



ACT
Government

GININI FLATS WETLAND COMPLEX RAMSAR SITE MANAGEMENT PLAN

SUMMARY 2017



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CONTENTS

Introduction	2
Background	3
Scope of the plan	4
Key objective	4
Current management regime	5
Site description	6
Key threats to the wetlands	7
Site management strategies	8
1 Fire management planning	9
2 Amelioration of hydrological changes	9
3 Protection and rehabilitation of peatland	10
4 Invasive animal management and control	10
5 Weeds management and control	11
6 Pathogen management and control	11
7 Protecting threatened fauna species	11
8 Recreation and visitor management	12
9 Infrastructure changes and maintenance	12
10 Amelioration of climate change impacts	13
11 Preserving aboriginal and european cultural heritage values	13
12 Education and communication strategies	13
13 Management of volunteer activities	14
14 Managing research and monitoring	14
REFERENCES	15

INTRODUCTION

The Ginini Flats Wetland Complex is an internationally significant wetland located in the Namadgi National Park. As such, it is incumbent on the ACT Government to conserve the wetland as a sustainable natural ecosystem that provides habitat for its native plants and animals and to protect the cultural heritage significance and values associated with the site.

On behalf of the Conservator for Flora and Fauna, the Environment and Planning Directorate has prepared a Draft Ginini Flats Wetland Complex Ramsar Management Plan for community and stakeholder comment. All comments will be considered when finalising the management plan, which will be presented to the Legislative Assembly as a Disallowable Instrument after approval by the Minister.





BACKGROUND

The Ginini Flats Wetland Complex (known as Ginini Flats wetlands) was designated as a wetland of international importance under the Ramsar Convention in 1996. The Ramsar Convention, an international intergovernmental treaty adopted in the Iranian city of Ramsar in 1971, came into force in 1975. It aims to halt and, where possible, reverse the worldwide loss of wetlands and to conserve those that remain through ‘wise use’ and management. The Ramsar Convention defines the wise use of wetlands as “the maintenance of their ecological character, achieved through the implementation of ecosystem approaches”.

The Environment Protection and Biodiversity Conservation Regulations (the EPBC Act Regulations) Schedule 6 – Australian Ramsar management principles, sets out guidelines for best practice management planning to maintain the ecological character of Ramsar wetlands. These principles include review of management plans at intervals of not less than seven years. Under new provisions of the ACT *Nature Conservation Act 2014* (the NC Act), the ACT Conservator of Fauna and Flora (the Conservator) must report to the Minister about each Ramsar wetland management plan at least once every five years.

Following the 1996 listing of the site, a non-statutory plan of management for the site commenced in 2001 (ACT Government 2001). Since then, several relevant occurrences and scientific and policy advances have necessitated the review of the management plan. A devastating bushfire in 2003 impacted the wetland complex, causing severe damage. In 2009 the Commonwealth listed the ‘Alpine *Sphagnum* Bogs and Associated Fens ecological community’ as endangered, and over the past decade advances in climate change science have forced natural resource managers to implement adaptive management strategies across the landscape.

This management plan replaces the original 2001 plan of management for the site. It will be the first statutory plan of management for the wetland. The Conservator must undertake public consultation on a draft Ramsar management plan for a period of six weeks under section 195 of the NC Act. Following public consultation the conservator must consider the submissions received, make any revisions considered appropriate and prepare a final version of the draft management plan. The conservator must then submit the draft plan to the Minister for approval.

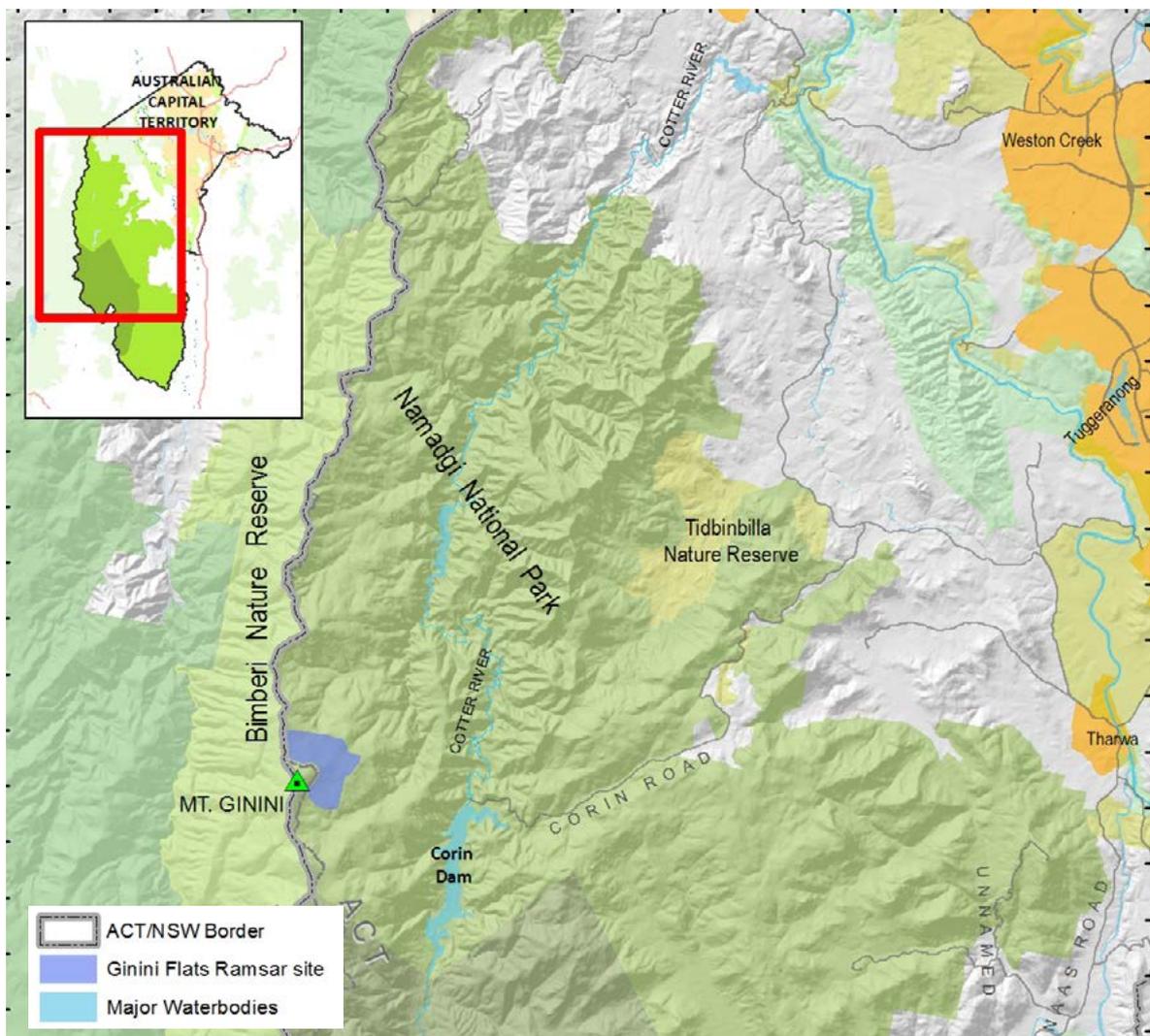
SCOPE OF THE PLAN

The key desired outcome of this and subsequent management plans is that the Ginini Flats wetlands is conserved as a sustainable natural ecosystem, providing ecosystem services and habitat for the native plants and animals that are representative of the community in perpetuity. It also aims to protect the cultural heritage significance and values associated with the site.

KEY OBJECTIVE

This management plan provides a framework to:

- 1 maintain, enhance and restore the ecological character of the Ginini Flats wetland complex through informed and appropriate management practices
- 2 ensure the biodiversity, ecosystems and habitats of the wetland complex are conserved and protected in perpetuity.



Regional location map for Ginini Flats Wetland Complex

CURRENT MANAGEMENT REGIME

The Ginini Flats wetlands occurs entirely within Namadgi National Park (NNP), which is public land (national park) under the ACT *Planning and Development Act 2007* (P&D Act) as defined in the Territory Plan (ACT Government, 2008). Schedule 3 of the P&D Act sets out management objectives for the categories of public land in which the wetland complex occurs:

- » to conserve the natural environment and
- » to provide for public use of the area for recreation, education and research.

The Namadgi National Park Plan of Management 2010 (NNP PoM) (ACT Government 2010) applies to the area in which the Ramsar site occurs, but does not provide detailed management actions for the site. NNP is managed for biodiversity conservation, water supply, appropriate recreation, natural and cultural heritage conservation, visual character, research and education. The wetland occurs in Zone 1 of the NNP management zones (NNP PoM p. 225), the Remote Zone—the core conservation and catchment area, which includes the Bimberi Wilderness, and the Middle Cotter Catchment and adjacent areas.

This management plan sets strategic management guidelines and objectives for the Ginini Flats Ramsar Site, and provides detail on management actions to be carried out to conserve the wetland and avoid or minimise the impact of threats. The ecological integrity of the Ramsar site will be managed through the management objectives and actions of this management plan.

In prioritising works to address threats in all the *Sphagnum* bogs and fens within NNP, the Ginini Flats wetlands has the highest overall priority: for example, in responding to widespread wildfire, the Ginini Flats Wetland will be the highest priority for “preventing fire entering bogs and fens.



SITE DESCRIPTION

The Ginini Flats wetlands lies in the Australian Capital Territory (ACT), at the head of Ginini Creek near the crest of the Brindabella Range on the north-eastern summit slopes of Mount Ginini, about 800 metres (m) east of the ACT–New South Wales (NSW) border, within NNP. The total Ramsar site catchment area is 350 hectares (ha), including 50 ha of wetland complex and 75 ha of open flats. Elevation of the Ginini Flats wetlands ranges from 1520–1600 m ASL (Wild et al. 2010).

The site is in the upper reaches of the Cotter River catchment, which is within the Murrumbidgee River Drainage Basin in south-eastern Australia. The site is of hydrological importance due to the role the wetlands play in maintaining water quality and, to a lesser extent, moderating runoff. The Cotter River catchment is a primary water source for the ACT and Canberra, the capital city of Australia.

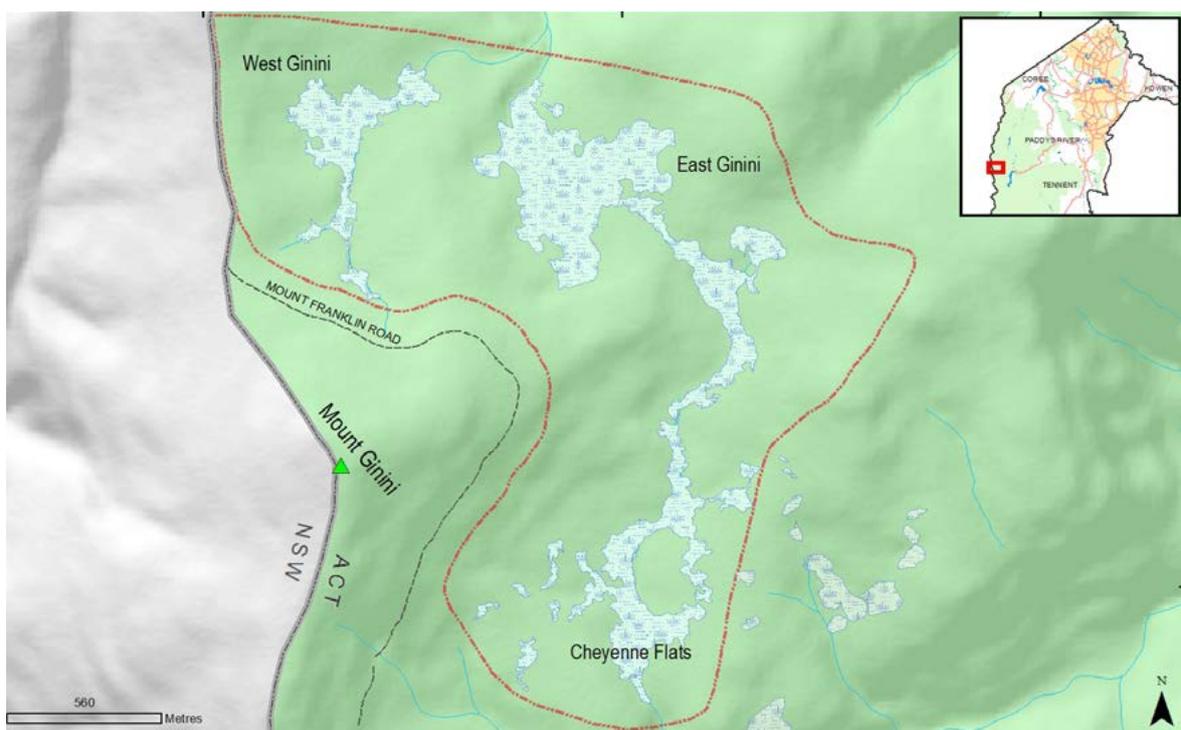
The Ramsar site is a mosaic of subalpine *Sphagnum* bogs and associated fens, wet heath, wet grassland communities and surrounding Snow Gum woodland that occurs across a series of interconnected wetlands known as West Ginini, East Ginini and Cheyenne Flats.

The site is at the northern extreme of the climatic range for alpine *Sphagnum* bog wetlands, and is the largest intact *Sphagnum* bog and fen community in the Australian Alps. The 'Alpine *Sphagnum* Bogs and Associated Fens' ecological community, and the Northern Corroboree Frog (*Pseudophryne pengilleyi*) and Broad-toothed Rat (*Mastacomys fuscus*) communities on site are nationally significant.

Other wetland dependent vertebrate fauna species that have been recorded in the area include Latham's Snipe (*Gallinago hardwickii*), Alpine Water Skink (*Eulamprus kosciusko*) and Mountain Swamp Skink (*Niveoscincus rawlinsoni*) (ACT Government 2001).

The site also provides habitat for migratory birds listed under several international migratory bird agreements (JAMBA, CAMBA and ROKAMBA).

The other predominant vegetation community within the Ramsar site boundary is Snow Gum (*Eucalyptus pauciflora* ssp. *pauciflora* and ssp. *debeuzevillei*) woodland with a grassy ground cover (*Poa* spp.) or a shrubby understorey dominated by *Bossiaea foliosa*, *Oxylobium ellipticum* and *Daviesia ulicifolia* (Wild et al. 2010).



Location of the West Ginini, East Ginini and Cheyenne Flats.



KEY THREATS TO THE WETLANDS

Ginini Flats wetlands is within a national park and at the top of the catchment and is therefore protected from many developmental and upper catchment impacts. However, alpine and subalpine vegetation is particularly susceptible to environmental change, particularly the Alpine *Sphagnum* Bogs and Associated Fens ecological community.

The greatest threat, with the most severe consequences, is associated with climate change. Increased temperatures and altered rainfall regimes have been predicted for the Australian Alps under climate change scenario modelling, which may in turn affect the carbon and water cycle processes in the wetlands (Muller et al. 2016). Future higher temperatures and altered rainfall patterns may result in the demise of *Sphagnum* bogs at the hottest and driest margins of their Australian distribution. This at-risk distribution will almost certainly include the Ginini Flats wetlands.

Fire is strongly influenced by climate, and increased temperatures and altered rainfall regimes may result in more frequent and intense wildfires.

Modelled climate change impacts predict increased frequency and intensity of precipitation events that may alter the overall hydrology of peatlands. This may result in the reduction of peatbog area or increased erosion of disturbed peat surfaces.

Other identified risks are less severe but may contribute to changes in character in the longer term when associated with climate change impacts. These include impacts from feral animals and weeds which, although not currently resulting in large-scale changes in the case of weeds, may do so in a drier, less acidic bog system.

SITE MANAGEMENT STRATEGIES

The management plan sets management guidelines and objectives for the Ginini Flats wetlands, and provides detail on management actions that are to be carried out to conserve the site and avoid or minimise the impact of threats. Fourteen site management strategies are identified:

1. Fire management planning
2. Amelioration of hydrological changes
3. Protection and rehabilitation of peatland
4. Invasive animal management and control
5. Weeds management and control
6. Pathogen management and control
7. Protecting threatened fauna species
8. Recreation and visitor management
9. Infrastructure changes and maintenance
10. Amelioration of climate change impacts
11. Preserving aboriginal and European cultural heritage
12. Education and communication strategies
13. Management of volunteer activities
14. Managing research and monitoring

The site management strategies further identify management objectives, with specific management actions outlined for each objective.

1 FIRE MANAGEMENT PLANNING

Prevent fire from entering the Ginini Flats wetlands so the values of the ecological community are protected.

ACTION 1 ▷ Incorporate appropriate management guidelines for fire suppression in the ecological community, as outlined in the ACT Ecological guidelines for fuel and fire management operations into current ACT Strategic Bushfire Management Plan and regional fire management plans (e.g. for Bimberi Nature Reserve). All future fire management plans will continue to protect the Ginini Flats wetlands from planned fire and wildfire.

Prevent the transfer of Epizootic Haematopoietic Necrosis Virus (EHNV) into the Ginini Flats wetlands.

ACTION 2 ▷ Source the supply of water for fire suppression in or near Ginini Flats from an EHNV free supply such as Cotter, Bendora or Corin dams or mains water supply and include this requirement in all future fire management plans.

Maintain the Ginini Flats wetlands as a functioning ecosystem through rehabilitation and monitoring of burned areas.

ACTION 3 ▷ Develop and implement targeted management responses for fire affected areas (e.g. an immediate post-fire risk assessment, and restricting access in the post-fire recovery period).

ACTION 4 ▷ Maintain accurate fire history via mapping of extent, frequency, severity (or intensity) and regeneration.

ACTION 5 ▷ Continue monitoring the 2003 fire bog rehabilitation program at five yearly intervals (e.g. in 2018 and 2023).

ACTION 6 ▷ Finalise the report on the 2003 bog restoration works, including recommendations, and undertake further actions if required.

2 AMELIORATION OF HYDROLOGICAL CHANGES

Maintain and, where feasible and desirable, improve the hydrological function of the Ginini Flats wetlands.

ACTION 7 ▷ Prepare a report reviewing the rehabilitation techniques employed in the post-2003 fire restoration works and research, and assess their effectiveness in terms of hydrological processes. Develop recommendations for ongoing rehabilitation works, and for strategies and indicators to guide where and when such rehabilitation should occur in the future if similar fire impacts occur.

ACTION 8 ▷ Apply the ACT Hydrogeological Landscapes project research outcomes to better elucidate current threats to catchment hydrology within Ginini Flats Wetland Complex and develop strategies to minimise risks to ecosystems. The strategy may include monitoring, such as survey of soil moisture and ground water movement, and impact mitigation.

ACTION 9 ▷ Protect water quality in all streams by minimising the impact of erosion caused by management infrastructure and use (such as fire trails, road works and creek crossings). This includes applying a high standard of soil erosion control measures and keeping any new works to an absolute minimum.

3 PROTECTION AND REHABILITATION OF PEATLAND

Maintain and enhance the *Sphagnum* bogs and fens ecological communities and peat formation processes that occur on site.

ACTION 10 ▷ Continue to conduct systematic vegetation surveys, mapping and long-term monitoring to support research that assists in identifying specific management requirements for bogs and fens species and communities, including responses to: (a) planned and unplanned fire; (b) climate change; and (c) impacts of threats such as introduced species.

ACTION 11 ▷ Restrict access to the Ginini Flats bogs and fens except for research and management purposes.

ACTION 12 ▷ Restrict the use of heavy machinery for fire suppression purposes or any other reason in the immediate catchment of the wetlands.

Protect the peat deposits under the *Sphagnum* bogs and fens in the Ginini Flats wetlands from degradation or destruction.

ACTION 13 ▷ Continue post-fire rehabilitation work to assist the natural regeneration of the Ginini Flats Wetlands *Sphagnum* bogs following the 2003 fires, and adapt management according to the results of monitoring and assessment.

ACTION 14 ▷ Rehabilitate damaged areas of the *Sphagnum* bogs and fens ecological community on the site (e.g. from fire, historic grazing, infrastructure damage, areas containing erosion tunnels, flow line incisions and bog collapse).

4 INVASIVE ANIMAL MANAGEMENT AND CONTROL

Minimise the impact of invasive animals on the ecological values of the Ginini Flats wetlands (consistent with national and regional invasive animal plans, where applicable).

ACTION 15 ▷ Ensure the co-operative invasive fauna management programs developed for NNP address the management of feral pigs, feral horses and other pest animals within the Ginini Flats Wetland Complex. Continue delivering, monitoring and evaluating existing pest management programs for pigs and feral horses in NNP. Invasive animal management programs should include consultation with stakeholders and neighbours and accord with the ACT Vertebrate Pest Management Strategy and threatened species action plans.

ACTION 16 ▷ Where management planning is absent, establish a program to monitor for the presence and impact of goats, cattle, deer, foxes, cats, rabbits and European wasps that are not currently actively managed.

ACTION 17 ▷ Develop pest management programs specifically for any new pest animal species likely to have an impact on the wetlands.



Field survey at Ramsar site



5 WEEDS MANAGEMENT AND CONTROL

Minimise the impacts of weeds (woody and non-woody) on the Ginini Flats wetlands (consistent with national and regional weed management plans, where applicable).

ACTION 18 ▷ Pest plant management programs developed for NNP will address the management of weeds within the Ginini Flats Wetland Complex. Continue delivering, monitoring and evaluating existing pest plant management programs in NNP.

ACTION 19 ▷ In conjunction with action 18, establish an ongoing weed monitoring and mapping program in the immediate catchment area to track the extent of weed species of concern and the effectiveness of weed management programs. Adapt weed management to the findings.

6 PATHOGEN MANAGEMENT AND CONTROL

Minimise the impacts of pathogens/ diseases on the Ginini Flats wetlands (consistent with national and regional disease management plans).

ACTION 20 ▷ Hygiene protocols should be followed by all people entering the Ginini Flats Wetland Complex.

ACTION 21 ▷ A. Assess the latest science on the chytrid fungus and other pathogens to assist minimising their impact.

B. Where possible, identify, prevent, eradicate, contain or control pathogens and diseases where they threaten the ecological community.

7 PROTECTING THREATENED FAUNA SPECIES

Maintain and improve habitat for the Northern Corroboree Frog and other native fauna species.

ACTION 22 ▷ Continue implementing the Northern Corroboree Frog Action Plan. Assess and monitor populations of other fauna species at the site, including the Broad-toothed Rat (*M. fuscus*).



Researchers and field assistants after a field survey

8 RECREATION AND VISITOR MANAGEMENT

Recreation within the Ramsar site is managed to conserve and protect sensitive vegetation communities of the site.

ACTION 23 ▷ Promote awareness about the Ramsar site and its vulnerability to damage by recreational activities to user groups through various media and interpretation methods, e.g. signage.

ACTION 24 ▷ Include information on avoiding entering Spahgnum bogs in the Ginini Flats area in camping permits for the Upper Cotter Catchment area.

Recreation and visitor use do not negatively affect the Ginini Flats wetlands.

ACTION 25 ▷ Develop best practice guidelines for visitors to the ecological community, and ensure these are followed.

ACTION 26 ▷ Avoid trampling impacts by implementing measures to restrict access to Ginini Flats bogs and fens.

ACTION 27 ▷ When permitted, access to Ginini West (by researchers and other persons) is via navigation across country using a map or GPS, rather than following a defined track.

9 INFRASTRUCTURE CHANGES AND MAINTENANCE

Protect hydrology and water quality by avoiding and/or minimising impacts of infrastructure and road and track construction and maintenance.

ACTION 28 ▷ Avoid any new infrastructure, road and track construction and maintenance works within the catchment of the Ginini Flats wetlands.

ACTION 29 ▷ Where unavoidable construction or maintenance takes place, minimise the impact of erosion by applying a high standard of soil erosion control measures.

ACTION 30 ▷ Construct improvements to river crossings on tracks near or within the Ginini Flats wetlands catchment in a way that does not affect natural drainage.

10 AMELIORATION OF CLIMATE CHANGE IMPACTS

Maximise ecosystem resilience to climate change by integrating findings from monitoring and research into site management.

ACTION 31 ▷ Establish a long-term climate change monitoring site in the immediate vicinity of the Ginini Flats wetland complex to better understand the impacts of climate change on the wetland. Continue to collaborate with other agencies (e.g. Icon Water, Australian Alps national parks) in measuring the impacts of climate change on bogs, fens and affected biota in the vicinity of the Ginini Flats wetlands.

ACTION 32 ▷ Incorporate the knowledge gained from monitoring and assessment into management actions that maximise ecosystem resilience of the site.

ACTION 33 ▷ Further develop and use climate models to identify threats to the site from climate change impacts in different parts of the landscape to identify where control of invasive plants and animals will be most critical. Develop a climate change impact conceptual model of risks to the site and revise regularly as impacts and feedback mechanisms are identified.

ACTION 34 ▷ Identify characteristics of the ecological community on the site that may make some patches more resilient to UV-B (e.g. greater shrub cover, aspect, shading proximity, snow cover duration). Consider and model these variables in rehabilitation/restoration triage spatial fire protection planning. Monitor effects of UV-B and, if possible, develop management responses.

11 PRESERVING ABORIGINAL AND EUROPEAN CULTURAL HERITAGE VALUES

Identify, conserve and protect Aboriginal and European cultural heritage sites in and surrounding the Ginini Flats wetlands and, where appropriate, interpret and promote the sites to retain and foster community associations and an appreciation of the past.

ACTION 35 ▷ Encourage and support further research to identify and assess the significance of Aboriginal sites in and surrounding the Ginini Flats wetlands.

12 EDUCATION AND COMMUNICATION STRATEGIES

Communicate effectively with partners, stakeholders and the community.

ACTION 36 ▷ Develop and implement a Ginini Flats Wetland Complex Ramsar Site Communication, Education and Public Awareness Plan.

Through expanded education opportunities, the community supports conservation measures to prevent the decline of the Ginini Flats wetlands.

ACTION 37 ▷ Incorporate interpretation about *Sphagnum* bogs and fens, their role in conservation and habitat provision, and the need for protection, into programs that focus on the Northern Corroboree Frog.

ACTION 38 ▷ Explore further opportunities for providing the public with additional information about the Ramsar site, including through additional and improved interpretive signage at key locations e.g. Mount Ginini carpark and entrances to backcountry walking tracks, without improving site access.

13 MANAGEMENT OF VOLUNTEER ACTIVITIES

Promote regional consistency in volunteer activities.

ACTION 39 ▷ Continue to involve volunteers in as many aspects of management implementation as possible, providing safe, supported and engaging opportunities.

ACTION 40 ▷ Continue involvement in the Australian Alps National Parks Water Catchments Reference Group to ensure a regionally consistent approach to management and monitoring of *Sphagnum* bogs and fens.

Volunteer activities do not negatively affect the *Sphagnum* bogs and fens.

ACTION 41 ▷ Ensure park staff directly supervises all volunteer assisted management programs in or near the Ginini Flats wetland complex. Restrict numbers for volunteer activities to the minimum number needed to carry out the work safely.

14 MANAGING RESEARCH AND MONITORING

Undertake and support research and monitoring that builds knowledge and understanding of the Ginini Flats Wetlands complex, including their constituent components and species, and leads to effective management and conservation of the ecological community.

ACTION 42 ▷ Prepare an inventory (including a bibliography) of past and current surveys, monitoring and research at Ginini Flats Wetland Complex.

ACTION 43 ▷ Analyse survey, monitoring and research requirements and priorities and prepare a research and monitoring strategy for Ginini Flats that identifies and addresses current knowledge gaps.

ACTION 44 ▷ Identify and develop an agreed method for determining baseline condition of the site (consider flora, fauna and non-biotic indicators, using information contained in the approved Ecological Character Description).

ACTION 45 ▷ Update the Limits of Acceptable Change, as identified in the 2010 Ecological Character Description, as new information becomes available to ensure they more accurately reflect the natural variability (or normal range for artificial sites) of critical components, processes, benefits or services of the Ramsar wetland.

ACTION 46 ▷ Continue to support and conduct systematic vegetation surveys, mapping and long-term monitoring to support research that assists in identifying specific management requirements for species and communities within the Ginini Flats Wetlands Complex.

ACTION 47 ▷ The conservator must monitor the implementation of the Ramsar wetland management plan and report to the Minister about the wetland management plan at least

once every five years.



