and non-native) contribute to total grazing pressure. While strategies to reduce herbivore populations in reserves primarily focus on controlling introduced species³, reducing the total grazing pressure is likely to include management of the kangaroo populations where evidence shows they are having a detrimental impact on conservation values.

Successful kangaroo population management requires the investigation of all management options, such as removal of water points or exclusion fencing, along with destruction. The strategic culling of kangaroos may occur if it is found to be the only practicable option to manage their impacts on conservation values.

Animal welfare is very important to the Department and any destruction will follow strict safety measures and best-practice methods for the humane destruction of animals detailed in the *National code of practice for the humane shooting of kangaroos and wallabies for non-commercial purposes* and the *National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Commercial Purposes*.

Amending these management plans enables management of kangaroos to occur should it be necessary, in accordance with the Department for Environment and Water policy regarding kangaroos on reserves. The policy requires an assessment and consultation process to ensure that there is an ecological benefit to removing a portion of the kangaroo population, and that the regional conservation status of the kangaroo species being managed is not at risk.

The plans included in this document have been written in different years, resulting in different plan structures, such as the inclusion of actions and their priority status and duration.

¹ While currently recognised as belonging to the genus *Osphranter*, the red kangaroo is listed in this document as *Macropus rufus* to maintain consistency with the *National Parks and Wildlife Act 1972*.

² While currently recognised as belonging to the genus *Osphranter*, the euro is listed in this document as *Macropus robustus* to maintain consistency with the *National Parks and Wildlife Act 1972*.

³ The accepted way to refer to non-native animals in management plans has changed over the years. Where these animals have become a management issue, different plans have referred to non-native animals as feral, exotic and introduced animals or species. Where relevant, the amendment language has reflected the terminology used in the adopted plan.

1. Draft amendment to the Newland Head Conservation Park Management Plan 2005

Current text	Amendment
Section 4.2.5 Native Fauna; Mammals; paragraph 4 (page 13): Western grey kangaroos are abundant throughout the region. This rise in abundance is attributed to agricultural and pastoral practices, with the clearing of forests and woodlands providing kangaroos with an abundance of food. Furthermore, the development of artificial water sources (farm dams and tanks), across what was once a predominantly dry landscape, has meant that the effects of minor droughts no longer act to regulate kangaroo numbers. Kangaroo surveys were conducted at Newland Head in 1992, 1993, 1997, 1998 and 2003. Although some data is unreliable, results generally indicate that kangaroo densities fluctuate between years, but are consistently greater than 25 per square kilometre. In comparison to macropod population densities elsewhere in Australia for similar vegetation types, numbers within the park are considered high. Exclusion trials were conducted during 1992 and 1993 by DEH and the Friends of Newland Head. Results of these trials provide some indication that regeneration dramatically improves with the exclusion of grazing pressure, however further monitoring is required to determine the impacts of kangaroo grazing on native vegetation, and to determine what type and level of kangaroo management is required. Abundant pasture is available adjacent to the park and there is little scope to regulate water as an option for managing macropod populations on Newland Head Conservation Park. While other techniques can and will continue to be investigated, sterilisation and relocation are not considered feasible alternatives to culling, which is currently considered the most practical and humane method of controlling macropod populations. Failure to manage the total grazing pressure from macropods may result in reduced survivorship and recruitment of native vegetation, leading to altered vegetation composition and structure, increased invasion by introduced plant species and reduced potential for ecological restoration in the area, as well as sand dune disturbance and subsequent erosion. If further research and monitoring determine that kangaroo densities are too high and that kangaroo grazing pressure is having an unacceptable impact on native vegetation, then kangaroo culling will be implemented.	Replace current text with: Managing total grazing pressure Western grey kangaroos (<i>Macropus fuliginosus</i>) are abundant throughout the region. This rise in abundance is attributed to agricultural and pastoral practices, with the clearing of forests and woodlands providing kangaroos with an abundance of food. Furthermore, the development of artificial water sources (farm dams and tanks), across what was once a predominantly dry landscape, has meant that the effects of minor droughts no longer act to regulate kangaroo numbers. The total grazing pressure in Newland Head Conservation Park, including by western grey kangaroos and introduced herbivores, is having adverse impacts on native vegetation, revegetation, sand dune stability, and contributing to the spread of weeds. While strategies for managing total grazing pressure will focus primarily on the control of introduced herbivores (see 4.2.7 Introduced Animals), reducing the total grazing pressure across Newland Head Conservation Park is likely to include management of the kangaroo population. Where evidence of total grazing pressure suggests that western grey kangaroos are having an unsustainable impact on conservation values, strategic management will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.

Current text	Amendment
Section 4.2.5 Native Fauna; Actions; dot points 3&4 (page 15): Maintain a sustainable population of macropods by culling if necessary	Replace current text with: Where evidence indicates impacts from western grey kangaroos (<i>Macropus fuliginosus</i>) is unsustainable and impacting park conservation values, implement management programs.
Section 5 Summary of Management Actions; Native Fauna; 3rd Action (page 28): Maintain a sustainable population of macropods by culling if required. Priority: High Duration: Ongoing	Replace current text with: Where evidence indicates impacts from western grey kangaroos (<i>Macropus fuliginosus</i>) is unsustainable and impacting park conservation values, implement management programs. Priority: High Duration: Ongoing



2. Draft amendment to the Scott Creek Conservation Park Management Plan 2000

Current text	Amendment
Management Context; Management Issues (page 12):	Replace current text with:
Protecting and maintaining biodiversity, species of conservation significance, habitats, the associated water catchment area and preserving the significant heritage values within the park are the principle management aims. A number of current management issues need to be addressed to achieve these aims. The negative impacts of indiscriminate recreational use and the incidence of wildfires started under suspicious circumstances, are of considerable concern. The continued spread of existing weeds and the emergence of new weed species in the park are major problems with re-infestation by weeds from areas surrounding the park a constant threat.	Protecting and maintaining biodiversity, species of conservation significance, habitats, the associated water catchment area and preserving the significant heritage values within the park are the principle management aims. A number of current management issues need to be addressed to achieve these aims. The negative impacts of total grazing pressure from pest species and native herbivores, indiscriminate recreational use and the incidence of wildfires started under suspicious circumstances, are of considerable concern. The continued spread of existing weeds and the emergence of new weed species in the park are major problems with re-infestation by weeds from areas surrounding the park a constant threat.
Considerations and Strategies; Objective 2; Background and Action (page 16):	Proposed new text:
<i>New text to be added after second paragraph</i>	Introduced herbivores including feral goats, fallow deer (<i>Dama dama</i>) and rabbits (<i>Oryctolagus cuniculus</i>) are known to occur in the park. They create adverse impacts to biodiversity through grazing native vegetation and spreading weeds. While managing the impacts of herbivores will primarily focus on the control of introduced species, western grey kangaroos (<i>Macropus fuliginosus</i>) are also contributing to total grazing pressure and their strategic management is required.
Considerations and Strategies; Objective 2; Background and Actions (page 16)	Proposed new text:
<i>New dot point to be added to action list.</i>	Where evidence indicates that impacts from introduced herbivores and native wildlife, including the western grey kangaroo, is unsustainable and impacting the conservation values of the park, strategic management will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.



Current text	Amendment
Action Summary (page 25)	Proposed new text:
<i>New dot point to be added to action list.</i>	Where evidence indicates that impacts from introduced herbivores and native wildlife, including the western grey kangaroo, is unsustainable and impacting the conservation values of the park, strategic management will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options. Priority: Very High Duration: Ongoing

3. Draft amendment to the Morialta and Black Hill Conservation Parks Management Plan

Current text	Amendment
Management Framework; Park Values and Management Issues; Conservation; Broad Issues (page 11):	Proposed new text:
<i>Insert new dot point after first dot point.</i>	The total grazing pressure in the parks, including by western grey kangaroos (<i>Macropus fuliginosus</i>) and introduced herbivores including rabbits (<i>Oryctolagus cuniculus</i>) and fallow deer (<i>Dama dama</i>) is having a detrimental impact on conservation values. Excessive grazing can impact native vegetation quality, inhibit recruitment and restoration success, increase weed load and reduce habitat for other native fauna.
Management Framework; Natural resources; Native Fauna; Mammals (page 17):	Proposed new text:
<i>New text to be added after first paragraph.</i>	Managing total grazing pressure The total grazing pressure in the parks, including by western grey kangaroos (<i>Macropus fuliginosus</i>) and introduced herbivores, is having a negative impact on biodiversity and strategic management is required. Grazing herbivores are reducing plant diversity and quality, and compete for food and habitat with other native fauna. While strategies for reducing total grazing pressure will primarily focus on the control of introduced species, integrated management programs are likely to include western grey kangaroos, should evidence suggest that they are having an unsustainable impact on conservation values. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Summary of management actions; Natural Resources (page 35)	Proposed new text:
<i>New dot point to be added to action list.</i>	Where evidence indicates that impacts from introduced herbivores and native wildlife, including the western grey kangaroo, is unsustainable and impacting the conservation values of the parks, strategic management will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.

4. Draft amendment to the Porter Scrub Conservation Park Management Plan 2006

Current text	Amendment
Section 5.4 Native Fauna (page 11):	Replace current text with:
The number of kangaroos in the park has not been surveyed but some anecdotal evidence suggests the population may be larger than is ecologically sustainable. Monitoring to ascertain the impacts that kangaroos are having on native vegetation and habitat quality is required. Systematic counts should be undertaken, so that optimum population densities can be compared against habitat types, while also considering prevailing seasonal conditions, all in relation to the condition of native vegetation.	Grazing pressure from western grey kangaroos (<i>Macropus fuliginosus</i>) and introduced herbivores is having a detrimental impact on conservation values in the park, and on surrounding primary production enterprises. Total grazing pressure effects were exacerbated when the park was burnt out in the 2019 Cuddlee Creek bushfire, hindering vegetation recovery. Strategic management of western grey kangaroos, and pest animals (see 5.5 Introduced Plants and Animals) is required.
Section 5.4 Native Fauna; Objectives (page 11):	Replace current text with:
Identify and protect native fauna species, especially those of conservation significance.	Manage ecosystem health by gaining a better understanding of species distribution and ecology and implement management programs in response to adverse impacts to biodiversity.
Section 5.4 Native Fauna; Strategies; second dot point (page 11):	Replace current text with:
Monitor numbers of Western Grey Kangaroos and their impact on native vegetation.	- Where evidence indicates that impacts from western grey kangaroos (<i>Macropus fuliginosus</i>) is unsustainable and impacting park conservation values, implement management programs. - Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Summary of Management Strategies; Native Fauna (page 19)	Replace current text with:
Monitor numbers of Western Grey Kangaroos and their impact on native vegetation.	Where evidence indicates that impacts from western grey kangaroos (<i>Macropus fuliginosus</i>) is unsustainable and impacting the park conservation values, implement management programs. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.

5. Draft amendment to the Anstey Hill Conservation Park Management Plan 2006

Current text	Amendment
Section 5.4 Native Fauna – insert as second paragraph under Mammals heading (page 12)	Proposed new text:
<i>Insert new text</i>	The total grazing pressure in Anstey Hill Recreation Park, including by western grey kangaroos (<i>Macropus fuliginosus</i>) and introduced herbivores, is impacting park conservation values. Excessive grazing is putting important plant species at risk, reducing ground cover vegetation and increasing erosion, and impacting food availability for small native herbivores. Managing domestic sheep (<i>Ovis aries</i>) incursions into the park has been an ongoing issue. While strategies for reducing herbivore populations will continue to focus on the control of sheep and other introduced species (see section 5.5 Introduced Plants and Animals), reducing the total grazing pressure across Anstey Hill Recreation Park is likely to include management of the kangaroo population. Total grazing pressure, including by western grey kangaroos, will be monitored to assess impacts to native vegetation and revegetation programs. Should evidence indicate that kangaroos are having an unsustainable impact on biodiversity, an adaptive management framework will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Section 5.4 Native Fauna; Objectives (page 12)	Replace current text with:
Protect and conserve native fauna within the park	Maintain healthy ecosystems to protect the range of habitats and wildlife they support.
Section 5.4 Native Fauna; Strategy (page 12)	Proposed new text:
<i>Insert additional dot points.</i>	• Monitor total grazing pressure impacts, including by western grey kangaroos (<i>Macropus fuliginosus</i>), and its effects on park conservation values • Where evidence indicates that impacts from western grey kangaroos (<i>Macropus fuliginosus</i>) is unsustainable and impacting park conservation values, implement management programs.
Summary of Management Strategies; Native Fauna (page 27)	Proposed new text:
<i>Insert additional dot points.</i>	• Monitor total grazing pressure impacts, including by western grey kangaroos (<i>Macropus fuliginosus</i>), and its effects on park conservation values • Where evidence indicates that impacts from western grey kangaroos (<i>Macropus fuliginosus</i>) is unsustainable and impacting park conservation values, implement management programs.

6. Draft amendment to the Gawler Ranges National Park Management Plan 2017

Current text	Amendment
Management themes and priorities; Theme 1: Protecting Natural Values; paragraph 4 (page 9):	Replace current text with:
In combination with pest animals, unnaturally large populations of kangaroos have the potential to impact significantly on biodiversity. An annual assessment of total grazing pressure is used to indicate when the control of over-abundant kangaroo populations may be necessary.	A long-running monitoring program has demonstrated western grey kangaroo (<i>Macropus fuliginosus</i>), red kangaroo (<i>Macropus rufus</i>) and euro (<i>Macropus robustus</i>) populations, along with introduced herbivores including rabbits (<i>Oryctolagus cuniculus</i>) and goats (<i>Capra hircus</i>) contribute to total grazing pressure in the park. These herbivores create adverse impacts to biodiversity through grazing native vegetation, reducing food sources for the yellow-footed rock wallaby (<i>Petrogale xanthopus xanthopus</i>) and spreading weeds. Should evidence indicate that total grazing pressure from native species is having an unsustainable impact on biodiversity, management programs will be implemented in conjunction with the management of pest animals.
Management themes and priorities; Theme 1: Protecting Natural Values; Objectives and strategies; dot point six (page 12):	Replace current text with:
Implement strategic culling of western grey kangaroo (<i>Macropus fuliginosus</i>) and Euro (<i>Macropus robustus</i>) if the assessment of total grazing pressure determines that control measures are warranted. Kangaroo management programs will be undertaken in conjunction with the management of pest animals and may consider commercial options for the utilisation of carcasses.	Where evidence indicates that impacts from native wildlife, including the western grey kangaroo, red kangaroo and euro, is unsustainable and impacting park conservation values, implement strategic management. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Wildlife management programs will be planned in conjunction with the Gawler Ranges People to ensure that their interests are considered. Kangaroo control may also include commercial harvest options.

7. Draft amendment to the Parks of the Coffin Bay Area Management Plan 2004

Reserves included in this management plan: Coffin Bay National Park, Kellidie Bay Conservation Park, Avoid Bay Islands Conservation Park, Whidbey Isles Conservation Park and Mt Dutton Bay Conservation Park.

Current text	Amendment
Section 4.2.3 Native Fauna; Western grey kangaroo (page 18): Management of the total grazing pressure within the mainland parks is a key component in the conservation of vegetation associations and plant species of conservation significance. The combined high grazing pressure of kangaroos, rabbits and, until recently, horses has prevented regeneration of the Drooping Sheoak - Dryland Tea-tree grassy low woodland, which originally occupied much of the Coffin Bay Peninsula. Kangaroo numbers across southern Eyre Peninsula are generally higher than in pre-European times. This rise in abundance is attributed to agricultural and pastoral practices, with the clearing of mallee and woodlands providing kangaroos with an abundance of food. More importantly, the development of artificial water sources (farm dams, tanks and troughs) across what was predominantly a dry landscape has reduced the influence that minor droughts once had in regulating kangaroo numbers. In Coffin Bay National Park, natural springs and soaks were enhanced by excavation. This situation has been further exacerbated by the removal of the kangaroo's primary predator, the Dingo. DEH regularly issues non-commercial destruction permits to landholders in the area to manage grazing impacts when kangaroos are locally abundant. In addition, some landholders on Eyre Peninsula utilise the commercial kangaroo quota, and engage Kangaroo Field Processors to harvest kangaroos on their property. The kangaroo population of Coffin Bay National Park has been monitored annually since 1997. Results from surveys indicate that the kangaroo population fluctuates annually, with the highest density of 38 kangaroos per square kilometre recorded in 1998. In comparison to macropod population densities elsewhere in Australia for similar vegetation types, numbers within Coffin Bay National Park are considered high. The history of grazing by domestic stock, feral animals and kangaroos has resulted in the severe degradation and loss of low grassy woodland throughout the park. Vegetation monitoring indicates that the high grazing pressure within Coffin Bay National Park is preventing the recruitment of Drooping Sheoak and the flowering of native grasses. Management of kangaroo abundance will be necessary to enable restoration of this vegetation association and the other native species it supports. This will include culling kangaroos in conjunction with an integrated pest animal control program and the restoration of key watering points to their natural state.	Replace current text with: Managing Total Grazing Pressure Managing total grazing pressure within the mainland parks is a key component in the conservation of vegetation associations and plant species and communities of conservation significance. The combined high grazing pressure of western grey kangaroos (<i>Macropus fuliginosus</i>), rabbits and, historically, sheep and horses has resulted in the severe degradation and loss of Drooping Sheoak - Dryland Tea-tree grassy low woodland throughout the park. Large numbers of western grey kangaroos are preventing the recruitment of drooping sheoak and the flowering of native grasses and their strategic management is required. Management strategies will be integrated with other pest management and habitat restoration opportunities.

Current text	Amendment
Section 4.2.2 Native Vegetation; paragraph 8 (page 16):	Replace current text with:
Vegetation associations within the mainland parks have been affected by past management practices. A large population of Western Grey Kangaroos on the Coffin Bay Peninsula has increased grazing pressure on the Drooping Sheoak - Dryland Tea-tree low woodland. At the western end of Coffin Bay Peninsula, the combined grazing pressure of both exotic and native herbivores limits regeneration. An enclosure has been established near Point Sir Isaac within Coffin Bay National Park in conjunction with the Lower Eyre Peninsula Four Wheel Drive Club and other volunteers to provide a seed source and to re-establish the Drooping Sheoak woodland. This project will be expanded as part of the regional initiative known as “Ark on Eyre” (see 3.2 Integrated Natural resource Management).	Vegetation associations within the mainland parks have been affected by past management practices. A large population of western grey kangaroos on the Coffin Bay Peninsula has increased grazing pressure on the EPBC Critically Endangered listed Threatened Ecological Community - Drooping Sheoak Grassy Woodland. At the western end of Coffin Bay Peninsula, total grazing pressure from introduced and native herbivores limits regeneration. Fencing has been established to prevent herbivore access around some existing drooping sheoak grassy woodlands as part of a long-running Sheoak grassy woodlands restoration project.
Section 4.2.3 Native Fauna; Objectives; (page 19):	Proposed new text:
<i>Insert new objective after third objective.</i>	Monitor impacts from native herbivores and implement management programs in response to adverse impacts to biodiversity
Section 4.2.3 Native Fauna; Actions; third dot point (page 19)	Replace current text with:
• Monitor population trends and impacts of Western Grey Kangaroos within the mainland parks and if necessary, reduce the kangaroo population to a sustainable level by targeted culling.	• Where evidence indicates that impacts from western grey kangaroos (<i>Macropus fuliginosus</i>) is unsustainable and impacting park conservation values, implement management programs. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Section 5 Summary of management actions; Native Fauna; third action:	Replace current text with:
Monitor population trends and impacts of Western Grey Kangaroos within the mainland parks and if necessary, reduce the kangaroo population to a sustainable level by targeted culling.	Where evidence indicates that impacts from western grey kangaroos (<i>Macropus fuliginosus</i>) is unsustainable and impacting park conservation values, implement management programs. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.

8. Draft amendment to the Venus Bay Conservation Park Management Plan 2006

Current text	Amendment
Section 5.3 Native Fauna; paragraph 3 (page 10): Regular monitoring indicates that kangaroo numbers, particularly those of the Western Grey Kangaroo (<i>Macropus fulliginosus</i>), are currently higher than the vegetation communities within the park can sustain (especially inside the predator-exclusion fence), thus negatively impacting on the ecological health of Venus Bay Conservation Park. Kangaroo grazing has heavily impacted the nationally vulnerable West Coast Mint-bush. In addition, kangaroos have negatively affected the regeneration of direct seeding and tube-stock revegetation programs. Unless the population is managed, it may compromise the recovery of some plant species and the regeneration of plant communities in areas previously developed for agriculture. At Venus Bay, the impact of Western Grey Kangaroos and Euros (<i>Macropus robustus</i>) on the native vegetation in the park and on surrounding land is being monitored through the installation of selective grazing exclosure plots. These plots are located in areas that are at varying stages of recovery from past disturbance. Unreplicated plots at each site selectively exclude rabbits, kangaroos, and both or neither. Baseline monitoring began in August 2002. While other techniques can and will continue to be investigated, culling is currently considered the only practicable method of controlling kangaroo numbers. If the impact of Western Grey Kangaroo and/or Euro grazing is demonstrated to be threatening vegetation recovery and broader ecological restoration objectives in the park, the resident populations will be strategically reduced by culling, in accordance with section 38(10) (a) of the National Parks and Wildlife Act 1972.	Replace current text with: The total grazing pressure in the park, including by western grey kangaroos (<i>Macropus fuliginosus</i>), euros (<i>Macropus robustus</i>) and introduced herbivores is having adverse impacts on park conservation values and their strategic management is required. Excessive grazing from kangaroo populations can impact the ability of vegetation communities to recruit, including the EPBC listed vulnerable west coast mintbush (<i>Prostanthera calycina</i>) and critically endangered drooping sheoak grassy woodland community, reduce habitat for wildlife including the greater bilby (<i>Macrotis lagotis</i>) and malleefowl (<i>Leipoa ocellata</i>), and can adversely affect macropod population health in severe weather conditions. Artificial water points have been removed within the fenced area and selective grazing exclosure plots targeting native and non-native (rabbits) herbivores have been established in the park and on neighbouring properties. Should evidence indicate that impacts from introduced herbivores and native wildlife, including the western grey kangaroo and euro, is unsustainable and impacting the park conservation values, management programs will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Section 5.3 Native Fauna; Objectives; (page 11): Protect and conserve native fauna within the park. Manage macropod populations at sustainable levels.	Replace current text with: Maintain healthy ecosystems to protect the range of habitats and wildlife they support.

Current text	Amendment
Section 5.3 Native Fauna; Strategies; dot points 2&3 (page 11)	Replace current text with:
• Monitor total grazing pressure and the effects on the flora and fauna within the park. • Reduce the size of the Western Grey Kangaroo and Euro populations by culling, when considered necessary to meet the ecological restoration objectives for the park.	• Monitor total grazing pressure impacts, including by western grey kangaroos (<i>Macropus fuliginosus</i>), and euros (<i>Macropus robustus</i>) and its effects on park conservation values • Where evidence indicates that impacts from western grey kangaroo (<i>Macropus fuliginosus</i>) and euro (<i>Macropus robustus</i>) populations is unsustainable and impacting the parks conservation values, implement management programs. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Summary of management strategies; Native Fauna; second and third strategy (Page 29):	Replace current text with:
Monitor total grazing pressure and the effects on the flora and fauna within the park. Reduce the size of the Western Grey Kangaroo and Euro populations by culling, when considered necessary to meet the ecological restoration objectives for the park	Monitor total grazing pressure impacts, including by western grey kangaroo (<i>Macropus fuliginosus</i>) and euro (<i>Macropus robustus</i>) populations and its effects on park conservation values. Where evidence indicates that impacts from western grey kangaroo (<i>Macropus fuliginosus</i>) and euro (<i>Macropus robustus</i>) populations is unsustainable and impacting park conservation values, implement management programs. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.

9. Draft amendment to the Lake Newland Conservation Park Management Plan 2003

Current text	Amendment
Section 4.2.5 Native Fauna; (page 20):	Proposed new text:
<i>New paragraph to be added before Reptiles and Frogs.</i>	Managing Total Grazing Pressure The total grazing pressure in Lake Newland Conservation Park, including by western grey kangaroos (<i>Macropus fuliginosus</i>) and introduced herbivores, is reducing habitat quality, having an adverse impact on revegetation and remnant sheoak grassy woodlands, and helping to spread weeds. While strategies for reducing herbivore populations will primarily focus on the control of introduced species (see section 4.2.8 Introduced Animals), reducing the total grazing pressure across Lake Newland Conservation Park is likely to include management of the kangaroo population as a result of their growing abundance in the landscape. Total grazing pressure, including by western grey kangaroos, will be monitored to assess impacts to native vegetation and revegetation programs. Should evidence indicate that kangaroos are having an unsustainable impact on biodiversity, an adaptive management framework will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Section 4.2.5 Native Fauna; Actions (page 21):	Proposed new text:
<i>Add fourth action.</i>	Where evidence indicates impacts from western grey kangaroos (<i>Macropus fuliginosus</i>) is unsustainable and impacting park conservation values, implement management programs.
Summary of Management Actions; Native Fauna (page 37):	Proposed new text:
<i>Add fourth action.</i>	Where evidence indicates impacts from western grey kangaroos (<i>Macropus fuliginosus</i>) is unsustainable and impacting park conservation values, implement management programs. Priority: High Duration: Ongoing

10. Draft amendment to the Calpatanna Waterhole Conservation Park Management Plan 1987

Current text	Amendment
Part 1: Background information; Biology; Mammals; paragraph 6 (page 26): Moderate numbers of western grey kangaroos (<i>Macropus fuliginous</i>) occur in the park tending to feed in the open areas and shelter in the native vegetation. The wallaroo (<i>Macropus robustus</i>) has been recorded in the vicinity of Venus Bay, 25 kilometres south-east of the park, and within a similar distance to the east, but any which may be seen in the park are probably vagrants rather than a resident population. Similarly, vagrant red kangaroos (<i>Macropus rufus</i>) are occasionally recorded in the district, particularly in very dry years, and a core of individuals is known from a property about 40 kilometres east of the park.	Replace current text with: Western grey kangaroos (<i>Macropus fuliginous</i>), red kangaroos (<i>Macropus rufus</i>) and euros (<i>Macropus robustus</i>) are found in the park and across the surrounding landscape. Population numbers can fluctuate seasonally, with the western grey kangaroo and euro most commonly sighted.
Management considerations; Conservation of the Natural Environment (page 58): Fauna Management Calpatanna Waterhole Conservation Park harbours a large number of kangaroos, an animal which is considered by some of the local community to be both an agricultural pest and a traffic hazard. Kangaroos have an established pattern of moving from the refuge of the park to graze and water on surrounding agricultural land. Boundary fencing has limited this movement but it is still regarded as a problem during dry periods when feed and water are scarce. In cases where there appears to be conflict between the conservation of native species and community interests, it is the policy of the Service to co-operate with the community in clarifying the nature of the impact of the species, and to determine effective and appropriate control measures. It is also the responsibility of the Service to determine a realistic balance between fauna protection and the damage caused by native animals. If required, under Section 53(d) of the National Parks and Wildlife Act, the Service may issue permits to surrounding landholders for the purpose of destroying protected animals such as kangaroos that are causing damage to crops, livestock and other property on their lands. If the movement of kangaroos from the park to adjoining lands continues to be a problem, the Service will undertake appropriate actions to combat it. District staff will routinely monitor kangaroo movements within the park and along park boundaries, and will liaise with surrounding landholders to determine the extent of the problem and the necessity for further action.	Replace current text with: Managing Total Grazing Pressure The total grazing pressure in Calpatanna Waterhole Conservation Park including by western grey kangaroo (<i>Macropus fuliginous</i>), red kangaroo (<i>Macropus rufus</i>), euro (<i>Macropus robustus</i>) populations and introduced herbivores is reducing plant diversity and habitat quality, and having adverse impacts on revegetation efforts on surrounding properties, and strategic management is required. Total grazing pressure is impacting significant flora species, including the EPBC listed west coast mintbush (<i>Prostanthera calycina</i>), senna wattle (<i>Acacia praemorsa</i>) and chalky wattle (<i>Acacia cretacea</i>). While strategies for reducing herbivore populations will primarily focus on the control of introduced species, such as continuing existing rabbit control programs, reducing the total grazing pressure across Calpatanna Waterhole Conservation Park is likely to include management of the kangaroo populations as a result of their impact on conservation values. Total grazing pressure, including by western grey kangaroos, red kangaroos, and euros, will be monitored to assess impacts to native vegetation and revegetation programs. Should evidence indicate that kangaroos are having an unsustainable impact on biodiversity, an adaptive management framework will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Management Actions; Research and Monitoring; sixth action (page 67): Monitor kangaroo numbers	Replace current text with: Where evidence indicates impact from western grey kangaroo (<i>Macropus fuliginosus</i>) red kangaroo (<i>Macropus rufus</i>) and euro (<i>Macropus robustus</i>) populations is unsustainable and impacting conservation values, implement management programs.

11. Draft amendment to the Eastern Eyre Peninsula Parks Management Plan 2014

Reserves included in this management plan: Munyaroo Conservation Park, Ironstone Hill Conservation Park, Lake Gilles Conservation Park, Malgra Conservation Park, Heggaton Conservation Park, The Plug Range Conservation Park and Sheoak Hill Conservation Park.

Current text	Amendment
Setting the Management Direction; What are the challenges?; third dot point (page 5): reducing the ecological impact of pest plants and animals;	Replace current text with: Managing the impacts of pest plant and animals and total grazing pressure to protect threatened species and ecosystem health;
Management themes and priorities; Theme 1: Conserving biodiversity; third paragraph (page 6): High populations of some native animals can also have significant impacts on biodiversity. An annual assessment of total grazing pressure is used to indicate when the control of over-abundant species is required. For example, the over-abundance of kangaroos may result in negative impacts on park conservation values. Strategic culling of kangaroos will be implemented if the assessment of grazing pressure determines that control measures are warranted, in accordance with section 38(10)(a) of the National Parks and Wildlife Act. Kangaroo management programs may consider commercial options for the utilisation of carcasses.	Replace current text with: A long-running monitoring program has demonstrated that grazing pressure from western grey kangaroo (<i>Macropus fuliginosus</i>), red kangaroo (<i>Macropus rufus</i>) and euro (<i>Macropus robustus</i>) populations is having a detrimental impact on conservation values. Should evidence indicate that native animals are having an unsustainable impact on biodiversity, management programs will be implemented in conjunction with the management of pest animals.
Management themes and priorities; Theme 1: Conserving biodiversity; Objectives and strategies; third dot point (page 7): Assess total grazing pressure and implement strategies including a kangaroo management program if necessary to avoid the decline of native vegetation and threatened species.	Replace current text with: - Where evidence indicates that impacts from native wildlife, including the western grey kangaroo, red kangaroo and euro, is unsustainable and impacting the conservation values of parks, implement strategic management. - Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.

12. Draft amendment to the Mallee Parks of the Central Eyre Peninsula Management Plan 2007

Reserves included in this management plan: Barwell Conservation Park, Bascombe Well Conservation Park, Hambidge Wilderness Protection Area, Hincks Conservation Park, Hinks Wilderness Protection Area, Peachna Conservation Park, Shannon Conservation Park, Verran Tanks Conservation Park and Wharminda Conservation Park.

Current text	Amendment
Section 6.4: Native Fauna; Mammals; paragraph 7 (page 15):	Replace current text with:
Kangaroos are present in the reserves, however whilst they are currently not a management issue their numbers and impact on vegetation will be monitored. Kangaroos are more likely to be an issue off-reserve for neighbouring landowners, rather than causing specific management issues on park (eg. impact on native vegetation). DEH will therefore liaise with neighbouring landowners in developing management strategies to manage kangaroo numbers off-reserve. As the reserves are within a commercial harvesting region, allowing neighbouring landowners to continue commercially harvesting kangaroos will be considered by DEH as a management option.	The total grazing pressure in these reserves, including by western grey kangaroo (<i>Macropus fuliginosus</i>), euro (<i>Macropus robustus</i>) populations and introduced herbivores, is having an adverse impact on habitat quality, exacerbates negative impacts following bushfires, and reduces desired biodiversity outcomes from prescribed burning programs. Where evidence indicates that total grazing pressure is unsustainable and impacting the conservation values of the reserves, strategic management will be considered for native species such as western grey kangaroos and euros. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Section 6.4: Native Fauna; Mammals; strategies (page 16):	Replace current text with:
Monitor total grazing pressure by kangaroos and effects on the flora and fauna within the reserves.	Where evidence indicates that impacts from western grey kangaroos (<i>Macropus fuliginosus</i>) and euros (<i>Macropus robustus</i>) is unsustainable and impacting conservation values, implement management programs.
Summary of Management Strategies; Native Fauna (page 34):	Replace current text with:
Monitor total grazing pressure by kangaroos and effects on the flora and fauna within the reserves.	Where evidence indicates that impacts from western grey kangaroos (<i>Macropus fuliginosus</i>) and euros (<i>Macropus robustus</i>) is unsustainable and impacting conservation values, implement management programs.

13. Draft amendment to the Yellabinna and Warna Manda Parks Management Plan 2019

Reserves included in this management plan which this amendment applies to: Acraman Creek Conservation Park, Chadinga Conservation Park, Fowlers Bay Conservation Park, Laura Bay Conservation Park, Point Bell Conservation Park, Wahgunyah Conservation Park and Wittelbee Conservation Park.

Current text	Amendment
What are the challenges and opportunities? (page 7):	Proposed new text:
<i>New dot point to be added</i>	Managing the effects of total grazing pressure caused by goats, deer, rabbits, and impact causing western grey kangaroo (<i>Macropus fuliginosus</i>) populations in the Warna Manda parks.
Management themes and priorities; Theme 1: Managing healthy country; Warna Manda parks (page 9):	Proposed new text:
<i>New paragraph to be added before final paragraph</i>	Total grazing pressure by both native and introduced animals in the Warna Manda parks is impacting natural ecosystem and cultural sites. Excessive grazing is reducing habitat quality for wildlife including species of conservation significance such as the yellabinna rufous grasswren (<i>Amytornis whitei aenigma</i>). While control of pest animals is a priority, where evidence indicates that total grazing pressure is unsustainable and impacting the conservation values of the parks, strategic management will also be considered for native species such as western grey kangaroos (<i>Macropus fuliginosus</i>). Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Objectives and strategies (page 10):	Proposed new text
<i>New dot point to be added</i>	Monitor total grazing pressure from introduced animals and native species including western grey kangaroos (<i>Macropus fuliginosus</i>), and manage appropriately in response to evidence of harm to conservation values.

14. Draft amendment to the Danggali Wilderness Protection Area and Conservation Park Management Plan 2011

Current text	Amendment
What are the Challenges? First dot point (page 6)	Replace current text with:
Excessive total grazing pressure caused by feral goats and rabbits	Managing the impacts of total grazing pressure to protect threatened species and ecosystem health.
Management themes and priorities; Theme 2: Managing predation and total grazing pressure; paragraph 1 (page 10):	Replace current text with:
As part of a holistic approach, the contribution of native species to total grazing pressure requires further investigation. Red Kangaroo (<i>Macropus rufus</i>), Western Grey Kangaroo (<i>Macropus fuliginosis</i>) and Euros (<i>Macropus robustus</i>) are known to occur within the reserves. Although these iconic native species are valued for their role in natural ecosystems, human induced changes within the broader landscape creates the potential for these native grazers to negatively impact on conservation values. The potential for kangaroos to become over-populated and subsequently create negative impacts is supported by observations in other reserves within the region. This is particularly evident on neighbouring Chowilla Regional Reserve where high numbers of kangaroos contribute to the degradation of native vegetation (DENR, 1995). If future research and monitoring determines that an over-population of kangaroos is impacting negatively on identified conservation values within Danggali Wilderness Protection Area and/or Danggali Conservation Park, kangaroo control programs may be implemented using a variety of methods. This may include commercial harvesting where this does not compromise wilderness values. Based on an assessment of all available population control methods, culling will only be conducted if it is considered the only practicable option.	The total grazing pressure in the reserves, including by red kangaroo (<i>Macropus rufus</i>), western grey kangaroo (<i>Macropus fuliginosis</i>), euro (<i>Macropus robustus</i>) populations and introduced animals is impacting conservation values. While integrated control programs for managing total grazing pressure will prioritise introduced animals, should evidence indicate that native species are having an unsustainable impact on conservation values, management programs will be implemented. An integrated management program running across the Riverland landscape and into New South Wales is reducing total grazing pressure. Non-lethal methods such as disrupting drains and closing dams are utilised as management options. Non-lethal control options will continue to be used in the first instance in managing total grazing pressure programs. Where these methods are not having the desired conservation outcomes or are considered unsuitable, culling will be undertaken as it remains the only practicable method of management. Kangaroo control may also include commercial harvest options.
Management themes and priorities; Theme 1: Protecting Natural Values; Objectives and strategies (page 10):	Replace current text with:
- Design and implement an adaptive predation and total grazing pressure management (including kangaroo management) work program which addresses specific ecological requirements, conservation outcomes and monitoring needs. This will include: - Assessment and staged rationalisation of existing artificial waterpoints - Planning and implementation at a landscape scale, in collaboration with relevant partners - Empowering and educating neighbouring land managers to improve feral animal management practices	- Implement adaptive predation and total grazing pressure management strategies including rationalisation of existing artificial water points. - Control introduced herbivores when evidence indicates adverse impacts to conservation values. Where total grazing pressure indicates impacts to conservation values by red kangaroo, western grey kangaroo and euro populations implement management programs. - Collaborate with neighbouring land managers, researchers, environmental groups, government agencies, and volunteers to apply best-practice management to achieve ecological outcomes.

15. Draft amendment to the Brookfield Conservation Park Management Plan 2005

Current text	Amendment
Section 4.2.3 Native Fauna; paragraph 2 (page 12):	Replace current text with:
Southern Hairy-nosed Wombats favour the Sugarwood dominated open areas of the park, preferentially grazing on native grasses. Regeneration of natural vegetation in the park may adversely affect the area of preferred wombat habitat. In the absence of sheep grazing, further establishment of trees could lead to a significant alteration in wombat habitat through reduction of grassland areas. Evidence from transect counts indicates that kangaroo and rabbit populations have increased and may compete with wombats for food. The long-term effects of these interactions are presently unknown. Further research may suggest active manipulation of the vegetation and animal populations to maintain optimum wombat habitat as a priority.	Southern hairy-nosed wombats favour the sugarwood dominated open areas of the park, preferentially grazing on native grasses. Exclosure plots have been established, and evidence suggests that total grazing pressure in the park, including by red kangaroo (<i>Macropus rufus</i>), western grey kangaroo (<i>Macropus fuliginosus</i>), euro (<i>Macropus robustus</i>), eastern grey kangaroo (<i>Macropus giganteus</i>) populations, rabbits and goats is having a negative impact on conservation values. Excessive grazing from native and introduced herbivores reduces wombat food availability and has adverse impacts on native grassland health. Strategic management of kangaroos and introduced animals (see 4.2.5 Introduced Animals) is required.
Section 4.2.3 Native Fauna; paragraph 3 (page 12):	Delete sentence:
Thirteen native mammals have been recorded within Brookfield Conservation Park. The most common include the Western Grey Kangaroo (<i>Macropus fuliginosus</i>), Red Kangaroo (<i>M. rufus</i>) and White-striped Freetail-bat (<i>Tadarida australis</i>). Kangaroo surveys are currently conducted twice a year, with Western Grey Kangaroo numbers estimated at 20-23 per km ² and Red Kangaroo numbers at 1-20 per km ² , though this is likely to vary with seasonal conditions. Other less common native mammals include Common Brushtail Possum (<i>Trichosurus vulpecula</i>), Short-beaked Echidna (<i>Tachyglossus aculeatus</i>), Common Dunnart (<i>Sminthopsis murina</i>) and Fat-tailed Dunnart (<i>S. crassicaudata</i>).	Kangaroo surveys are currently conducted twice a year, with Western Grey Kangaroo numbers estimated at 20-23 per km ² and Red Kangaroo numbers at 1-20 per km ² , though this is likely to vary with seasonal conditions.
Section 4.2 Natural Heritage; Objectives; (page 14):	Replace current text with:
Conserve native vegetation and fauna, especially those species and communities of conservation significance. Maintain and restore wildlife habitat.	Maintain healthy ecosystems and improve natural ecological processes to protect the range of habitats and wildlife they support.
Section 4.2 Natural Heritage; Strategies; (page 14):	Proposed new text:
<i>Insert additional strategy.</i>	Where evidence indicates that impacts from red kangaroo, western grey kangaroo, euros and eastern grey kangaroo populations is unsustainable and impacting park conservation values, implement management programs. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.

16. Draft amendment to the Reserves of the Billiatt District Management Plan 2011

Current text	Amendment
What are the Challenges? Third dot point (page 6):	Replace current text with:
predation and total grazing pressure caused by introduced species	managing the impacts of pest plants and feral animals, and total grazing pressure to protect threatened species and ecosystem health.
Management themes and priorities; Theme 2: Managing predation and total grazing pressure; paragraph 2 & 3 (page10);	Replace current text with:
As irrigation development on surrounding properties continues to increase, potential exists for Western Grey Kangaroo (<i>Macropus fuliginous</i>) and Emu (<i>Dromaius novaehollandiae</i>) grazing to become a significant management issue. Although control of native species on reserves is permitted under the <i>National Parks and Wildlife Act 1972</i>, this option is not likely to be required during the life of this plan. The situation will be monitored and regulation of destruction permits issued on neighbouring properties will continue to occur. An adaptive management approach to predation and total grazing pressure will ensure that scientifically sound management actions are implemented, then reviewed and improved as more information becomes available. Future monitoring and control programs will aim to deliver measurable outcomes for high priority biodiversity assets.	The total grazing pressure in the reserves including by western grey kangaroo (<i>Macropus fuliginous</i>), red kangaroo (<i>Macropus rufus</i>), eastern grey kangaroo (<i>Macropus giganteus</i>), euro (<i>Macropus robustus</i>), emu (<i>Dromaius novaehollandiae</i>) populations and introduced herbivores is impacting conservation values. Excessive grazing from introduced and native animals can alter vegetation structures, leading to soil erosion and degrade vital habitat for threatened and declining mallee bird species. While strategies for reducing total grazing pressure will primarily focus on the control of feral animals, where evidence of total grazing pressure indicates that western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations are having an unsustainable impact on biodiversity, management programs will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options. Management programs will work in collaboration with surrounding landholders, applying best-knowledge and best practice methods to deliver conservation outcomes and protect high priority biodiversity assets.
Management themes and priorities; Theme 2: Managing predation and total grazing pressure; Objectives and Strategies (page 10):	Replace current text with:
- Design an adaptive total grazing pressure and predation management work program that addresses specific ecological requirements, conservation outcomes and monitoring needs. This will include: - Implementing best practice pest management techniques, including aerial and ground control - Monitoring the impact of total grazing pressure on reserve vegetation and neighbouring landholders - Planning and implementation at a landscape scale in collaboration with relevant partners	- Implement adaptive predation and total grazing pressure management strategies. Include native herbivores when they are having an unsustainable impact on conservation values. Consider commercial management options in consultation with the kangaroo industry. - Collaborate with neighbouring land managers and relevant partners to plan and implement best-practice management strategies.

17. Draft amendment to the Conservation Parks of the Murraylands (Western Plains) Management Plans 1984

Reserves included in this management plan: Ridley Conservation Park and Swan Reach Conservation Park.

Current text	Amendment
Ridley Conservation Park; Part 2: Management Objectives (page 34):	Proposed new text:
Insert new text after <i>Plant and vertebrate pests</i> .	Managing Total Grazing Pressure To reduce the impacts of total grazing pressure on conservation values.
Ridley Conservation Park; Part 3: Implementation of Management Objectives (page 35):	Proposed new text:
Insert new text after <i>Plant and vertebrate pests</i> .	Managing Total Grazing Pressure The total grazing pressure in the park including by western grey kangaroo (<i>Macropus fuliginosus</i>) red kangaroo (<i>Macropus rufus</i>), eastern grey kangaroo (<i>Macropus giganteus</i>), euro (<i>Macropus robustus</i>) populations and introduced herbivores, is reducing plant diversity and habitat quality for important and endangered species. While strategies for reducing herbivore populations will primarily focus on the control of introduced species (see Plant and Vertebrate Pests), reducing the total grazing pressure across the parks is likely to include management of the kangaroo populations. Should evidence indicate that native herbivores, including the western grey kangaroo, red kangaroo, eastern grey kangaroo and euro are having an unsustainable impact on biodiversity, an adaptive management framework will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Ridley Conservation Park; Part 4: Summary of Management Proposals (page 36):	Proposed new text:
Insert new text after <i>Works and Maintenance</i> .	Managing Total Grazing Pressure Project Monitor total grazing pressure impacts, including by western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations, and its effects on park conservation values. Where evidence indicates that impacts from western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations, is unsustainable and impacting conservation values, implement management programs. Priority: High Duration: Ongoing Page: 35

Current text	Amendment
Swan Reach Conservation Park; Part 2: Management Objectives (page 39): <i>Insert new text after Plant and vertebrate pests.</i>	Proposed new text: Managing Total Grazing Pressure To reduce the impacts of total grazing pressure on conservation values.
Swan Reach Conservation Park; Part 3: Implementation of Management Objectives (page 50): <i>Insert new text after Plant and vertebrate pests.</i>	Proposed new text: Managing Total Grazing Pressure The total grazing pressure in the park including by western grey kangaroo (<i>Macropus fuliginosus</i>) red kangaroo (<i>Macropus rufus</i>), eastern grey kangaroo (<i>Macropus giganteus</i>), euro (<i>Macropus robustus</i>) populations and introduced herbivores, is reducing plant diversity and habitat quality for important and endangered species. While strategies for reducing herbivore populations will primarily focus on the control of introduced species (see Plant and Vertebrate Pests), reducing the total grazing pressure across the parks is likely to include management of the kangaroo populations. Should evidence indicate that native herbivores, including the western grey kangaroo, red kangaroo, eastern grey kangaroo and euro are having an unsustainable impact on biodiversity, an adaptive management framework will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Ridley Conservation Park; Part 4: Summary of Management Proposals (page 53): <i>Insert new text after Works and Maintenance.</i>	Proposed new text: Managing Total Grazing Pressure Project Monitor total grazing pressure impacts, including by western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations and its effects on conservation values. Where evidence indicates that impacts from western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations is unsustainable and impacting conservation values, implement management programs. Priority: High Duration: Ongoing Page: 50

18. Draft amendment to the Conservation Parks of the Murraylands (North West Zone) Management Plans 1994

Reserves included in this management plan: Pooginook Conservation Park, Pandappa Conservation Park and White Dam Conservation Park.

Current text	Amendment
Pooginook Conservation Park; Section 2 Management Prescription; 2.1 Natural Resources (page 5): <i>Insert new text before Action list.</i>	Proposed new text: Managing total grazing pressure. The total grazing pressure in the park, including by western grey kangaroo (<i>Macropus fuliginosus</i>) red kangaroo (<i>Macropus rufus</i>), eastern grey kangaroo (<i>Macropus giganteus</i>), euro (<i>Macropus robustus</i>) populations and introduced herbivores, is reducing plant diversity, food availability and habitat quality for important and endangered species. While strategies for reducing herbivore populations will primarily focus on the control of introduced pest animals, reducing the total grazing pressure across the parks is likely to include management of the kangaroo populations.
Pooginook Conservation Park; Section 2 Management Prescription; 2.1 Natural Resources; Action (page 5): <i>Insert additional dot points.</i>	Proposed new text: • Monitor total grazing pressure impacts, including by western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations, and its effects on conservation values. Priority: High • Where evidence indicates that impacts from western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations is unsustainable and impacting conservation values, implement management programs. Priority: High
Pooginook Conservation Park; Section 3 Management Actions (page 9): <i>Insert additional dot points.</i>	Proposed new text: • Monitor total grazing pressure impacts, including by western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations, and its effects on conservation values. Priority: High Duration: Ongoing Page: 5 • Where evidence indicates that impacts from western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations is unsustainable and impacting conservation values, implement management programs. Priority: High Duration: Ongoing Page: 5

Current text	Amendment
Pandappa Conservation Park; Section 2 Management Prescription; 2.1 Natural Resources (page 12):	Proposed new text:
<i>Insert new text before Action list.</i>	Managing total grazing pressure. The total grazing pressure in the park, including by western grey kangaroo (<i>Macropus fuliginosus</i>) red kangaroo (<i>Macropus rufus</i>), eastern grey kangaroo (<i>Macropus giganteus</i>), euro (<i>Macropus robustus</i>) populations and introduced herbivores, is reducing plant diversity, food availability and habitat quality for important and endangered species. While strategies for reducing herbivore populations will primarily focus on the control of introduced pest animals, reducing the total grazing pressure across the park is likely to include management of the kangaroo populations.
Pandappa Conservation Park; Section 2 Management Prescription; 2.1 Natural Resources; Action (page 12):	Proposed new text:
<i>Insert new dot points.</i>	• Monitor total grazing pressure impacts, including by western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations, and its effects on conservation values. Priority: High • Where evidence indicates that impacts from western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations is unsustainable and impacting conservation values, implement management programs. Priority: High
Pandappa Conservation Park; Section 3 Management Actions (page 16):	Proposed new text:
<i>Insert additional dot points.</i>	• Monitor total grazing pressure impacts, including by western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations, and its effects on conservation values. Priority: High Duration: Ongoing Page: 12 • Where evidence indicates that impacts from western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations is unsustainable and impacting conservation values, implement management programs. Priority: High Duration: Ongoing Page: 12

Current text	Amendment
White Dam Conservation Park; Section 2 Management Prescription; 2.1 Natural Resources; 2.1.1 Fauna and Flora (page 18):	Proposed new text:
Insert new text before <i>Action list</i> .	2.1.2 Managing total grazing pressure. The total grazing pressure in the park, including by western grey kangaroo (<i>Macropus fuliginosus</i>) red kangaroo (<i>Macropus rufus</i>), eastern grey kangaroo (<i>Macropus giganteus</i>), euro (<i>Macropus robustus</i>) populations and introduced herbivores, is reducing plant diversity, food availability and habitat quality for important and endangered species. While strategies for reducing herbivore populations will primarily focus on the control of introduced pest animals, reducing the total grazing pressure across the parks is likely to include management of the kangaroo populations.
White Dam Conservation Park; Section 2 Management Prescription; 2.1 Natural Resources; Action (page 18):	Proposed new text:
Insert new dot points.	• Monitor total grazing pressure impacts, including by western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations, and its effects on conservation values. Priority: High • Where evidence indicates that impacts from western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations is unsustainable and impacting conservation values, implement management programs. Priority: High
White Dam Conservation Park; Section 3 Management Actions (page 22):	Proposed new text:
Insert additional dot points.	• Monitor total grazing pressure impacts, including by western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations, and its effects on conservation values. Priority: High Duration: Ongoing Page: 18 • Where evidence indicates that impacts from western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations is unsustainable and impacting conservation values, implement management programs. Priority: High Duration: Ongoing Page: 18

19. Draft amendment to the Maize Island Lagoon Conservation Park and Marne Valley Conservation Park Management Plan 1994

Current text	Amendment
Maize Island Lagoon Conservation Park; Section 2 Management Prescription; 2.1 Natural Resources (page 5): <i>Insert new text before Action list.</i>	Proposed new text: Managing total grazing pressure. The total grazing pressure in the park, including by western grey kangaroo (<i>Macropus fuliginosus</i>) red kangaroo (<i>Macropus rufus</i>), eastern grey kangaroo (<i>Macropus giganteus</i>), euro (<i>Macropus robustus</i>) populations and introduced herbivores, is impacting park conservation values. Excessive grazing is having adverse impacts on threatened species habitat, understory vegetation health, and damaging cultural heritage sites. While strategies for reducing herbivore populations will primarily focus on the control of introduced animal pests reducing the total grazing pressure across the park is likely to include management of the kangaroo populations.
Maize Island Lagoon Conservation Park; Section 2 Management Prescription; 2.1 Natural Resources; Action (page 6): <i>Insert new dot points.</i>	Proposed new text: • Monitor total grazing pressure impacts, including by western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations, and its effects on conservation values. Priority: High • Where evidence indicates that impacts from western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations is unsustainable and impacting conservation values, implement management programs. Priority: High
Maize Island Lagoon Conservation Park; Section 3 Management Actions (page 10): <i>Insert additional dot points.</i>	Proposed new text: • Monitor total grazing pressure impacts, including by western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations, and its effects on conservation values. Priority: High Duration: Ongoing Page: 6 • Where evidence indicates that impacts from western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations is unsustainable and impacting conservation values, implement management programs. Priority: High Duration: Ongoing Page: 6

Current text	Amendment
Marne Valley Conservation Park; Section 2 Management Prescription; 2.1 Natural Resources (page 13): <i>Insert new text before Action list.</i>	Proposed new text: Managing total grazing pressure. The total grazing pressure in the park, including by western grey kangaroo (<i>Macropus fuliginosus</i>) red kangaroo (<i>Macropus rufus</i>), eastern grey kangaroo (<i>Macropus giganteus</i>), euro (<i>Macropus robustus</i>) populations and introduced herbivores, is impacting park conservation values. Excessive grazing is having adverse impacts on threatened species habitat, understory vegetation health, and damaging cultural heritage sites. While strategies for reducing herbivore populations will primarily focus on the control of introduced animal pests reducing the total grazing pressure across the parks is likely to include management of the kangaroo populations.
Marne Valley Conservation Park; Section 2 Management Prescription; 2.1 Natural Resources; Action (page 13): <i>Insert new dot points.</i>	Proposed new text: • Monitor total grazing pressure impacts, including by western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations, and its effects on conservation values. Priority: High • Where evidence indicates that impacts from western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations is unsustainable and impacting conservation values, implement management programs. Priority: High
Marne Valley Conservation Park; Section 3 Management Actions (page 17): <i>Insert additional dot points.</i>	Proposed new text: • Monitor total grazing pressure impacts, including by western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations, and its effects on conservation values. Priority: High Duration: Ongoing Page: 13 • Where evidence indicates that impacts from western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations is unsustainable and impacting conservation values, implement management programs. Priority: High Duration: Ongoing Page: 13

20. Draft amendment to the Morgan Conservation Park Management Plan 1992

Current text	Amendment
Section 3.1.1 Fauna and Flora (page 6):	Proposed new text:
<i>Insert new text before Policies.</i>	Managing total grazing pressure. The total grazing pressure in the park, including by western grey kangaroo (<i>Macropus fuliginosus</i>) red kangaroo (<i>Macropus rufus</i>), eastern grey kangaroo (<i>Macropus giganteus</i>), euro (<i>Macropus robustus</i>) populations and introduced herbivores, is impacting park conservation values. Excessive grazing is having adverse impacts on threatened species habitat, understory vegetation health, and damaging cultural heritage sites. While strategies for reducing herbivore populations will primarily focus on the control of introduced species (see Natural Resources), reducing the total grazing pressure across the parks is likely to include management of the kangaroo populations. Should evidence indicate that native herbivores, including the western grey kangaroo, red kangaroo, eastern grey kangaroo and euro are having an unsustainable impact on biodiversity, an adaptive management framework will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.

21. Draft amendment to the Moorook-Loch Luna Game Reserve Park Management Plan 1994

Current text	Amendment
Section 3.1 Natural resources (page 7):	Proposed new text:
Insert new text before <i>Policies</i> .	Managing total grazing pressure. The total grazing pressure in Moorook and Loch Luna game reserves, including by western grey kangaroo (<i>Macropus fuliginosus</i>) red kangaroo (<i>Macropus rufus</i>), eastern grey kangaroo (<i>Macropus giganteus</i>), euro (<i>Macropus robustus</i>) populations and introduced herbivores, is impacting reserve conservation values. Excessive grazing is having adverse impacts on threatened species habitat, understory vegetation health, and damaging cultural heritage sites. While strategies for reducing herbivore populations will primarily focus on the control of introduced species (see Natural Resources), reducing the total grazing pressure across the parks is likely to include management of the kangaroo populations. Should evidence indicate that native herbivores, including the western grey kangaroo, red kangaroo, eastern grey kangaroo and euro are having an unsustainable impact on biodiversity, an adaptive management framework will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Section 4 Management Actions (page 17):	Proposed new text:
Insert additional dot point at beginning of list.	Should evidence indicate that native herbivores, including the western grey kangaroo, red kangaroo, eastern grey kangaroo and euro are having an unsustainable impact on biodiversity, implement an adaptive management framework. Priority: High Duration: Ongoing Page: 7

22. Draft amendment to the Mokota Conservation Park Management Plan 2003

Current text	Amendment
Section 4.1.5 Native Fauna; paragraph 6 (page 16):	Replace current text with:
Native herbivore populations may increase following the creation of the park and their contribution to maintaining diverse native grassland needs to be assessed. Macropods need to be maintained at a density where this contribution will be optimal. Regional monitoring of kangaroos and past fauna destruction permits indicate that most kangaroo culling by professional shooters has occurred on the plains, therefore the hills in which the park occurs provide refuge, apart from some control by graziers (Ian Falkenberg pers comm).	Evidence from long-running monitoring programs in Mokota Conservation Park indicates that native herbivores including western grey kangaroos (<i>Macropus fuliginosus</i>), contribute to total grazing pressure in the park and surrounding properties. Excessive grazing by native herbivores is detrimental to native grass tussock health as grasses become increasingly fragmented and weed cover increases. While strategies for managing total grazing pressure will primarily focus on the control of introduced animals, should evidence indicate that kangaroos are having an unsustainable impact on conservation values, management programs will be implemented.
Section 4.1.5 Native Fauna; objectives (page 16):	Replace current text with:
Manage populations of large fauna such as kangaroos and emus at sustainable levels. Conserve and restore habitat of native fauna recorded in the park.	Maintain healthy ecosystems to protect the range of habitats and wildlife they support.
Section 4.1.5 Native Fauna; strategies; second paragraph (page 17):	Replace current text with:
Continue to monitor kangaroo numbers to assess population trends and observe their behaviour to endeavour to understand their contribution to the total grazing pressure on vegetation throughout the park.	Monitor total grazing pressure impacts, including by western grey kangaroos and its effects on park conservation values.
Section 4.1.5 Native Fauna; Actions; dot points 1-3 (page 17):	Replace current text with:
• Measure the impact of macropods on vegetation by erecting suitable exclosures in representative areas of the park's vegetation. • Manage macropod populations to prevent overgrazing. This will be achieved by controlling availability of water, and culling if needed, as part of a continuing district strategy. • Assess the impact of park dams on macropod numbers.	• Where evidence indicates that impacts from western grey kangaroos are unsustainable and impacting park conservation values, implement management programs. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.

23. Draft amendment to the Bimbowrie Conservation Park Management Plan 2012

Current text	Amendment
Theme 2: Assisting rangeland ecosystem recovery; Paragraph 5-7 (page 8): Kangaroos form part of the grazing pressure within the park and surrounding properties. Although integrated control programs will prioritise feral animals, high densities of kangaroos can inhibit the successful recovery of degraded ecosystems and control methods are required. A number of options currently exist to manage kangaroo populations but most are impractical or ineffective over large areas: the closure of artificial water sources on the park has seen little change in kangaroo numbers and impacts; and fencing to exclude kangaroos from sensitive areas in the park is not practically achievable given these sensitive areas occur across vast distances. Culling is currently considered the only practicable option for managing the impacts of kangaroo grazing within Bimbowrie Conservation Park. Kangaroo culling programs will be implemented, as part of an integrated herbivore management program, when required to facilitate successful ecological restoration and protect conservation values, and when research and monitoring determines that culling is the only practicable option for managing high densities of kangaroos within the park. This is in accordance with section 38(10) (a) of the National Parks and Wildlife Act 1972. Bimbowrie Conservation Park is located within the commercial kangaroo harvest zone. Kangaroos were historically harvested on the former Bimbowrie pastoral lease as part of an integrated grazing management approach. Commercial harvesting may again be used as a management tool where this does not conflict with park conservation values.	Replace current text with: Evidence has shown that kangaroo contribute significantly to total grazing pressure within the park and surrounding properties. Western grey kangaroos (<i>Macropus fuliginosus</i>) red kangaroo (<i>Macropus rufus</i>), and euro (<i>Macropus robustus</i>) populations can impact park conservation values and prevent ecosystem recovery through grazing native vegetation and spreading weeds. While strategies for managing total grazing pressure will primarily focus on the control of feral animals, should evidence indicate that kangaroos are having an unsustainable impact on conservation values, management programs will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Theme 2: Assisting rangeland ecosystem recovery; Objectives and strategies; second dot point (page 9): Develop and implement a landscape scale kangaroo management plan, as part of an integrated herbivore management program, to minimise grazing impacts and facilitate successful ecological restoration within the park. Provide for the culling of kangaroos when research and monitoring determines this to be the only practicable option for managing high densities of kangaroos within the park	Replace current text with: Where total grazing pressure indicates impacts to conservation values by red kangaroo, western grey kangaroo and euro populations, implement management programs. Consider commercial management options in consultation with the kangaroo industry.

24. Draft amendment to the Mount Brown Conservation Park Management Plan 1999

Current text	Amendment
Section 4.2.4 Fauna; paragraph 4 (page 19): As a broad management strategy, caring for habitat and ensuring natural systems can operate free from disturbance in turn enhances opportunities for native flora and fauna to flourish. Grazing has dramatically reduced understory and altered vegetation structure generally. Cessation of grazing will result in improvement in habitat quality and should encourage native fauna.	Replace current text with: Managing total grazing pressure. The total grazing pressure in Mount Brown Conservation Park, including by western grey kangaroo (<i>Macropus fuliginosus</i>) red kangaroo (<i>Macropus rufus</i>), euro (<i>Macropus robustus</i>) populations and introduced herbivores, is reducing plant diversity, food availability and habitat quality for important and endangered species. While strategies for reducing herbivore populations will primarily focus on the control of introduced species, reducing the total grazing pressure across the park is likely to include management of the kangaroo populations. Should evidence indicate that western grey kangaroo, red kangaroo, eastern grey kangaroo and euro populations are having an unsustainable impact on biodiversity, an adaptive management framework will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Section 4.2.4 Fauna; Actions; first dot point (page 20): Phase out grazing from 1996	Replace current text with: - Implement adaptive total grazing pressure management strategies to protect natural assets. - Where evidence indicates that impacts from western grey kangaroo, red kangaroo and euro populations are unsustainable and impacting conservation values, implement management programs. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.

25. Draft amendment to The Dutchmans Stern Conservation Park Management Plan 2000

Current text	Amendment
Section 4.2 Natural Resources; fourth strategy (page 10): Control introduced species to minimise competition with, and alteration of, natural systems	Replace current text with: Manage the impacts of pest plant and animals and total grazing pressure to protect threatened species and ecosystem health
Section 4.3 Wildlife (page 11): <i>Insert new text after 4.3.1 Spotted skipper butterfly.</i>	Proposed new text: 4.3.2 Managing total grazing pressure. The total grazing pressure in the park, including by western grey kangaroo (<i>Macropus fuliginosus</i>) red kangaroo (<i>Macropus rufus</i>), euro (<i>Macropus robustus</i>) populations and introduced herbivores, is reducing plant diversity, food availability and habitat quality for important and endangered species. While strategies for reducing herbivore populations will primarily focus on the control of introduced species (see 4.6 Pest animals and plants), reducing the total grazing pressure across the park is likely to include management of the kangaroo populations. Should evidence indicate that native herbivores, including the western grey kangaroo, red kangaroo and euro are having an unsustainable impact on biodiversity, an adaptive management framework will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Section 5 Summary of Management Actions (page 22): <i>Insert new action after Prepare action plan for spotted skipper.</i>	Proposed new text: Should evidence indicate that native herbivores, including the western grey kangaroo, red kangaroo, eastern grey kangaroo and euro are having an unsustainable impact on biodiversity, an adaptive management framework will be implemented. Priority: High Duration: Ongoing Page: 11

26. Draft amendment to the Coorong National Park Management Plan 1990

Current text	Amendment
Section 5.1.4 Fauna Management (page 16):	Proposed new text:
<i>New text to be added before Management Objectives.</i>	The total grazing pressure in the park including by western grey kangaroos (<i>Macropus fuliginosus</i>), and introduced herbivores, is reducing plant diversity, food availability and habitat quality for important and endangered species and their strategic management is required. Management strategies will be integrated with other pest management and habitat restoration opportunities.
Section 5.1.4 Fauna Management; Management Objectives; sixth dot point (page 16):	Replace current text with:
- To control pest animal species especially those which affect: a. Natural habitat b. Neighbouring agricultural land c. Success of breeding in native populations	To manage the impacts of pest animals and total grazing pressure to protect threatened species, ecosystem health and neighbouring property values.
Section 5.1.4 Fauna Management; Management Actions; (page 17):	Proposed new text:
<i>New text to be added after action 7.</i>	8. While strategies for reducing total grazing pressure will primarily focus on the control of pest animals, where evidence indicates that impacts from western grey kangaroos, is unsustainable and impacting the park conservation values, implement strategic management. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.

27. Draft amendment to the Naracoorte Caves National Park Management Plan 2001

Current text	Amendment
Section 4.1.2 Fauna (page 23):	Proposed new text:
<i>New text to be added before Objective.</i>	The total grazing pressure in the park including by western grey kangaroo (<i>Macropus fuliginosus</i>) eastern grey kangaroo (<i>Macropus giganteus</i>), red-necked wallaby (<i>Macropus rufogriseus</i>) populations and introduced herbivores, is reducing plant diversity, food availability and habitat quality for important and endangered species and their strategic management is required. Management strategies will be integrated with other pest management and habitat restoration opportunities.
Section 4.1.2 Fauna; Objectives (page 23):	Replace current text with:
existing free living, self-perpetuating populations of native species in the Park will be maintained;	Maintain healthy ecosystems and improve natural ecological processes to protect the range of habitats and wildlife they support.
Section 4.1.2 Fauna; Action; (page 23):	Proposed new text:
<i>New action to be added</i>	- While strategies for reducing total grazing pressure will primarily focus on the control of introduced species, where evidence indicates that impacts from native wildlife, including the western grey kangaroo, eastern grey kangaroo and red-necked wallaby, is unsustainable and impacting the park conservation values, implement strategic management. - Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.

28. Draft amendment to the Piccaninne Ponds Conservation Park Management Plan 1992

Current text	Amendment
Section 3.1.2 Fauna Management (page 8):	Proposed new text:
<i>New text to be added before Policy</i>	The total grazing pressure in the park including by western grey kangaroo (<i>Macropus fuliginosus</i>) eastern grey kangaroo (<i>Macropus giganteus</i>) populations and introduced herbivores is inhibiting revegetation success, having adverse impacts on threatened flora, impacting neighbouring properties and their strategic management is required. Management strategies will be integrated with other pest management and habitat restoration opportunities.
Section 3.1.2 Fauna Management; Policy (page 8):	Replace current text with:
Existing endemic species will be managed	Maintain healthy ecosystems and improve natural ecological processes to protect the range of habitats and wildlife they support.
Section 3.1.2 Fauna Management; Actions; third dot point (page 9):	Replace current text with:
Encourage investigation of habitat requirements for the maintenance of native fauna populations	- Ensure park management programs are based on best available knowledge and best practice, and are implemented in consultation with conservation specialists. - Where evidence indicates that impacts from western grey kangaroo and eastern grey kangaroo populations, is unsustainable and impacting conservation values, implement strategic management. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.

29. Draft amendment to the Lake St Clair Conservation Park Management Plan 2011

Current text	Amendment
Theme 2; Re-establishing regionally threatened vegetation communities; paragraph 2-4 (page 4): Rabbits (<i>Oryctolagus cuniculus</i>), domestic stock and kangaroos (<i>Macropus spp.</i>) all pose a grazing threat to native vegetation, restoration projects, pastures and crops. The removal of domestic stock from the park, and some reduction in the numbers of rabbits since the release of the Calici virus, has reduced these threats to native vegetation within the park. However, kangaroo numbers have increased in some areas of the South East where blocks of native vegetation adjoin cleared and agricultural land (Croft et al., 1999). DENR will assess kangaroo populations in the park in comparison to the surrounding landscape. It is essential for DENR to work with surrounding neighbours to determine kangaroo densities both inside and outside the park, and collaboratively deliver adaptive management approaches to grazing threats. Vegetation exclosures and survey sites have been established to monitor regeneration success and the effects of grazing in the park. Continued monitoring and the analysis of results are essential to evaluate the success of management activities on regeneration and determine the impacts of grazing to conservation values of the park. If research and monitoring determines that an overpopulation of kangaroos in Lake St Clair Conservation Park is affecting the conservation values of the park, including native vegetation and natural regeneration, kangaroo population control programs may be implemented. Such programs may include a variety of management options. Based on assessment of all available population control methods, culling will only be conducted if it is considered the only practical option.	Replace current text with: Managing total grazing pressure The total grazing pressure in Lake St Clair Conservation Park, including by western grey kangaroo (<i>Macropus fuliginosus</i>), eastern grey kangaroo (<i>Macropus giganteus</i>) populations and introduced herbivores, is reducing plant diversity and habitat quality for important and endangered species, and creating adverse impacts for neighbouring primary production land. While strategies for reducing herbivore populations will primarily focus on the control of introduced species, reducing the total grazing pressure across Lake St Clair Conservation Park is likely to include management of the kangaroo populations as a result of their growing abundance in the landscape. Stock removal and biological control programs have been implemented and selective grazing exclosure plots have been established across the park. Where evidence indicates that impacts from introduced herbivores and native wildlife, including the western grey kangaroo and eastern grey kangaroo, is unsustainable and impacting conservation values, strategic management will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Theme 2; Re-establishing regionally threatened vegetation communities; Objectives and Strategies; dot points 2&3 (page 4): • Monitor kangaroo populations in the park and liaise with neighbours to ascertain outside park kangaroo densities • Ensure that adaptive management programs are developed for the park (including a kangaroo management program), if an assessment identifies that an overpopulation of kangaroos is affecting the conservation values of the park	Replace current text with: • Implement adaptive predation and total grazing pressure management strategies. • Control introduced herbivores when evidence indicates adverse impacts to conservation values. Where total grazing pressure indicates impacts to conservation values by western grey and eastern grey kangaroos, implement management programs. • Collaborate with neighbouring land managers, researchers, environmental groups, government agencies, and volunteers to apply best-practice management to achieve ecological outcomes.

30. Draft amendment to the Bool Lagoon Game Reserve and Hacks Lagoon Conservation Park Management Plan 2006

Current text	Amendment
Section 4.4 Native Fauna (page 40):	Proposed new text:
<i>New text to be added before Objectives</i>	Managing total grazing pressure The total grazing pressure in Bool and Hacks Lagoons, including by western grey kangaroo (<i>Macropus fuliginosus</i>), eastern grey kangaroo (<i>Macropus giganteus</i>) populations and introduced herbivores, is reducing plant diversity and habitat quality for important and endangered species. While strategies for reducing herbivore populations will primarily focus on the control of introduced species (see section 4.6 Introduced animals), reducing the total grazing pressure across Bool and Hacks Lagoons is likely to include management of kangaroo populations as a result of their growing abundance in the landscape. Should evidence indicate that kangaroos are having an unsustainable impact on biodiversity, an adaptive management framework will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Section 4.4 Native Fauna; Objectives (page 41):	Replace current text with:
Maintain diversity of native fauna and supporting habitats, consistent with the maintenance of the ecological character of the site.	Maintain healthy ecosystems to protect the range of habitats and wildlife they support.
Section 4.4 Native Fauna; Strategies (page 41):	Proposed new text:
<i>Insert new dot points.</i>	• Monitor total grazing pressure impacts, including by western grey kangaroos and eastern grey kangaroos and its effects on conservation values • Where evidence indicates that impacts from western grey kangaroos and eastern grey kangaroos is unsustainable and impacting conservation values, implement management programs.
Section 5 Summary of Management Strategies; 4.4 Native Fauna (page 54):	Proposed new text:
<i>Insert new strategy.</i>	Where evidence indicates that impacts from western grey kangaroos and eastern grey kangaroos is unsustainable and impacting conservation values, implement management programs. Priority: High Duration: Ongoing

31. Draft amendment to the Carpenter Rocks Conservation Park and Bucks Lake Game Reserve Management Plan 2007

Current text	Amendment
Section 4.4 Native Fauna (page 14):	Proposed new text:
<i>New text to be added before Invertebrates.</i>	Managing total grazing pressure The total grazing pressure in Carpenter Rocks Conservation Park and Bucks Lake Game Reserve, including by western grey kangaroo (<i>Macropus fuliginosus</i>), eastern grey kangaroo (<i>Macropus giganteus</i>) populations and introduced herbivores, is reducing plant diversity and habitat quality for important and endangered species. While strategies for reducing herbivore populations will primarily focus on the control of introduced species (see section 4.6 Introduced animals), reducing the total grazing pressure across Carpenter Rocks Conservation Park and Bucks Lake Game Reserve is likely to include management of kangaroo populations as a result of their growing abundance in the landscape. Should evidence indicate that kangaroos are having an unsustainable impact on biodiversity, an adaptive management framework will be implemented. Where non-lethal options for control are considered ineffective or not feasible, culling will be undertaken as it remains the only practicable method of management. Kangaroo management may also include commercial harvest options.
Section 4.4 Native Fauna; Objective (page 14):	Replace current text with:
Identify and protect native fauna inhabiting or using the reserve.	Maintain healthy ecosystems to protect the range of habitats and wildlife they support.
Section 4.4 Native Fauna; Strategies (page 14):	Proposed new text:
<i>Insert new dot point.</i>	Where evidence indicates that impacts from western grey kangaroos and eastern grey kangaroos is unsustainable and impacting conservation values, implement management programs.
Summary of Management Strategies; Native Fauna (page 28):	Proposed new text:
<i>Insert new dot point.</i>	Where evidence indicates that impacts from western grey kangaroos and eastern grey kangaroos is unsustainable and impacting conservation values, implement management programs.



Invitation to contribute

This document has been released for public consultation to facilitate community input into the proposed amendments to the 31 management plans listed on page 2 and 3.

You are invited to contribute by making a submission.

To ensure that your submission is effective:

- state the plan to which you are referring, as this document relates to 31 management plans
- ensure your submission relates specifically to the draft amendment
- make sure your text is clear and concise
- refer to the section, paragraph and/or objective or strategy upon which you are commenting
- if you disagree with the draft amendment, state your reasons and say what you would prefer in its place, and why
- it is also important to say which sections of the amendment you agree with.

Please note that your submission will become part of the public record and will be available to anyone who requests a copy unless you specifically request otherwise.

Submissions close at 5pm on 26 May 2024.

Written submissions:

Department for Environment and Water

National Parks and Protected Area Program
Re: Total grazing pressure amendments.
GPO Box 1047 ADELAIDE SA 5001

E-mail submissions:

DEWProtectedAreaManagement@sa.gov.au

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