Submission No 110

INQUIRY INTO PROPOSED AERIAL SHOOTING OF BRUMBIES IN KOSCIUSZKO NATIONAL PARK

Organisation: NSW Government

Date Received: 27 October 2023

NEW SOUTH WALES GOVERNMENT SUBMISSION

NSW Legislative Council Inquiry: Proposed aerial shooting of brumbies in Kosciuszko National Park

CONTENTS

KEY TERMS

NPW Act	NSW *National Parks and Wildlife Act 1974*
NPWS	NSW National Parks and Wildlife Service
SOP	Standard operating procedure
the park	Kosciuszko National Park
the plan	Kosciuszko National Park Wild Horse Heritage Management Plan (adopted under Part 2, *Kosciuszko Wild Horse Heritage Act 2018*)
the Act	NSW *Kosciuszko Wild Horse Heritage Act 2018*

Preamble

The NSW Government's recent submission to the Australian Senate Inquiry into the impacts and management of feral horses in the Australian Alps (**Attachment 1**), forms the basis of this submission to the NSW Parliament Inquiry: Proposed aerial shooting of brumbies in Kosciuszko National Park.

This submission updates information provided in the Australian Senate Inquiry submission and includes additional information relevant to the terms of reference of this NSW Parliament inquiry.

Please note that this document generally uses the term 'wild horse' for consistency with the *Kosciuszko Wild Horse Heritage Act 2018* (the Act).

1. Proposed amendment to allow aerial shooting as an available control method

On 23 October 2023, the Minister for the Environment adopted an amendment to the Kosciuszko National Park Wild Horse Heritage Management Plan (the plan) authorising aerial shooting as an available method to control wild horses in the park.

The proposed plan amendment was shared with the community for input, and a total of 11,002 submissions were received between 8 August and 11 September 2023.

Of the submissions which commented on aerial shooting, 82% expressed support for aerial shooting being included in the plan as an approved control method.

The adopted amendment to the plan means that the NSW National Parks and Wildlife Service (NPWS) is authorised to use aerial shooting, in addition to other control measures such as trapping and rehoming, and ground shooting, to reduce the wild horse population in Kosciuszko National Park (the park) to 3,000 horses by 2027.

If aerial shooting is used, NPWS will ensure that it is carried out to the highest animal welfare standards consistent with all legislative requirements and a standard operating procedure informed by independent advice.

A carcass management plan has been developed to minimise the impact of carcasses in the park landscape. This will apply to all forms of lethal wild horse control that result in carcasses being left in the park.

The adopted amendment does not change the requirement to recognise the heritage value of sustainable wild horse populations in the park and protect that heritage by retaining 3,000 wild horses in identified parts of the park. The specific focus of the adopted amendment is to provide an additional control method – namely aerial shooting – to assist in meeting this statutory target.

The Act makes provision for the Minister to amend an adopted plan. An adopted plan or an amended adopted plan must be carried out and given effect by the Secretary, Department of Planning and Environment. Operational implementation and delivery of the plan is undertaken by the National Parks and Wildlife Service (NPWS), within the Department.

2. Senate Inquiry report supports use of aerial shooting

The report of the Australian Senate Inquiry into the impacts and management of feral horses in the Australian Alps was released on 13 October 2023. The NSW Government provided a submission to the Inquiry and NSW officials appeared as witnesses at a public hearing.

The Senate Inquiry report recognises the impacts of feral horses and supports the use of aerial shooting as a management option if deemed appropriate under strict safety, scientific and humane practice.

The report includes 14 recommendations covering a range of issues. Key recommendations include:

- updating the Kosciuszko National Park Wild Horse Heritage Management Plan to allow the use of aerial shooting as one of the available feral horse control methods if deemed appropriate under strict safety, scientific and humane practices (Rec 12)
- listing the impacts of feral horses as a key threatening process under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), and preparation of a threat abatement plan (Recs 2 and 3)
- review of staff safety across jurisdictions to ensure staff are protected in their workplaces (Rec 14).

The Committee commented on issues relevant to the NSW parliamentary inquiry, including:

Aerial shooting

- *The historical record has shown that urgent reduction cannot be reached solely with methods previously relied upon, such as rehoming* (para 5.116)
- *Evidence has been clear that feral horse population control is urgent, and aerial shooting under strict conditions is the most humane and effective management option; the committee supports the use of aerial shooting as a management option if deemed appropriate under strict safety, scientific and humane practice* (para 5.117)

Population survey and methodology

- *The committee understands that the population estimates for the Australian Alps, and Kosciuszko National Park (KNP) to be backed [sic] by robust and peer-reviewed scientific methodology* (para 2.31)
- *The committee further notes, that regardless of the exact feral horse numbers in the Australian Alps, the demonstrable and visible negative impacts of the current population, and its upwards trend, warrant urgent action* (para 2.32)
- *The committee acknowledges differing views on estimates of feral horse population numbers in Kosciusko National Park (KNP) and the Australian Alps more broadly, however notes that best-practice scientific methodology clearly shows a worrying upwards trend over the past decade* (para 7.6).

The Senate Inquiry report, including a full list of recommendations is included at **Attachment 2**.

3. Current control methods (not including aerial shooting) will not reduce the wild horse population

Despite significant efforts by NPWS to increase the rate of wild horse removal since the plan was adopted in 2021, the control methods provided for in the current plan prior to the inclusion of aerial shooting as an option would not enable the target population of 3,000 wild horses to be reached by the 30 June 2027 deadline.

Control methods such as trapping and rehoming, removal to a knackery, and ground shooting are limited by several factors, including the size and terrain of the park, the mobility and distribution of wild horses, and a limited number of people willing and capable of rehoming wild horses.

The ability to conduct aerial shooting will:

- enable the existing legal obligation to reduce the population of wild horses to 3,000 horses by 30 June 2027 to be met
- achieve the population target within the required timeframe and deliver significant benefits for the environment and cultural heritage, reducing the extent of damage caused by wild horses and lowering the risk of extinction for several threatened species; this is compared to using currently authorised methods only, which would not reduce the wild horse population to 3,000 in the required timeframe
- best practice aerial shooting would deliver animal welfare outcomes comparable to or better than other available control methods
- result in fewer wild horses being killed overall because the population would be reduced within the required timeframe (June 2027) rather than being drawn out for several more years while population growth continues
- reduce the risks posed by wild horses to visitors in the park, including in high visitation campgrounds, walking tracks and on roads.

4. Reproductive control is not viable with current population

Reproductive control is not viable for the wild horse population in its current numbers and distribution in the park. A trial of reproductive control options will commence when the overall population is reduced to 3,000 wild horses.

5. All wild horses cannot be rehomed

Trapping and rehoming will continue as a control measure in the park. However, trapping and rehoming in many parts of the park is not practicable or consistent with implementing the highest animal welfare standards.

In 2022-23 only 513 horses were rehomed from the park. Demand for wild horses to be rehomed represents a very small number of those needing removal from the park in the next 4 years. There are not enough people with suitable experience willing to take wild horses of any colour, size, age or gender and that can also meet the required standard of care to look after them. Rehoming cannot be implemented at the scale required to reduce the population to 3,000 wild horses by 2027, as required by the Act and the plan.

All authorised methods, including trapping and rehoming, will be used as part of the ongoing implementation of the plan consistent with the highest animal welfare standards.

6. Number of wild horses removed from Kosciuszko National Park

Up to 30 September 2023 a total of 2531 wild horses have been removed from the park since implementation of the plan began in February 2022.

Numbers of wild horses (to 30 September 2023) removed from the park since 2002 are shown in **Table 1** below.

Financial year	Number removed
2002/03	49
2003/04	17
2004/05	35
2005/06	32
2006/07	115
2007/08	131
2008/09	96
2009/10	358
2010/11	307
2011/12	658
2012/13	587
2013/14	287
2014/15	389
2015/16	182
2016/17	235
2017/18	152
2018/19	0
2019/20	99
2020/21	711
2021/22	411
2022/23	1256
2023/24*	925 (*current to 30 Sept 2023)

Table 1: Wild horses removed from Kosciuszko National Park since 2002

Notes:

1. *No horses were removed in 2018/19 while steps were underway to establish and consult with the Wild Horse Community Advisory Panel and Scientific Advisory Panel following passage of the Wild Horse Heritage Act.*
2. *Small numbers of ill or injured horses may be euthanised in a given year but are not included in these figures prior to 2022/23.*

7. Improving wild horse population survey methodology

NPWS conducts regular surveys to estimate the number of wild horses in the park. Surveys use the international best practice method for reliably estimating the population of large mammals over wide geographic areas, known as distance sampling. More than 1,500 peer-reviewed scientific papers use distance sampling to estimate wild animal populations[1].

Information on the survey method used and survey results are publicly released to ensure full transparency. Results are peer-reviewed by independent experts from the CSIRO (Commonwealth Scientific and Industrial Research Organisation) and Queensland Department of Agriculture and Fisheries.

[1] References for distance sampling http://distancesampling.org/dbib.html

NPWS continues to consider all options for ongoing improvement in population survey design and implementation, to further narrow the confidence interval and provide even greater certainty of population estimates.

The regular annual survey of the wild horse population was conducted in October 2023. The survey design was adjusted after considering feedback from independent wildlife ecology experts.

In particular, the number of survey transects was increased to improve survey precision. A separate, future trial of distance sampling combined with the 'mark and recapture' method (MRDS), will be further considered for application in discrete locations when the population is substantially reduced.

Consistent with past surveys, the 2023 survey results and analysis will be peer reviewed by independent external experts. The final survey report will be publicly released.

An updated population estimate based on the October 2023 survey will inform future planning for wild horse control.

8. Animal welfare outcomes of aerial shooting

Best practice aerial shooting carried out by skilled, highly trained shooters under appropriate operating protocols delivers animal welfare outcomes that are comparable to or better than other control methods such as trapping or mustering, and transport to a knackery or shooting in trap yards. This is supported by current available scientific research literature (**Attachment 3**).

When undertaken, aerial shooting of wild horses in the park will be carried out to the highest animal welfare standards. This will include the development of a standard operating procedure informed by independent expert veterinary and animal welfare advice, and involve ongoing auditing by animal welfare experts. The NPWS standard operating procedures will meet Australian and NSW legislative requirements.

NPWS shooters are highly trained, accredited and competent, with hundreds of hours of experience in aerial shooting a range of feral animal species, including pigs, goats and deer. The latest state-of-the-art equipment is used in aerial shooting operations. Shooters must undertake specialised training and accreditation to undertake this work.

9. Public safety during aerial shooting programs

NPWS has extensive experience in delivering safe aerial shooting operations over many years. Since 2019-20 over 1,300 hours of aerial shooting have been occurring annually in national parks and reserves, including in high visitation locations close to urban areas such as Royal National Park.

Aerial shooting for pigs, deer and other feral animal species (but not horses) already safely occurs in Kosciuszko National Park and across the state, on both public and private lands.

Aerial shooting for wild horses will be subject to rigorous protocols to ensure public safety. This will include notifications and closures of areas to public access while operations are underway. This is consistent with current procedures for aerial shooting of feral animal species in national parks across NSW.

Resort precincts would not be closed because wild horse control would not be conducted in those areas.

10. Aerial shooting event in Guy Fawkes River National Park

The facts about the aerial shooting event in Guy Fawkes River National Park in October 2000were set out in a published independent report at that time by the then head of the Veterinary Clinical sciences at Sydney University.[2] That report concluded that:

- appropriate techniques were used
- the aerial shooting operation was undertaken humanely
- the operation was planned and carried out in a professional manner.

One charge of animal cruelty initiated by the RSPCA was dismissed.

11. Wild horse control in other national parks

Wild horses occur in a number of other national parks including Guy Fawkes River, Barrington Tops and Kanangra Boyd national parks,

NPWS implements wild horse control – currently trapping and rehoming - through approved management plans in Oxley Wild Rivers and Guy Fawkes River national parks.

12. Status of and threats to endangered species in the park

In 2018, the NSW Threatened Species Scientific Committee determined habitat degradation and loss by feral horses as a key threatening process, identifying more than 30 adversely affected New South Wales and Commonwealth-listed threatened species and communities. These are outlined in the committee's final determination.[3]

The Australian Government's Threatened Species Scientific Committee advises that feral horses may be the crucial factor increasing the risk of extinction for some nationally listed threatened species.

Impacts of feral horses in the park and alpine environments are documented in numerous scientific, peer-reviewed papers (see **Attachment 1**).

The Australian Senate Inquiry concluded that scientific evidence of impacts of wild horses is clear (see **Attachment 2**). The Inquiry committee commented that:

- *Feral horses could be the difference between survival and extinction for up to a dozen threatened species found only in the Australian Alps* (para 3.59)
- *The unmanaged presence of high populations of feral horses causes compounding damage, endangering native threatened species and increasing their risk of extinction* (para 3.63)

The Department of Planning and Environment website provides information on the conservation status and indicative distribution of threatened species.[4] The maps

[2] Report on the cull of feral horses in Guy Fawkes River National Park in October 2000 Executive Summary https://www.environment.nsw.gov.au/resources/pestsweeds/englishreport.pdf

[3] NSW Threatened Species Scientific Committee Final Determination listing habitat loss and degradation by feral horses as a key threatening process https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species/nsw-threatened-species-scientific-committee/determinations/final-determinations/2017-2018/habitat-degradation-and-loss-by-feral-horses-equus-caballus-key-threatening-process

[4] Profiles of threatened NSW species, populations and ecological communities https://www.environment.nsw.gov.au/threatenedspeciesapp/

provided with these profiles show where species are known or predicted to occur. When overlaid with a map of wild horse distribution in the park (see **Attachment 1**) these maps show where wild horses are known or potentially impacting threatened species habitat.

The park's threatened species often face multiple threats simultaneously, including feral deer, pigs, cats and foxes, weeds, altered fire regimes and the impacts of climate change. These threats can interact and compound the challenges of conserving threatened species. NPWS seeks to deal with multiple threats simultaneously through integrated management that incudes feral animal control, and world-leading conservation initiatives and ecological monitoring programs (see **Attachment 1**).

NEW SOUTH WALES GOVERNMENT SUBMISSION

Parliament of Australia Inquiry: Impacts and management of feral horses in the Australian Alps

CONTENTS

KEY TERMS

AIS	Assets of Intergenerational Significance (declared under Part 12A, NPW Act)
BC Act	NSW *Biodiversity Conservation Act 2016*
EPBC Act	Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
NPW Act	NSW *National Parks and Wildlife Act 1974*
NPWS	NSW National Parks and Wildlife Service
SOP	Standard operating procedure
the park	Kosciuszko National Park
the Plan	Kosciuszko National Park Wild Horse Heritage Management Plan (adopted under Part 2, *Kosciuszko Wild Horse Heritage Act 2018*)
Wild Horse Heritage Act	NSW *Kosciuszko Wild Horse Heritage Act 2018*

Preamble

This submission generally uses the term 'feral horse', consistent with the terms of reference for the Inquiry. However, it should be noted that the NSW *Kosciuszko Wild Horse Heritage Act 2018* (Wild Horse Heritage Act) uses the term 'wild horse'.

A. About Kosciuszko National Park

At around 690,000 hectares[1] Kosciuszko National Park is the largest national park in NSW, the most popular park in regional NSW and the state's 7th most visited park overall[2]. It is one of the most significant and iconic conservation reserves in Australia. The park occupies around 87% of the Australian Alps bioregion[3].

The NSW National Parks and Wildlife Service (NPWS) manages the park in accordance with the NSW *National Parks and Wildlife Act 1974* (NPW Act) and other relevant NSW and Commonwealth legislation. A regional advisory committee comprising community representatives (including Aboriginal persons), and persons with identified skills and expertise, is appointed under the NPW Act to provide advice to NPWS and the relevant NSW Minister on matters related to management of the park (and other parks in the region).

The NSW Government also works with Victoria, the ACT and the Commonwealth via the Australian Alps National Parks Cooperative Management Program (Alps Program) to promote collaborative actions to protect the nationally important values of the 1.6 million hectare collection of national parks and reserves across the Australian Alps. The Alps Program has supported and delivered significant research and guidance on wild horse management in the Australian Alps.

Kosciuszko National Park has significant and outstanding environmental, social and economic values. The park contains the continent's highest mountains, unique glacial landscapes, and unusual assemblages of plants and animals, a number of which are found nowhere else. The park encompasses significant water catchments, the principal seasonally snow-covered region in Australia and extensive tracts of forest and woodland.

The park contains habitat for a wide diversity of threatened species and ecological communities. Blue Lake in Kosciuszko National Park is recognised as a wetland of international importance under the Ramsar Convention on Wetlands and is protected under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The park is culturally significant and important to Aboriginal people as part of the broader Aboriginal cultural landscape. More than 1000 Aboriginal heritage archaeological sites protected under the NPW Act are recorded in the park, reflecting the Aboriginal occupation of the area for thousands of years. NPWS works closely with Aboriginal stakeholders in the management of the park.

Kosciuszko National Park has a strong association with Australia's pioneering and pastoral history. The park features homesteads, huts, stock yards and many other historic structures which were constructed for grazing, mining and recreation. The stories, legends and myths of the mountains and mountain lifestyles have been represented in literature, films, songs and

[1] derived from current computer based mapping information
[2] https://www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/park-management/park-visitor-survey
[3] https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Bioregions/bioregions-australian-alps.pdf

television shows. The park's cultural significance also embodies history associated with mining, surveying, timber harvesting, the Snowy Mountains hydro-electric scheme, scientific research, conservation and recreation.

Kosciuszko National Park is one of 11 parks and reserves across Victoria, NSW and the ACT that collectively comprise the Australian Alps National Parks and Reserves – a national heritage place listed and protected under the EPBC Act[4].

The park's natural and cultural values also have tremendous economic value, attracting millions of visitors annually. This supports local businesses, employment and economic activity. The park offers the only snowfield destinations in NSW, and the alpine resorts are recognised as areas of exceptional recreational significance.

National park visitation and management contributes $816.6 million of economic activity and more than 24,000 jobs to the Snowy Valleys and Snowy Monaro regions annually[5]. In addition, the provision of high quality water from the Australia Alps to the Murray-Darling Basin has previously been estimated to be worth $9.6 billion to the Australian economy[6].

B. The population of feral horses in Kosciuszko National Park has increased

Horses have been present in the Australian Alps since the 1830s when Europeans first explored the region. Horses were used for travel and moving stock. At times, domesticated horses would escape or were released during drought or to improve the quality of mobs, and feral horses became established in the mountains, including areas that are now within Kosciuszko National Park.

Feral horse numbers have fluctuated in the area over time, but for much of the last century horse numbers were kept low. Horses were captured for their meat or hide and stockmen would undertake sporadic control of horses by shooting, trapping and 'brumby running' and roping. Captured horses were used as riding, hack or pack horses. Horse roping or brumby running was also undertaken for recreation and to source horses for events such as rodeos.

Information on the number of feral horses across the Australian Alps and in Kosciuszko National Park has significantly improved over time. While design and scope have been adjusted in response to survey technique improvements and to focus specifically on Kosciuszko National Park, the results consistently demonstrate a clear and significant expansion in the size and distribution of feral horses across survey periods.

The first standardised surveys of feral horse numbers were funded by the Alps Program. Surveys were completed in 2001, 2003 and 2009 in NSW and Victorian national parks within the Australian Alps. In that period, the population estimate of feral horses in the Alps increased from 5,200 (standard error 1,643; co-efficient of variation 31.6%) to 7,679 (standard error 1,950; co-efficient of variation 25.4%). As those surveys included data collected from Kosciuszko National Park, estimates of feral horses in the park were also able to be extrapolated, showing that numbers in the park increased from 2,900 to 4,237 between 2001 and 2009.

Aerial surveys of the Australian Alps were also completed in 2014 and 2019 using updated international best practice methods for population surveys of large animals from the air. During this period the feral horse population estimate for the Alps grew from 9,187 (co-efficient of

[4] https://www.dcceew.gov.au/parks-heritage/heritage/places/national/australia-alps
[5] derived from data obtained for the economic analysis of the value of NSW national parks – refer to Attachment A for relevant publications
[6] https://theaustralianalpsnationalparks.org/wp-content/uploads/2014/01/catchmentrpt2011_summary.pdf

variation 19%) to 25,318 (co-efficient of variation 12.3%). Using data extrapolated from survey blocks within Kosciuszko National Park, the estimate of feral horses in the park increased from 6,150 in 2014 to 19,000 in 2019 (95% confidence interval of 14,561 to 25,037 feral horses).

In 2020 and 2022, specific aerial surveys were undertaken for Kosciuszko National Park, using the same best practice methods. Both the 2020 and 2022 surveys of Kosciuszko National Park were peer-reviewed by CSIRO and the Queensland Department of Agriculture and Fisheries.

The 2020 survey estimated the feral horse population in Kosciuszko National Park to be 14,380, with the 95% confidence interval being 8,798 to 22,555 horses.

The 2022 survey found the best estimate for the feral horse population in Kosciuszko National Park is 18,814, with a 95% confidence interval of 14,501 to 23,535. Based on the most recent survey in 2022 this means we can be very confident that the population within Kosciuszko National Park is currently at least 14,501 and could be up to 23,535 wild horses.

Other key findings of the 2022 survey of Kosciuszko National Park include:

- the highest density of horses is in the north of the park
- there was an increase in the ratio of foals to adult horses in 2022 compared to the numbers observed in 2020
- seasonal conditions, such as drought and bushfires, may influence the population size and distribution across the park.

Links to the 2020 and 2022 survey reports are provided in Attachment A to this submission. Information on previous surveys is available on the website of the Alps Program (a link is also provided in Attachment A).

C. The impact of feral horses on ecological, cultural and recreational values is significant

Feral horses occur across 53% of Kosciuszko National Park (Attachment B) and are causing significant, adverse and ongoing impacts to the natural, cultural and recreational values of the park. These impacts present risks to the long-term survival of threatened species and ecological communities and overall catchment and ecosystem health in the park. The key impacts include:

- loss and disturbance of native vegetation by trampling, soil displacement and grazing
- increased run-off associated with loss of riparian vegetation, bank damage, soil compaction, and erosion and sediment loss, which adversely affects water quality and aquatic life (such as the critically endangered stocky galaxias [*Galaxias tantangara*]).
- degradation of native plant and animal habitat, including of EPBC Act listed species such as the Broad-toothed rat (*Mastacomys fuscus*).

Impacts are recognised in the:

- listing of habitat degradation and loss by feral horses as a Key Threatening Process in Schedule 4 of the NSW *Biodiversity Conservation Act 2016* (BC Act)
- 2016 report of the Kosciuszko National Park Independent Technical Reference Group
- 2020 report of the Kosciuszko Wild Horse Scientific Advisory Panel
- 2021 Kosciuszko National Park Wild Horse Heritage Management Plan.

Feral horse damage extends to various historic sites in the park, and to Aboriginal cultural heritage values. Aboriginal peoples have also expressed concern about the negative impacts of feral horses on Aboriginal cultural landscapes. Aboriginal stakeholders participated in

development of the 2021 Kosciuszko National Park Wild Horse Heritage Management Plan (the Plan), including via representation on the statutory Wild Horse Community Advisory Panel, and continue to have an important role in advising on implementation of the Plan.

Negative interactions between visitors and problem or aggressive feral horses have been recorded on roads, and in campgrounds and other visitor use areas. Feral horses pose visitor safety risks and can negatively impact on some of the park's recreational values.

Impacts of feral horses in the park and alpine environments, together with research on control options, are documented in numerous scientific, peer-reviewed papers (see Attachment A).

The impact of feral horses is itself significant. In addition, the impacts of feral horses interact with the impacts from other threats such as feral deer and pigs, feral cats and foxes, weeds and altered fire regimes. NPWS is seeking to deliver effective, integrated management of all of these threats (see, for example, section F below).

D. Management of feral horses in Kosciuszko National Park

From the mid-late 1800s horses were captured for their meat or hide and stockmen would undertake sporadic control of horses by shooting, trapping and 'brumby running' and roping. These practices had ceased or significantly declined by the 1960s (authorised brumby running finally ended in the 1980s).

Limited control of horses by the NSW Government in Kosciuszko National Park commenced in the early 1970s, but only at a very small-scale. The management framework for feral horse control was formalised in a 2008 Horse Management Plan (under the 2006 Kosciuszko National Park Plan of Management). Neither ground shooting nor aerial shooting was undertaken under the 2008 plan. A 2016 Kosciuszko National Park Draft Wild Horse Management Plan was publicly exhibited but not finalised.

The Wild Horse Heritage Act now provides the statutory framework for management of feral horses in the park. The Act requires the preparation and implementation of a Wild Horse Heritage Management Plan (the Plan), which was adopted in November 2021 by the previous NSW Government. Development of the Plan involved consultation with the community, Wild Horse Community Advisory Panel and Scientific Advisory Panel.

The NSW Government strongly supports NPWS actions to implement the Plan and has committed to reducing the feral horse population in the park as quickly as possible.

The Wild Horse Heritage Act imposes a statutory obligation on NPWS to implement the Plan. Accordingly, NPWS is now legally required to reduce the feral horse population in Kosciuszko National Park to 3000 horses by 30 June 2027. In particular, the Plan:

- requires a reduction in the feral horse population of 84% from 2022 levels (to 3,000) by 30 June 2027
- requires a reduction in the area where horses occur from 53% to 32% of the park
- authorises ground shooting of wild horses in the park for the first time.

As required by the Wild Horse Heritage Act, the Plan:

- identifies the heritage value of sustainable wild horse populations within identified parts of the park
- sets out how those heritage values will be protected while ensuring other environmental values of the park (including values identified in the plan of management for the park) are also maintained.

The Plan divides the park into three distinct management areas:

- **Wild horse retention areas (32% of the park)** – where horses will be retained because the populations represent wild horse heritage values. The total population across the wild horse retention management areas will be reduced to 3000 horses by 30 June 2027.
- **Wild horse removal areas (21% of the park)** – all wild horses will be removed from these areas and the population maintained at zero.
- **Wild horse prevention areas (47% of the park)** – these areas do not currently contain wild horses. They will be maintained at a population of zero.

Between July 2022 and Dec 2022, 525 horses were removed – this represents an annualised rate of removal of more than 1,000 horses. While activities under the Plan during 2022 involved a "phase in" stage of implementation, it nevertheless enabled almost a quadrupling of the level of horse removal, compared to the average level of removal over the previous 20 financial years. Additional resources from 2023 will help further accelerate the rate of removal.

Numbers of feral horses removed from Kosciuszko National Park since 2002 are shown in Table 2 below.

Financial year	**Number removed**
2002/03	49
2003/04	17
2004/05	35
2005/06	32
2006/07	115
2007/08	131
2008/09	96
2009/10	358
2010/11	307
2011/12	658
2012/13	587
2013/14	287
2014/15	389
2015/16	182
2016/17	235
2017/18	152
2018/19	0
2019/20	99
2020/21	711
2021/22	411
*2022/23**	525 (*current to 31 December 2022)

Table 2 Feral horses removed from Kosciuszko National Park since 2002

Note No horses were removed in 2018/19 while steps were underway to establish and consult with the Wild Horse Community Advisory Panel and Scientific Advisory Panel following passage of the Wild Horse Heritage Act.

There are significant challenges in implementation of the Plan. These include: conducting operations across a difficult and remote landscape (presenting logistical, access and safety challenges); the size, dispersed distribution and mobility of the existing feral horse population; and the limitations inherent in application of the approved methods at the scale required to meet the legal obligation to reduce the population to 3,000 horses by 30 June 2027. Recognising the control of horses in Kosciuszko National Park raises a unique set of

challenges for a program of its kind, NPWS will keep under ongoing review whether, and to what extent, there is a risk that the approved control methods cannot be implemented in a manner and at the scale required to discharge this legal obligation.

The effectiveness of the Plan in meetings its objectives – broadly described as protecting wild horse heritage values while also maintaining the environmental values of the park – will be kept under ongoing review. In particular, the ecological health of Kosciuszko National Park will be measured and reported regularly as part of a major investment in ecological health monitoring across NSW (refer section E below).

The Plan anticipates a formal review after 30 June 2027.

Community engagement

Development of the Plan was informed by advice from the Wild Horse Community Advisory Panel established under the Wild Horse Heritage Act, a Scientific Advisory Panel, and extensive community consultation over many years, including public exhibition of two draft plans (2016 and 2021).

The Wild Horse Community Advisory Panel continues to provide ongoing advice on matters relating to identifying the heritage value of, and managing, sustainable wild horse populations in Kosciuszko National Park. The Panel includes Aboriginal and local community representation, together with persons of identified expertise and experience.

Control methods

Animal welfare and visitor and staff safety are core components of the approach set out in the Plan. Control measures are undertaken in strict compliance with standard operating procedures that consider advice from the RSPCA NSW and animal welfare experts, and are consistent with relevant legislation, policy and guidelines.

Non-lethal and lethal control methods are available under the Plan, including in the retention areas, and are required to achieve the Plan's targets. Control options are subject to strict conditions which ensure the highest animal welfare standards are met.

As indicated above, ground shooting is a control method available under the Plan. Prior to the adoption of the Plan, ground shooting of feral horses had never been carried out by NPWS in Kosciuszko National Park as a control method.

The Plan notes that if undertaken in accordance with best practice, aerial shooting can have the lowest negative animal welfare impacts of all lethal control methods. That is supported by previous conclusions of the Independent Technical Reference Group (2016). In addition to better animal welfare outcomes, other benefits of aerial shooting may include improved environmental outcomes (through more effective control); lower cost to taxpayers; and enhanced safety of NPWS staff.

However, the Plan further notes that NSW Government policy for the last 20 years has been no aerial shooting of horses in NSW national parks. That policy has not changed under the current Plan. The basis for this position in the Plan was that implementation of an aerial shooting program presented a risk that could result in loss of the social licence to remove feral horses from the park.

As indicated above, NPWS will keep under ongoing review whether, and to what extent, there is a risk that the approved control methods cannot be implemented in a manner and at the scale required to discharge the legal obligation to reduce the horse population to 3,000 horses by 30 June 2027.

Welfare and safety reviews in 2022

Initial evaluations of the Plan's implementation, with a focus on safety and animal welfare, have been completed. Recommendations for additional measures to enhance welfare and safety outcomes have been accepted. Links to the evaluation report summaries are included in Attachment A to this submission.

Animal welfare

The independent evaluation of animal welfare outcomes associated with the Plan's implementation aimed to determine: whether control operations were occurring in accordance with the Plan; whether animal welfare considerations are being adequately managed and addressed; and any recommendations.

The evaluation concluded that control operations are occurring in accordance with the Plan and that animal welfare considerations are being adequately managed and addressed. The evaluation observed that:

- **on NPWS standard operating procedures (SOPs)**
  - "the procedure for development was rigorous, and the SOPs prioritize the maximising of animal welfare outcomes"
  - "the development of SOPs is rigorous and complies with the Plan"
  - "The Park-specific SOPs adhere to the standards in already developed SOPs, with equivalent or higher ethical standards"
  - "SOPs are rigorously followed by personnel, and all are familiar with the details of the SOPs, and all personnel had welfare as a priority".
- **on currently excluded methods**
  - "Aerial shooting can have low negative welfare outcomes (ie good welfare outcomes) when conducted in accordance with best practice"
  - "given the potential for welfare outcomes to be improved with the method [*i.e. aerial shooting*], the feasibility and public acceptability should continue to be assessed, particularly in reviews of the plan".
- **on passive trapping and transportation**
  - key factors "combined to result in welfare outcomes that were better than predicted by the Animal Welfare Assessment"
  - "The diligence undertaken by NPWS to ensure continued welfare of the horses is as prescribed by the SOP, and at a higher standard than legally required, which is appropriate".
- **on ground shooting**
  - "The SOP has been followed in detail, and the implementation has resulted in better than expected welfare outcomes… verified by a highly skilled independent observer".
- **on operational success**
  - "The current rate of removal is sufficient to have an impact on current population size, and seems scalable to the higher numbers required to reduce population size."
- **on stakeholder engagement**
  - "current engagement with stakeholders to improve animal welfare outcomes is appropriate and includes highly skilled experts in animal welfare".

Operational safety

The NPWS review of operational safety during implementation of the Plan concluded that:

- "NPWS have established work practices and processes to manage worker and public safety"
- "Further work will be required to ensure all elements of the safe systems of work once completed for the new operations are established and functioning as intended"
- "there is no immediate risk to public safety given shooting operations are carried out by trained shooters in areas less frequented by park users"
- "NPWS has developed a series of standard operating procedures to guide wild horse management consistent with the plan".

The review also recognised the risk posed by members of the community placing themselves in shooting areas with the aim of intentionally disrupting operations and or using social media to harass those involved with the operations (see below).

Staff safety

NPWS has a legal responsibility to provide a safe work place and prioritises the welfare of staff. Unfortunately, views and opinions on feral horse management have sometimes been expressed to NPWS staff in ways that are not respectful, productive or in line with acceptable community standards. A zero-tolerance approach is taken to any interactions that are considered harassing or threatening[7].

Various measures have been taken to protect the safety of NPWS staff involved in feral horse management, including:

- risk assessment and safety audit of all NPWS managed premises
- security improvements to worksites and updated emergency procedures
- regular engagement with NSW Police
- non-release of operational program details
- completion of Job Safety Analysis (JSA) prior to control operations
- provision of mental health and wellbeing support.

E. Measuring and reporting on the ecological health of Kosciuszko National Park

NPWS is implementing a ground-breaking ecological health monitoring program that aims to significantly enhance the health of NSW national parks by tracking key ecological indicators and using that data to refine management actions.

In Kosciuszko National Park, activities to measure and report on the ecological health of the park include:

- surveillance monitoring at 125 sites stratified by vegetation type and fire history across the park, which includes 500 camera traps (see map at Attachment C)
- targeted monitoring designed for specific species, vegetation communities and/or ecological processes to derive more detailed information on their park wide occurrence and how their population and/or condition may change over time. This monitoring includes (or will include, as surveys are designed and rolled out):
    - important threatened communities, such as alpine bogs and fens

[7] Respectful engagement in feral horse management - https://www.environment.nsw.gov.au/topics/animals-and-plants/pest-animals-and-weeds/pest-animals/wild-horses/kosciuszko-national-park-wild-horse-management

  - species that have small distributions and are iconic, or threatened, such as the Guthega skink (*Liopholis Guthega*) and Anemone Buttercup (*Ranunculus anemoneus*)
  - water quality attributes, including for alpine glacial lakes, providing information on park wide catchment health.
- measuring the extent of threats including fire, weeds and feral animals, including
  - monitoring of feral animals, designed to track the population or density of all significant feral animals such as cats, deer and horses (other metrics may be used in the short term)
  - monitoring to track the area of occurrence for ecologically significant weeds
  - key metrics on the impact of fire will be measured and reported on, such as fire extent, frequency and intensity across the park and in selected vegetation types.

This represents one of the most comprehensive ecological monitoring programs for any national park in Australia.

Outcomes from monitoring will be considered during implementation and review of the Plan.

F. Other measures to protect threatened species in Kosciuszko National Park

Feral animal control
Across NSW, NPWS is delivering the largest feral control program in its history. This includes:

- more than doubling aerial shooting
- a fivefold increase in aerial baiting.

In Kosciuszko National Park and the surrounding region, NPWS removed more than 10,000 feral animals, including 6,800 deer, in the three years to the end of 2022. Of those 10,000 feral animals, over 87% were removed via aerial shooting.

NPWS aerial shooting of pigs and deer is conducted in accordance with a framework developed and led by NPWS, working in collaboration with Local Land Services and Department of Primary Industries, which provides strong governance, accreditation, and strict procedural guidance to meet the highest animal welfare standards.

Shooters and pilots receive comprehensive training and are assessed against nationally recognised units of competency. To maintain accreditation, shooters must participate in 20 hours of shooting each year and successfully complete biennial reaccreditation. All aircraft and personnel involved in aerial shooting must be accredited for the work.

Assets of Intergenerational Significance
Under the NPW Act, Assets of Intergenerational Significance (AIS) can be declared to strengthen protections for natural or cultural areas of exceptional value that warrant special protection, including dedicated management measures[8].

A conservation action plan (CAP) must be prepared and implemented for each declared AIS. For threatened species declared AIS, the CAP sets out:

- key risks to the declared area of habitat for the threatened species
- priority actions to reduce risks to this important habitat, such as dedicated feral animal control or fire management, or the establishment of insurance populations
- actions to measure and report on the health of the threatened species.

[8] https://www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/park-management/assets-of-intergenerational-significance

In Kosciuszko National Park, AIS declarations have been made across 49 sites so far, protecting important habitat for 14 threatened species including the northern corroboree frog (*Pseudophryne pengilleyi*), the southern corroboree frog (*Pseudophryne corroboree*), the mountain pygmy-possum (*Burramys parvus*) and the smoky mouse (*Pseudomys fumeus*).

Zero Extinctions framework

NPWS is the first national parks agency in Australia to adopt a zero-extinction target and is committed to creating permanent strongholds for the conservation and recovery of threatened species. The Zero Extinctions framework outlines a series of actions designed to secure and restore threatened species populations on the national park estate.

In Kosciuszko National Park, measures to support the zero extinctions target include:

- feral animal control (see above)
- statutory protection of the most critical habitat through declaration of AIS and the preparation of CAPs
- implementation of Saving our Species initiatives, the NSW Government's flagship threatened species conservation program which is working to increase the number of threatened species that are secure in the wild in New South Wales and control threats to these.

G. Commonwealth role

The Australian Government provided $1.1 million to assist feral horse removal in Kosciuszko National Park following the 2019-20 bushfires.

The NSW Government looks forward to continuing to work in partnership with the Australian Government to address the impacts of feral horses. Additional financial support from the Australian Government would assist in accelerating removal of horses and the protection of park values, including matters of national environmental significance listed under the EPBC Act.

ATTACHMENT A – SUPPORTING INFORMATION

Australian Alps National Parks Cooperative Management Program (Alps Program)

The Alps Program maintains an extensive publicly accessible collection of publications and research about the Australian Alps, including work undertaken with the support and sponsorship of the Australian Alps Liaison Committee.

Relevant materials may be found at: https://theaustralianalpsnationalparks.org/the-alps-partnership/publications-and-research/

Plans, reports and process

Aboriginal cultural values report 2021 (prepared to support development of the 2021 Wild Horse Heritage Management Plan)

- https://www.environment.nsw.gov.au/research-and-publications/publications-search/aboriginal-cultural-values-report

Australian Alps bioregion

- https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/bioregions/bioregions-of-nsw/australian-alps

Australian Alps Cooperative Management Program (a partnership between the NSW, Victoria, ACT and Australian Governments)

- https://theaustralianalpsnationalparks.org/

Community Wild Horse Advisory Panel (a statutory advisory body established under the Kosciuszko Wild Horse Heritage Act 2018)

- https://www.environment.nsw.gov.au/topics/animals-and-plants/pest-animals-and-weeds/pest-animals/wild-horses/kosciuszko-national-park-wild-horse-management/advisory-panels
- Final report of the Kosciuszko Wild Horse Community Advisory Panel (2020)
    1. note this report was prepared by the first Wild Horse Community Panel to support preparation of the 2021 Wild Horse Heritage Management Plan
    2. appointments to the current Panel were finalised in December 2022.

Independent Technical Reference Group 2016 (a non-statutory body established to provide advice to support development of the draft 2016 Wild Horse Heritage Management Plan, which did not proceed to adoption)

- Final report of the Independent Technical Reference Group

Key threatening process listing under NSW Biodiversity Conservation Act 2016

https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Scientific-Committee/Determinations/2018/habitat-degradation-loss-feral-horses-equus-caballus-final-determination.pdf

Kosciuszko National Park Plan of Management 2006 (this is the statutory plan for management of the whole park)

- https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Parks-reserves-and-protected-areas/Parks-plans-of-management/kosciuszko-national-park-plan-of-management-210174.pdf

Kosciuszko Wild Horse Heritage Management Plan 2021 (this is the statutory plan for the management of feral horses in the park)

- https://www.environment.nsw.gov.au/research-and-publications/publications-search/2021-kosciuszko-national-park-wild-horse-heritage-management-plan
  - Key facts

- Evaluation of implementation of the Kosciuszko Wild Horse Heritage Management Plan 2022
- *Review of animal welfare* - https://www.environment.nsw.gov.au/research-and-publications/publications-search/evaluation-of-the-implementation-of-the-kosciuszko-national-park-wild-horse-heritage-plan-2021
- *Review of staff and visitor safety* **-** https://www.environment.nsw.gov.au/research-and-publications/publications-search/review-of-staff-and-visitor-safety-summary-report

Kosciuszko feral horse population surveys

- https://www.environment.nsw.gov.au/topics/animals-and-plants/pest-animals-and-weeds/pest-animals/wild-horses/kosciuszko-national-park-wild-horse-management/tracking-the-wild-horse-population
- A survey of the wild horse population (November 2022)
- The results of a survey of the wild horse populations in the Kosciuszko National Park (October-November 2020)

Kosciuszko Wild Horse Scientific Advisory Panel 2020 (a non-statutory body established to provide advice to support development of the 2021 Wild Horse Heritage Management Plan)

- Final report of the Kosciuszko Wild Horse Scientific Advisory Panel

National Cultural Heritage Values Assessment and Conflicting Values Report (a report prepared to support development of the draft 2016 Wild Horse Heritage Management Plan, which did not proceed to adoption)

- https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Pests-and-weeds/Kosciuszko-wild-

horses/national-cultural-heritage-values-assessment-conflicting-values-report-2015.pdf

Research (not definitive - a sample of recent examples)

- An assessment of feral horse impacts on treeless drainage lines in the Australian Alps (2019)
- Assessment of animal welfare for helicopter shooting of feral horses (2017)
- Could current fertility control methods be effective for landscape-scale management of populations of wild horses (Equus caballus) in Australia? (2018)
- Drones are an effective tool to assess the impact of feral horses in an alpine riparian environment (2022)
- Feral horse activity reduces environmental quality in ecosystems globally (2020)
- Feral-horse impacts on corroboree frog habitat in the Australian Alps (2019)
- Feral horses (Equus caballus) increase suspended sediment in subalpine streams (2021)
- Horse Activity is Associated with Degraded Subalpine Grassland (2018)
- Impacts of feral horses and deer on an endangered woodland of Kosciuszko National Park (2019)
- Impacts of feral horses in the Australian Alps and evidence-based solutions (2019)
- Modelling horse management in the Australian Alps (2019)
- Monitoring the impact of feral horses on vegetation condition using remotely sensed fPAR: A case study in Australia's alpine parks (2017)
- The occurrence of the Broad-toothed Rat Mastacomys fuscus in relation to feral Horse impacts (2019)

Research on the economic value of NSW national parks

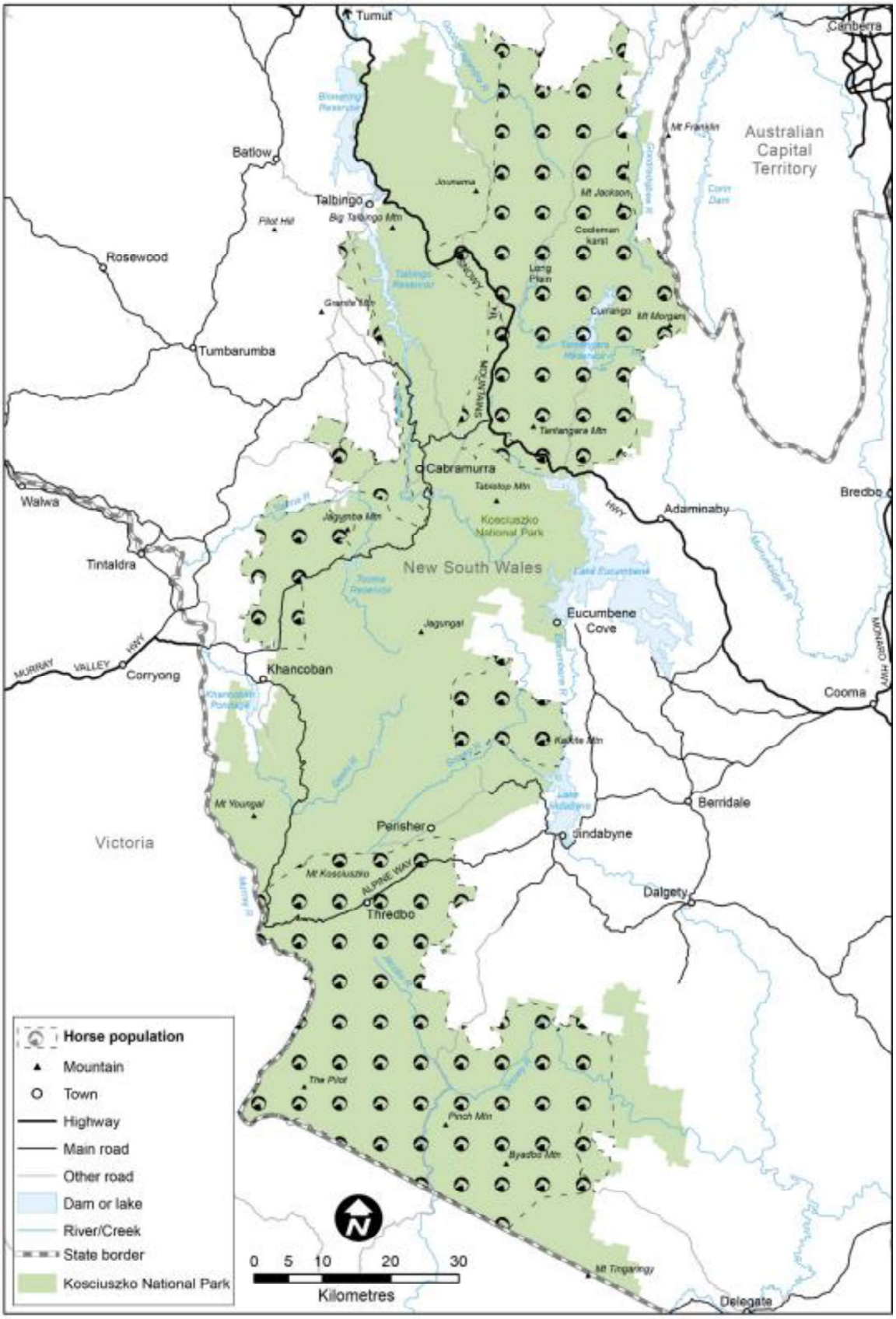
Heagney E.C., Kovac M., Fountain J., Conner N., (2015) Socio-economic benefits from protected areas in south eastern Australia; *Conservation Biology*, 29(6):1647-57 https://www.researchgate.net/publication/280118185_Socio-economic_benefits_from_protected_areas_in_southeastern_Australia

Heagney, E.C., Rose, J.M., Ardeshiri, A., Kovac, M., (2017) Optimising recreation services from protected areas – Understanding the role of natural values, built infrastructure and contextual factors. *Ecosystem Services*, 31(Part C):358-370 https://www.sciencedirect.com/science/article/pii/S2212041617303881

Heagney, E.C., Rose, J.M., Ardeshiri, A., Kovac, M., (2018) **The economic value of tourism and recreation across a large protected area network**, *Land Use Policy* Nov;88: Article 104084 https://www.sciencedirect.com/science/article/pii/S0264837718308615

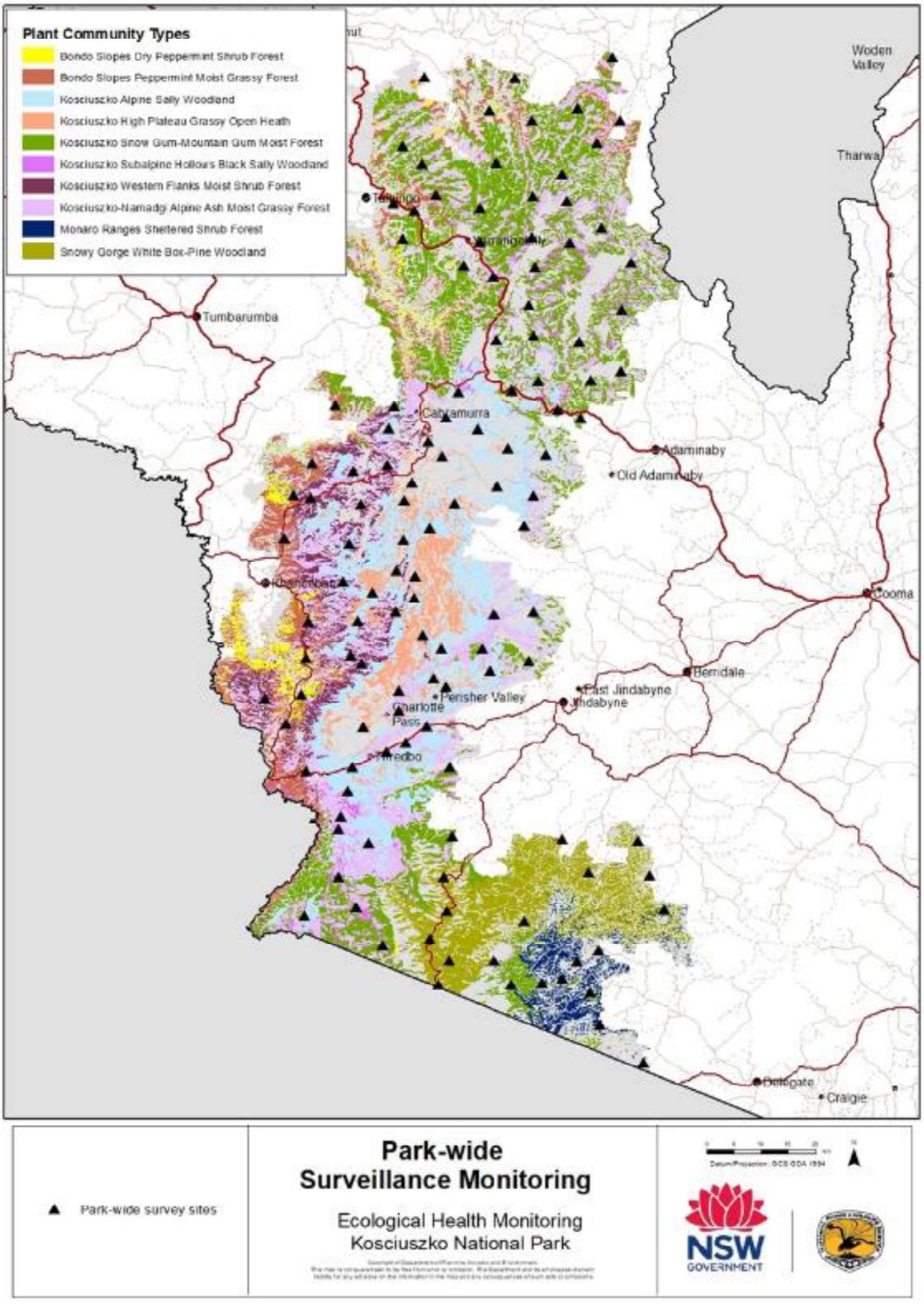
Pelletier, M-C, Heagney, E.C., Kovac, M., (2020, in press) From valuation to accounting: recreational services from NSW national parks, *Ecosystem Services*

ATTACHMENT B – KOSCUISZKO NATIONAL PARK WILD HORSE DISTRIBUTION



Source: Kosciuszko National Park Wild Horse Heritage Management Plan

ATTACHMENT C – ECOLOGICAL HEALTH MONITORING SITES



The Senate

Environment and Communications References Committee

Impacts and management of feral horses in the Australian Alps

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Recommendation 1

7.31 The Committee recommends that the Department of Climate Change, Energy, the Environment and Water, in collaboration with its state and territory counterparts, undertake an impact and population assessment of feral horses at the national level.

Recommendation 2

7.35 The Committee recommends that the Minister for Environment and Water list habitat degradation, competition and disease transmission by feral horses as a Key Threatening Process under the Environment Biodiversity and Conservation Act 1999.

Recommendation 3

7.36 The Committee recommends that, after the Key Threatening Process is in place, the Minister for the Environment issue a Threat Abatement Plan as soon as is practicable, in order to reduce the threat of feral horses in the Australian Alps.

Recommendation 4

7.39 The Committee recommends that in partnership with the states and territory, the Murray-Darling Basin Authority undertake work to measure, monitor and record the quality of Basin water resources in and flowing from the Australian Alps, with particular reference to the impact of feral horses.

Recommendation 5

7.40 The Committee recommends that in partnership with the states and territory, the Murray-Darling Basin Authority undertake an immediate assessment of the condition of the catchment of the Hume Reservoir, with particular reference to the impact of feral horses.

Recommendation 6

7.44 The Committee recommends that the Australian Government take a lead role to achieve cooperation between state and territory governments in the formulation of management plans for National Heritage listed places, including in the Australian Alps National Heritage place. The Australian Government should establish agreed mechanisms to resolve disputes between jurisdictions to ensure that National Heritage values are being protected.

Recommendation 7

7.46 The Committee recommends that the EPBC Regulations, which set out the management principles for National Heritage listed places, be amended to include reference to international obligations.

Recommendation 8

7.49 The Committee recommends that the National Heritage provisions of the EPBC Act be amended to include that regard must be given towards Target 6 as adopted in the Kunming-Montreal Global Biodiversity Framework.

Recommendation 9

7.51 The Committee recommends that the Australian Government commission urgent monitoring to assess the current status of EPBC Act-listed species, ecological communities and migratory species in the Australian Alps.

7.52 Further, the Australian Government should work with the NSW, Victorian and ACT governments to urgently implement recovery plans to better protect critically endangered species such as the Stocky Galaxias and Southern Corroboree Frog.

Recommendation 10

7.57 The Committee recommends that the Australian Government increase funding to the states and territory, who are the primary land managers of the Australian Alps National Parks and Reserves, to enable them to ensure National Heritage values are upheld and threatened species are protected from extinction.

Recommendation 11

7.60 The Committee recommends that the Australian Government expand its partnership with FeralScan to develop a platform for the monitoring and logging of feral horses.

Recommendation 12

7.62 The Committee recommends that the NSW Government update the Kosciuszko National Park Wild Horse Heritage Management Plan to allow the use of aerial shooting as one of the available feral horse control methods if deemed appropriate under strict safety, scientific and humane practices.

Recommendation 13

7.66 The Committee recommends that the Australian Alps Liaison Committee membership include Indigenous representation, to ensure that Indigenous knowledge and culture is properly considered at each stage of its processes.

Recommendation 14

7.70 The Committee recommends that the NSW, Victoria and ACT Governments urgently review the safety of staff working in and around national parks, and work with local law enforcement agencies to ensure that staff are properly protected in their workplaces.

Executive Summary

The Australian Alps are a national icon. On the driest inhabited continent on earth, renowned for its extensive coastlines and vast desert interior, the Alps are recognised as an exceptional alpine environment. The region contains substantial heritage values ranging from specialised ecosystems to unique flora and fauna; from millennia of Indigenous cultural heritage to more recent European pioneering history and culture.

Despite this, the heritage-listed Australian Alps are under pressure from significant threats. Key among these is the threat posed by feral horses. Along with other introduced species, feral horses have caused significant damage to this fragile environment. There are an estimated 25,000 feral horses impacting the broader Australian Alps region.[1] They freely cross state borders, and the impact they have on the environment spreads well beyond their immediate range, including polluting waterways.

The Australian Alps National Parks and Reserves are an incredibly fragile, precious ecosystem supporting critically endangered and vulnerable native plants and animals. Many of these species are not found anywhere on the planet other than the Australian Alps, and some are at high risk of imminent extinction. Feral horses directly impact 12 animal species that occur in the Australian Alps, and which are listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as being threatened with extinction. It has been made clear that if feral horse populations are not urgently managed, there is a real risk of losing this unique landscape and the native species that call it home.

While the Australian Alps National Parks and Reserves are listed federally as a National Heritage place (Australian Alps National Heritage Place), the individual parks and reserves which make it up are state land and are managed through a Memorandum of Understanding that provides states and territory with primary responsibility for management of the parks. This has perpetuated legislative and policy inconsistencies across jurisdictions regarding the management of feral horses and their impact on the unique heritage values of the Australian Alps. This will require collaborative action from Commonwealth, NSW, Victorian and ACT Governments to resolve.

The Commonwealth Government has obligations through the EPBC Act to protect listed National Heritage places and threatened species and communities. Further, it

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1 Dr Stuart Cairns, *Feral Horses in the Australian Alps: the Analysis of Aerial Surveys Conducted in April-May, 2014 and April-May 2019*, p. 1.

has commitments through binding international treaties such as the Convention on Biological Diversity (CBD). Despite this, previous Commonwealth Governments have had minimal engagement in the management of feral horses, and the current EPBC Act has ultimately so far failed to protect the national heritage value of the Australian Alps, including critically endangered species, in spite of its National Heritage listing and international obligations.

While there are identified limitations on the Commonwealth Government to act on state land, as well as identified shortcomings of the EPBC Act which should be addressed through upcoming reform, it is clear there is still a role for Commonwealth leadership in addressing the damage of feral horses in the Australian Alps.

The current Commonwealth Environment Minister, the Hon Tanya Plibersek MP, recently acknowledged her love for horses but said 'they don't belong in our national parks'. In June 2023, the Minister, along with her NSW, Victorian and ACT counterparts, re-established the Alps Ministerial Council in a collaborative effort to act against ecological threats and integrated future planning for the alpine region. This represents an important resumption of much needed cooperation to properly manage the Australian Alps.

The Albanese Government has also set a target of preventing any new extinctions of plants and animals by 2032. In order to achieve this target, key threats to native species must be managed. The committee heard that feral horses are a significant threat to species such as the critically endangered Southern Corroboree Frog, Stocky Galaxias fish and other unique alpine species. Action to manage feral horse populations is urgent in preventing extinction of these species.

Further, the Australian Alps were identified as one of twenty 'priority places' across the nation in the Australian Government's Threatened Species Action Plan. The plan involves targeted actions from 2022 to 2027 that may include elimination of particular invasive pests or weeds, implementation of First Nations ecological management practices and habitat restoration.

In order to preserve the fragile and unique Australian Alps, cooperation between the Commonwealth and state and territory governments is vital to protect and manage this National Heritage listed area. This will require collaboration to ensure state management is consistent with natural heritage values.

In 2018, the former NSW Government brought in the NSW *Kosciuszko Wild Horse Heritage Act* (NSW Wild Horse Heritage Act). By providing protections for feral horses, this Act poses significant limitations to protecting national heritage values of the region including highly vulnerable threatened species. Legislative

inconsistencies between the Commonwealth and NSW were identified as a significant complicating factor for the overall effective management of feral horses in the Australian Alps National Heritage place. The NSW Act has allowed the existing population of feral horses to grow exponentially by limiting the NSW Parks and Wildlife Service's ability to effectively manage them.

The current NSW Government has acknowledged that it needs to reassess its management methods in order to prevent further heritage, habitat and biodiversity degradation. The committee heard that only 5 to 10 NSW Government employees work on the management of approximately 19,000 feral horses in Kosciuszko National Park.

During the course of this inquiry, the NSW Government announced a public consultation on allowing aerial shooting of feral horses in Kosciuszko National Park in order to meet its statutory obligation to reduce the population from around 19,000 in 2022 to 3,000 by June 2027.[2] Evidence of a variety of management techniques showed that under current settings, it will be extremely difficult for the NSW Government to reach this target. The committee heard that aerial culling is both the most humane and cost-effective management tool considering the high population numbers and urgent reduction task at hand. As such, the NSW Government's consideration of this matter is an important first step.

Victoria and the ACT have implemented more effective responses to managing feral horses in their jurisdictions. Victoria and the ACT received minimal financial assistance from the former Commonwealth Government to deal with feral horses, monitor their borders and undertake restoration work. Only the ACT has a population of zero feral horses.

Scientific evidence has made it clear that addressing the threats posed by feral horses to the Australian Alps area is urgent. Feral horses could be the final factor in the extinction of several Australian native plants and animals. Further, without effective management of population numbers, feral horses risk starvation as we enter another significant El Niño weather pattern. More financial and human resources are needed to manage the feral horse population and protect the fragile landscape of the Australian Alps.

It is clear that urgent and collaborative action is required from the Commonwealth, NSW, Victorian and ACT governments to protect the unique heritage values of the Australian Alps.

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[2] National Parks and Wildlife Service (NPWS), *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021, p. 13.

It is also clear that there is momentum and shared commitment across the four relevant governments. The committee strongly encourages continued determination and application of the necessary resources to this vital and urgent restoration effort.

Abbreviations

1986 MOU	Memorandum of Understanding in relation to the Co-operative Management of the Australian Alps national parks
AALC	Australian Alps Liaison Committee
ACF	Australian Conservation Foundation
ACT	Australian Capital Territory
AIS	Assets of Intergenerational Significance
Alps program	Australian Alps National Parks Co-operative Management Program
CBD	Convention on Biological Diversity
CAMBA	China-Australia migratory bird agreement
CAP	conservation action plan
the committee	Senate Environment and Communications References Committee
DAFF	Department of Agriculture, Fisheries and Forestry
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DSWEPC	Department of Sustainability, Environment, Water, Population and Communities (former)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
FFG Act (Vic)	*Flora and Fauna Guarantee Act 1988* (Vic)
GBF	Kunming-Montreal Global Biodiversity Framework
ITRG	Independent Technical Reference Group
IUCN	International Union for Conversation of Nature
JAMBA	Japan-Australia migratory bird agreement
Jaithmathang	Jaithmathang Traditional Ancestral Bloodline Original Owners First Nation Aboriginal Corporation
Kosciuszko Management Plan	2021 Kosciuszko National Park Wild Horse Heritage Management Plan

KNP	Kosciuszko National Park
MAB	Man and the Biosphere Programme
MAS	Monaro Acclimatisation Society
MDBA	Murray-Darling Basin Authority
MNES	matters of national environmental significance
Namadgi management plan	Namadgi National Park Feral Horse Management Plan 2020
Novel biota key threatening process	Key Threatening Process of novel biota and their impact on biodiversity
NPWS	NSW National Parks and Wildlife Service
NSW	New South Wales
NSW Wild Horse Heritage Act	*Kosciuszko Wild Horse Heritage Act 2018*
OEH	NSW Office of Environment and Heritage
Ramsar sites	wetlands of international significance
ROKAMBA	Republic of Korea-Australia migratory bird agreement
TSSC	Threatened Species Scientific Committee
VNPA	Victorian National Parks Association
UNESCO	United Nations Educational, Scientific and Cultural Organization

Chapter 1
Introduction

1.1 On 9 February 2023, the Senate referred the impacts and management of feral horses in the Australian Alps to the Senate Environment and Communications References Committee (the committee) for inquiry and report initially by 9 June 2023, with the following terms of reference:

(a) identifying best practice approaches to reduce the populations of feral horses in the Australian Alps and their impact on:

  (i) biodiversity, including threatened and endangered species and ecological communities listed under Commonwealth, state or territory law,
  (ii) the ecological health of the Australian Alps national parks and reserves,
  (iii) Indigenous cultural heritage, and
  (iv) the headwaters of the Murray, Murrumbidgee, Snowy and Cotter Rivers, including their hydrology, water holding capacity, water quality, habitat integrity and species diversity;

(b) Commonwealth powers and responsibilities, including:

  (i) the protection of matters of national environmental significance under the *Environment Protection and Biodiversity Conservation Act 1999*, including listed threatened species and communities and the National Heritage listed Australian Alps national parks and reserves,
  (ii) obligations under international treaties, such as the Convention on Biological Diversity, and
  (iii) the commitment to prevent new extinctions under the threatened species action plan;

(c) the adequacy of state and territory laws, policies, programs and funding for control of feral horses and other hard-hoofed invasive species in the Australian Alps, and their interaction with Commonwealth laws and responsibilities;
(d) measures required to repair and restore native habitats for species impacted by feral horses and other hard-hoofed invasive species in the Australian Alps, including for iconic species like the corroboree frog and the platypus; and
(e) any other related matters.[1]

[1] *Journals of the Senate*, No. 32, 9 February 2023, pp. 965–966.

1.2 In June 2023, the Senate granted an extension of time to report to 29 September 2023.[2]

Conduct of the inquiry

1.3 The committee advertised the inquiry on its webpage, and wrote to various organisations and individuals to invite submissions by 11 April 2023. This date was extended to 28 April 2023.

1.4 The committee received 801 submissions, which are listed at Appendix 1.

1.5 Public hearings were held in Canberra on 23 August and 7 September 2023. A list of witnesses who gave evidence at the hearings is available at Appendix 2.

1.6 The committee intended to undertake a field inspection of impacted and unimpacted sites in Kosciuszko National Park but was unable to due to dangerous weather conditions on the day. The committee thanks the NSW Government for its assistance in planning the field inspection, and notes the large amount of work that went into the flight plan and itinerary. The committee also thanks the NSW Government for providing photographs and video footage of the area. A selection of the photographs have been used in this report.

1.7 Evidence received by the committee can be found on its website. This includes Hansard transcripts of evidence from hearings, tabled documents, answers to questions on notice, and public submissions.[3]

Acknowledgements

1.8 The committee would like to thank those individuals, institutions and organisations that made submissions to the inquiry, as well as all witnesses who provided evidence at public hearings.

1.9 The committee particularly acknowledges the valuable work of the staff of state and territory managed national parks. Staff of these agencies have received serious threats and abuse for carrying out their valuable work. The committee thanks all staff who conduct this important work, and thanks representatives who willingly gave evidence through submissions or appearing before the committee.

Terminology

1.10 The committee has used the term 'feral horse' throughout this report, to reflect the terminology in the inquiry terms of reference and to match the terminology used by the Commonwealth, Victoria and the Australian Capital Territory (ACT) governments.

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2 *Journals of the Senate*, No. 49, 13 June 2023, p. 1410.

3 Senate Environment and Communications References Committee, *Inquiry into the impacts and management of feral horses in the Australian Alps*.

1.11 The committee acknowledges that advocates for the presence of feral horses in the Australian Alps use the term 'brumby' or 'wild horse', and that the relevant NSW state legislation uses the term 'wild horse'.

1.12 The Federal Court of Australia has noted that the term 'wild horse' is inaccurate, as that term is used to describe horses that have never been domesticated, such as Przewalski's horse (native to the steppes of Central Asia).[4]

Structure of the report

1.13 This chapter provides details on the referral and administration of the inquiry.

1.14 Chapter 2 provides background information, including information on the Australian Alps and an overview of feral horses in Australia.

1.15 Chapter 3 considers the impacts of feral horses on the natural environment, and discusses the observed detrimental impacts. This chapter also sets out the impact on Indigenous cultural heritage.

1.16 Chapter 4 sets out advocate views for the retention of feral horses, and references to feral horses in Australia's written culture.

1.17 Chapter 5 discusses best practice management strategies for the effective control and removal of feral horses in the Australian Alps.

1.18 Chapter 6 sets out the role of the Australian Government in managing and protecting the Australian Alps.

1.19 Chapter 7 sets out the committee's view, and makes recommendations.

[4] Australian Brumby Alliance Inc v Parks Victoria Inc [2020] FCA 605 (8 May 2020).

Chapter 2
Overview of feral horse populations

Overview

2.1 The Australian Alps constitute a large area made up of 11 national parks and nature reserves across New South Wales, Victoria and the ACT. The individual parks and reserves which make up the Australian Alps National Parks and Reserves are individually gazetted and managed by the relevant state and territory governments. Despite the term 'national park', these are not located on Commonwealth land and primary responsibility for their management rests with the states and territory.

2.2 The area is more than 1.6 million hectares of public land, and includes high altitude peaks and plateaus, glacial lakes and alpine and sub-alpine ecosystems.[1] The Australian Alps are part of the Great Dividing Range and contain the Snowy Mountains in New South Wales and the ACT, and the Victorian Alps.

2.3 The fragile Australian Alpine ecosystem has been listed for protection under a variety of provisions of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), including specific listings for plant and animal species, certain ecological communities, and the parks and reserves within the alpine area.

2.4 Australia's tallest mountain, Mount Kosciuszko, is within Kosciuszko National Park (KNP), which is managed by the NSW National Parks and Wildlife Service (NPWS). KNP is around 690,000 hectares and is the largest national park in NSW.[2]

2.5 Figure 2.1 is a map of the Australian Alps National Parks and Reserves, which shows the state borders and boundaries of the heritage place listing.

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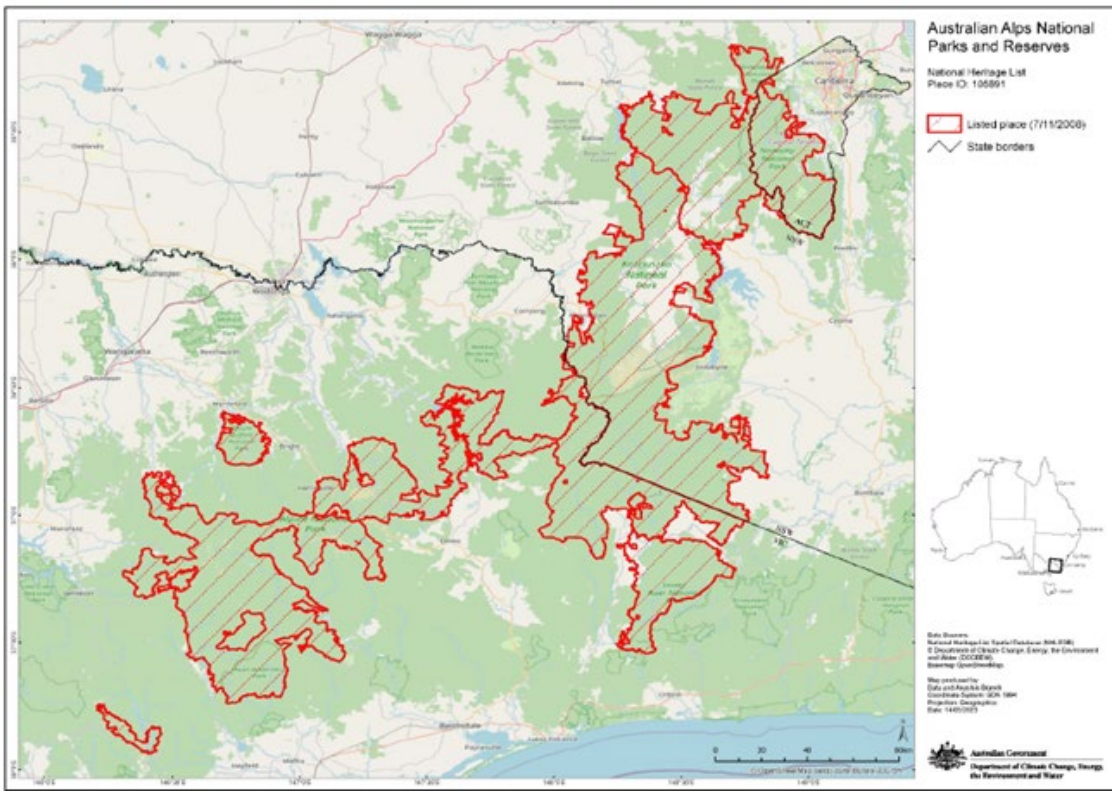
1 Department of Climate Change, Energy, the Environment and Water (DCCEEW), *National Heritage Places - Australian Alps National Parks and Reserves* (accessed 22 May 2023).

2 NSW Government, *Submission 361*, p. 3.

Figure 2.1 Map of the Australian Alps National Parks and Reserves National Heritage place



Source: Department of Climate Change, Energy, the Environment and Water (DCCEEW), Submission 23, p. 21.

Feral horses *(Equus caballus)*

2.6 Feral horses are an introduced species. They are horses that are from domesticated stock but are free-roaming, rather than wild animals.[3] Feral horses are considered to be a pest animal by the Australian Government because of the damage they can do to the environment.[4]

2.7 Australia has the world's largest population of feral horses. The most recent nation-wide assessment is from 2011, which found an estimated 400,000 feral horses in locations across Australia (see Figure 2.2).[5] As discussed below, in 2019 there were around 25,000 present in the Australian Alps.[6] Feral horses inhabit a

[3] Australian Brumby Alliance Inc v Parks Victoria Inc [2020] FCA 605.

[4] Department of Agriculture, Fisheries and Forestry (DAFF), *Submission 29*, p. 3.

[5] Department of Sustainability, Environment, Water, Population and Communities (DSEWPC), *Feral Horse and Feral Donkey fact sheet*, 2011; Dr Stuart Cairns, *Feral Horses in the Australian Alps: the Analysis of Aerial Surveys Conducted in April-May*, 2014 and April–May 2019, p. 1.

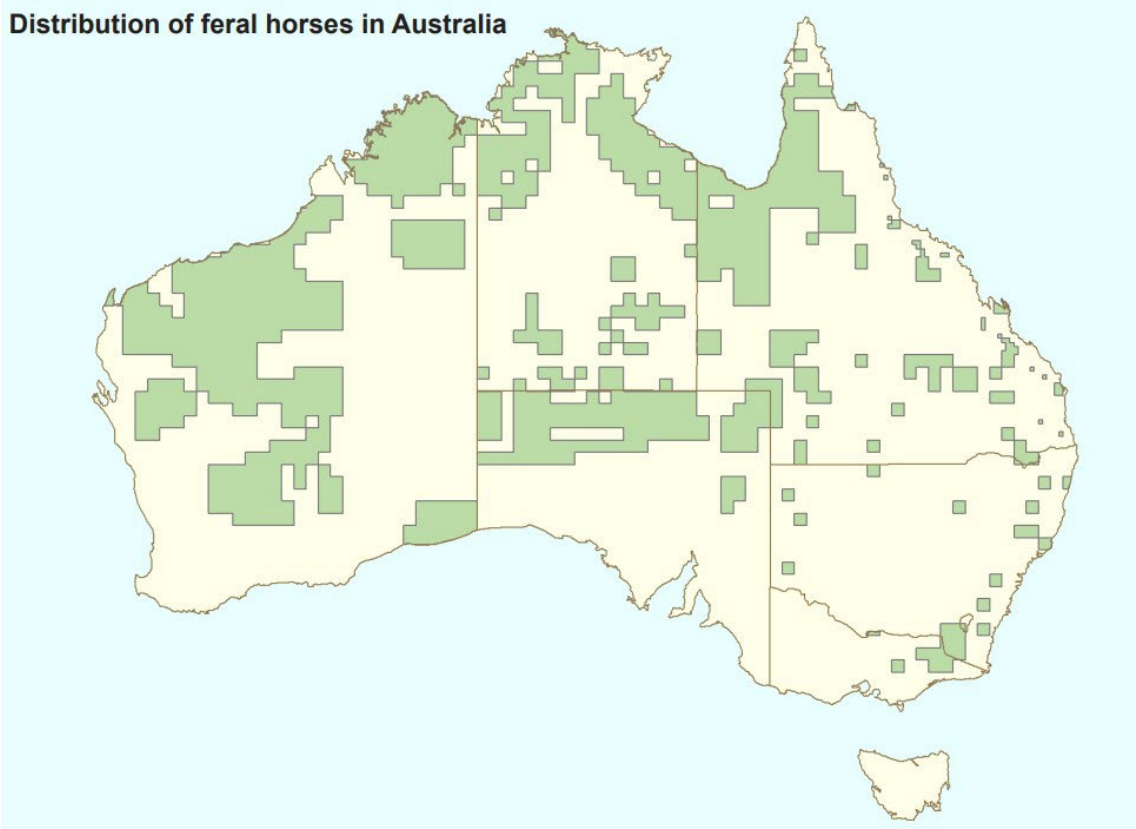
[6] Dr Stuart Cairns, *Feral Horses in the Australian Alps: the Analysis of Aerial Surveys Conducted in April-May*, 2014 and April–May 2019, p. 1.

variety of ecosystems, from semi-arid to tropical grasslands to alpine areas. They prefer grasslands and shrublands with water and pasture.[7]

2.8 The only significant threats to feral horses are drought and bushfire. This means that active management is required for overall population control or for eradication. The population of feral horses in the Australian Alps is rapidly increasing at a rate of 15 to 20 per cent per annum.[8]

2.9 Feral horse populations in the Australian Alps are particularly prevalent in NSW, with populations present in 53 per cent of KNP.[9]

Figure 2.2 Distribution of feral horses in Australia, 2000



Source: Department of Sustainability, Environment, Water, Population and Communities (DSEWPC), 2011

2.10 In the 1830s, Europeans entered the Australian Alps region and used horses for travel and moving stock. The NSW Government stated that:

> At times, domesticated horses would escape or were released during drought or to improve the quality of mobs, and feral horses became

7 DSEWPC, *Feral Horse and Feral Donkey fact sheet*, 2011.

8 See: Professor Don White, *Submission* 17, p. 5; DSWEPC, *Feral horse and feral donkey fact sheet*, 2011.

9 National Parks and Wildlife Service (NPWS), *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021, p. 8.

established in the mountains, including areas that are now within Kosciuszko National Park.[10]

2.11 Until relatively recently, numbers of feral horses have been kept low in the Australian Alps over time, primarily through intervention by stockmen and people capturing horses for meat or hide. Control of feral horse populations by shooting, trapping and 'brumby running' and roping was undertaken from time to time.[11]

2.12 Feral horses form small social units of either a dominant stallion accompanying one to three mares and offspring, or a bachelor group. Groups of mares and offspring prefer areas with steady access to water and have territories they tend to stay in. Bachelor groups can range more widely, up to 88 square kilometres. Feral horses breed in the spring to summer and have a gestation period of around 11 months, producing one foal every two years.[12]

Feral horse population estimates

2.13 Estimates of feral horse populations in the Australian Alps have been provided by scientific aerial studies of the area since 2001, and are conducted every five years. Additional, more targeted surveys of KNP have also been undertaken.

Australian Alps

2.14 The first standardised surveys of feral horse numbers in the NSW and Victorian Australian Alps national parks were funded by the Australian Alps National Parks Co-operative Management Program (Alps program). Surveys conducted in 2014 and 2019 used updated international best practice methods for population surveys of large animals from the air (see Table 2.1).

Table 2.1 Results from surveys conducted for the Australian Alps

Year	Area Surveyed (km^2)	Density (horses/km^2)	Population estimate (area x density)
2001	2,789	1.86	**5,187**
2003	2,717	0.87	**2,363**
2009	2,860	2.69	**7,693**
2014	5,429	1.70	**9,187**
2019	7,443	3.40	**25,318**

Source: Estimated feral horse population, 2001–2019; data is sourced from the Independent Technical Reference Group Final Report (2016), Table 2, and the 2019 Alps survey results.

10 NSW Government, *Submission 361*, p. 4.

11 NSW Government, *Submission 361*, p. 4.

12 DSWEPC, *Feral Horse and Feral Donkey fact sheet*, 2011.

2.15 Professor Chris Johnson, a member of the Threatened Species Scientific Committee (TSSC), told the committee that due to the reproduction rate, in five years' time the population of feral horses in the Australian Alps would double.[13]

2.16 The next major aerial survey of the Australian Alps parks is due in 2024.

Kosciuszko National Park

2.17 Surveys were conducted in 2020 and 2022 for KNP specifically, and were peer-reviewed by CSIRO and the Queensland Department of Agriculture and Fisheries.[14]

2.18 In 2020, the KNP survey estimated that the feral horse population in the park was 14,380 (with the 95 per cent confidence interval being 8,798 to 22,555). Two years later, the KNP survey estimated that feral horse numbers had increased to 18,814 (with the 95 per cent confidence interval of 14,501 to 23,535).[15]

2.19 The 2022 survey's key findings were:

- the highest density of horses is in the north of the park;
- there was an increase in the ratio of foals to adult horses in 2022 compared to the numbers observed in 2020; and
- seasonal conditions, such as drought and bushfires, may influence the population size.[16]

2.20 The Public Service Association of NSW (PSA NSW) provided Figure 2.3, which shows the sharp increase in the total population of feral horses in KNP from 2000 to 2022, and displays: the population trendline; the removals that were undertaken; and, the removals required to prevent population growth.[17]

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[13] Professor Christopher Johnson, Member, Threatened Species Scientific Committee (TSSC), *Proof Committee Hansard*, 7 September 2023, p. 3.

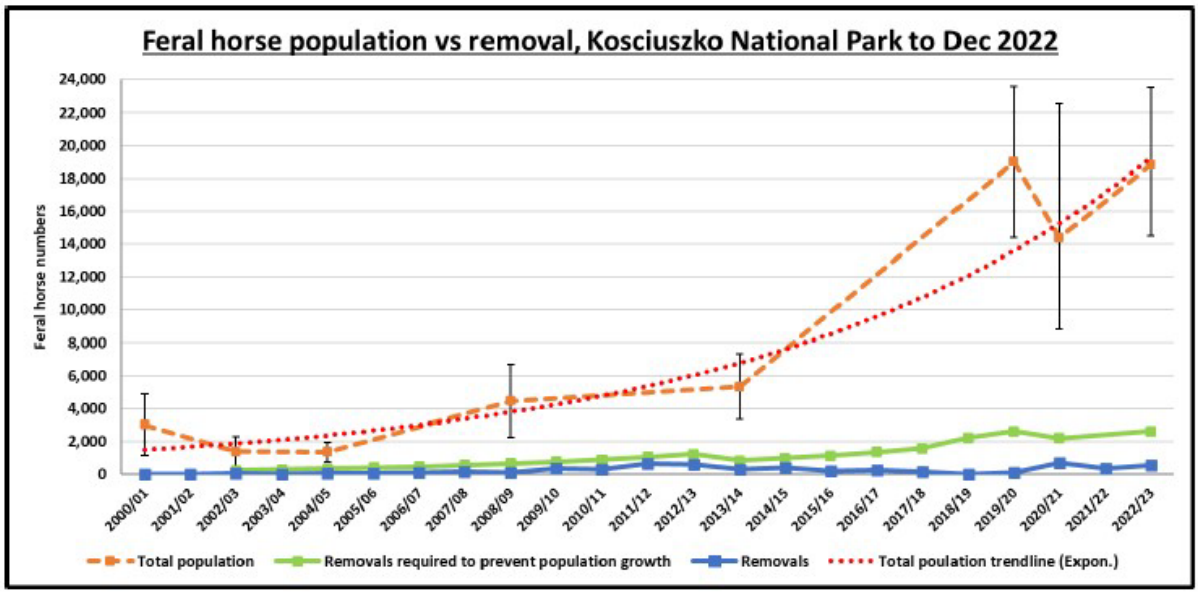
[14] NSW Government, *Submission 361*, p. 3.

[15] NSW Government, *Submission 361*, p. 3.

[16] NSW Government, *Submission 361*, p. 3.

[17] Public Service Association of NSW (PSA NSW), *Submission 20*, p. 7.

Figure 2.3 Population vs removal in Kosciuszko National Park



Source: Public Service Association NSW, Submission 20, p. 7.

2.21 The survey design used for the aerial surveys was questioned by several inquiry participants. Some submitters stated that the current estimates of feral horse populations in the Australian Alps were incorrect, with numbers ranging from 2,000 to 5,000.[18]

2.22 For instance, the Brumby Action Group set out its concerns, stating that the distance methodology used has 'produced estimates that are scientifically and biologically not possible for the species':

> The survey population numbers have been strenuously disputed for many years by stakeholders, locals to the Alpine High Country and Brumby advocates, as the methodology used is inappropriate for moving animals, and has returned false numbers.[19]

2.23 The Snowy Mountains Horse Riders Association also disputed the survey methodology, and estimated the number of feral horses to be much lower than the survey results had shown:

> The local community with generational knowledge and intimate landscape experience of the park and its horses, strongly dispute these current ridiculous numbers. The local community believe that the true population estimate is currently in 2023 up to 4000 – 5000 horses in the whole of KNP at most![20]

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18 See, for example: Indigo Brumbies, *Submission 50*, p. 1; Snowy Mountains Horse Riders Association, *Submission 52*, p. 3.

19 Brumby Action Group, *Submission 71*, p. 7.

20 Snowy Mountains Horse Riders Association, *Submission 52*, p. 3.

2.24 Ms Claire Galea, an independent biostatistician, outlined her concerns over the methodology applied by the Alps and KNP surveys, and argued that there were insufficient clusters of feral horses to enable the methodology to be used.[21]

2.25 In 2016, the Independent Technical Reference Group (ITRG), formed by the NPWS to provide independent and rigorous scientific and technical advice to the NSW Office of Environment and Heritage (OEH) and the NPWS on the management of wild horses within KNP, issued its final report. The ITRG noted it could not come to a conclusion about the trends in density of feral horse populations:

> In conclusion, differences in survey area, design and analysis between the various surveys make it impossible for the ITRG to infer trends over time in the overall density of horses.[22]

2.26 Despite these concerns, the NSW Government remains confident in the survey results, and noted that there is a high confidence interval in the estimate of the population:[23]

> Information on the number of feral horses across the Australian Alps and in Kosciuszko National Park has significantly improved over time. While design and scope have been adjusted in response to survey technique improvements and to focus specifically on Kosciuszko National Park, the results consistently demonstrate a clear and significant expansion in the size and distribution of feral horses across survey periods.[24]

2.27 The TSSC stated that the surveys 'follow best practice in counting animals', which acknowledges that the surveyor does not see every animal, and employs a methodology to account for this. Professor Johnson, a member of the TSSC, explained that:

> Some people don't like the figures because there is always a range of values—a lower limit and an upper limit—but this is what science does: we try to quantify uncertainty, so that we know what we know and how confident we can be on that. I think it actually is a point in favour of those surveys that they provide those confidence bounds. However you look at them, they're showing an increase, and it's the increasing trend that is the thing we should be most concerned about. Whatever the exact number of horses [in KNP] is now, whether it's 14,000 or 19,000, as I say, we've got clear evidence of an increasing trend which will double that number in the near future.[25]

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21 Ms Claire Galea, *Submission 801*, pp. 4–5.

22 Office of Environment and Heritage (OEH), NSW, *Final report of the Independent Technical Reference Group Supplementary to the Kosciuszko National Park Wild Horse Management Plan*, 2016, p. 4.

23 Mr Atticus Fleming, Acting Coordinator-General, Environment and Heritage Group, Department of Planning and Environment, New South Wales, *Proof Committee Hansard*, 23 August 2023, p. 25.

24 NSW Government, *Submission 361*, p. 3.

25 Professor Christopher Johnson, Member TSSC, *Proof Committee Hansard*, 7 September 2023, p. 3.

Victoria and the ACT

2.28 Parks Victoria stated that from the most recent surveys, there are approximately 5,000 horses in the Eastern Alps section of the Alpine National Park, and approximately 100 horses on the Bogong High Plains area of the Alpine National Park.[26] Parks Victoria has conducted aerial surveys of the feral horse population on the Bogong High Plains every two to three years since 2005, and an aerial survey was most recently conducted of the Eastern Alps in 2021.[27]

2.29 The Invasive Species Council estimated, however, that in the Bogong High Plains in the Victorian Alps, 'we've gone from about 52 to 250 horses within five years, which is similarly looking at that exponential growth—about a 130 per cent increase'.[28]

2.30 Although feral horses on occasions travel into the ACT from NSW, due to effective management strategies there is currently no known permanent population in the ACT.

Committee comment

2.31 The committee understands that the population estimates for the Australian Alps, and Kosciuszko National Park (KNP) to be backed by robust and peer-reviewed scientific methodology. While noting some dissenting opinions, the methods are widely used by the scientific community, and is supported by the TSSC.

2.32 The committee further notes, that regardless of the exact feral horse numbers in the Australian Alps, the demonstrable and visible negative impacts of the current population, and its upwards trend, warrant urgent action as set out in following chapters.

2.33 On a broader scale, the committee notes that Australia has the world's largest population of feral horses, which has a reproduction rate of around 15 to 20 per cent per annum. It is therefore surprising that the national population estimate is more than a decade old. Given the high historic number and the rapid rate of reproduction, the committee considers that the impact of feral horses is not well understood at the national level. This is likely to affect the ability to tackle this issue through key threatening processes and threat abatement plans.

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26 Parks Victoria, *Feral horse FAQs* (accessed 18 August 2023).

27 Parks Victoria, *Victorian Surveys on Feral Horses* (accessed 5 September 2023). According to Parks Victoria, the broader Australian Alps surveys conducted in 2014 and 2019 did not differentiate between land in NSW and Victoria, 'making it difficult to extract Victorian-specific numbers for the eastern Victorian Alps'.

28 Mr Jack Gough, Advocacy Manager, Invasive Species Council, *Proof Committee Hansard*, 23 August 2023, p. 4.

2.34 The committee therefore urges the Department of Climate Change, Energy, the Environment and Water (DCCEEW) to take a leadership role to establish the population and impacts of feral horses across Australia. This would facilitate an accurate snapshot of the current population and its locations, and allow the Commonwealth, in consultation with the relevant state and territory jurisdictions, to address the issue in a more coordinated way.

2.35 Further committee comment and recommendations are made in Chapter 7.

Chapter 3
Impacts of feral horses on the Australian Alps

Overview

3.1 The committee heard that feral horses cause serious environmental damage to the Australian Alps. These animals cause environmental degradation and can increase the risk of extinction of threatened species.[1] Large hard-hooved herbivores such as feral horses cause major environmental damage by trampling the grasses and mosses, displacing soil, grazing of vegetation, compacting the soil, damaging banks, and degrading the habitat of native animals.[2]

3.2 According to the Threatened Species Scientific Committee (TSSC), native vertebrate animals are under direct threat from the presence of feral horses in the Alps, with at least 14 species of vertebrate animals in the Australian Alps threatened with extinction. Feral horses are documented as a threat to 12 of these.[3]

3.3 The TSSC further stated that while these animals may be impacted by several threatening processes, 'feral horses may be the crucial factor that causes final extinction'.[4]

3.4 This chapter explores key impacts of feral horses on the Australian Alps, including on:

- vegetation and soil through trampling, wallowing and grazing;
- fragile sphagnum moss and associated fens;
- headwaters of major rivers; and
- Indigenous cultural heritage.

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1 Department of Climate Change, Energy, the Environment and Water (DCCEEW), *Submission 23*, p. 4.

2 NSW Government, *Submission 361*, p. 4.

3 Threatened Species Scientific Committee (TSSC), *Submission 19*, p. 1. These include the: Northern Corroboree Frog; Southern Corroboree Frog; Stocky galaxias; Dargo galaxias; Shaw galaxias; Kosciuszko galaxias; Kiandra greenhood; Pimelea bracteate; Alpine She-oak skink; Guthega skink; Mountain skink; and, Alpine Bog skink.

4 TSSC, *Submission 19*, p. 1. The committee has focussed on the key threats to the environment and heritage values, but other examples of the impacts of feral horses were raised in the inquiry, including feral horses causing car crashes in national parks, and neighbouring properties having fences damaged. See, for example: Invasive Species Council, *Submission 76, Attachment 1*, pp. 28–29.

Environmental impacts of feral horses across the Australian Alps

3.5 Alpine ecosystems are rare and unique in Australia, making up only 0.03 per cent of the country.[5] The natural ecosystems and species present in the Australian Alps have evolved over millions of years. The Australian Government recognises the widespread environmental damage caused by feral horses, and the Department of Agriculture, Fisheries and Forestry (DAFF) noted that 'feral horses are the single most significant cause of widespread environmental degradation throughout their range in alpine parks'.[6]

3.6 Dr Fiona Fraser, Threatened Species Commissioner, set out similar concerns:

> For many of those [threatened species and ecological communities], it is the most significant threat at this point in time. They have got to the status of being threatened through other threats historically—through disease, through climate change generally—but horses literally could be the last knell for them.[7]

3.7 The Australian Academy of Science submitted that the impacts of feral horses on the Australian Alps must be addressed in order to meet the Australian Government's goal of no new extinctions, as the area is 'one of three bioregions in Australia supporting the highest number of Australia's most imperilled vertebrates'.[8]

3.8 The imperative to conserve critically endangered species was highlighted by the TSSC who stated that, as the population numbers were likely to double in the next five years, there is a need for urgent action.[9]

3.9 Feral horses overgraze large areas as they can travel large distances and degrade water sources, which affects native plants and animals. This can lead to extinction for native plants and animals across a wide landscape.[10]

3.10 Deakin University described the damage as 'substantial and measurable', and increasing numbers of feral horses mean that they are a 'far greater threat…than ever before.'[11]

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5 Parks Victoria, *Protection of the Alpine National Park: Feral Horse Action Plan November 2021*, p. 4.

6 Department of Agriculture, Fisheries and Forestry (DAFF), *Submission 29*, p. 3; DCCEEW, *Submission 23*, p. 4.

7 Dr Fiona Fraser, Threatened Species Commissioner, Biodiversity Division, DCCEEW, *Proof Committee Hansard*, 23 August 2023, p. 41.

8 Australian Academy of Science, *Submission 57*, p. 1.

9 Professor Christopher Johnson, Member, TSSC, *Proof Committee Hansard*, 7 September 2023, p. 3.

10 NSW Government, *Wild horses* (accessed 9 June 2023). Diseases such as tick fever, which can infect domestic horses and cattle, and equine influenza and African horse sickness, can also be carried and spread through feral horse populations.

11 Deakin University, *Submission 25*, p. 3.

3.11 The three Australian Alps land manager governments agreed that feral horses cause measurable damage to the natural environment. The ACT Government, which has a zero-tolerance approach to feral horses, set out that the damage feral horses have on the environment and biodiversity is 'in most cases catastrophic':

> Feral horses damage and destroy vegetation, trample and compact soil, and compete with native wildlife for food and water resources. Feral horses may also spread weeds and alter fire regimes, which can negatively impact the survival of native or threatened species. Additionally, feral horses impact aquatic environments and species and create hardened trails which can expose/fragment ground dwelling fauna such as reptiles and small mammals, increasing predation risk and changing fine scale movements.[12]

3.12 Ms Rebecca Vassarotti, MLA, Minister for the Environment in the ACT, echoed this sentiment, and noted that damage to waterways in KNP is visible when viewed from the air. Ms Vassarotti further stated that '[b]y comparison, no damage is occurring in the ACT, due to our zero-tolerance policy'.[13]

3.13 The Invasive Species Council described the harm that feral horses cause through erosion, pollution and overgrazing in the area:

> ...they are having a significant impact in terms of damage to some of those sensitive riparian areas—for example, wetlands and streams—through erosion of banks and through pollution...you can't walk 10 metres without seeing piles and piles of horse manure...They are causing damage through the grazing pressure.[14]

3.14 The environmental impacts of feral horses in the Australian Alps have been noted in several Commonwealth, state and territory government policies.[15] The NSW Government noted that feral horses cause direct damage to the environment, including:

- increase soil erosion – by killing vegetation, disturbing the soil and creating paths along frequently used routes
- destroy native plants – by grazing and trampling
- foul waterholes
- cause the collapse of wildlife burrows
- compete with native animals for food and shelter

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12 ACT Government, *Submission 83*, p. 2.

13 Ms Rebecca Vassarotti MLA, Minister for the Environment and Minister for Heritage, Australian Capital Territory Legislative Assembly, *Proof Committee Hansard,* 23 August 2023, p. 25.

14 Mr Jack Gough, Advocacy Manager, Invasive Species Council, *Proof Committee Hansard,* 23 August 2023, p. 3.

15 NSW Government, *Submission 361*, p. 3. In NSW, the impacts of feral horses were recognised in the 2016 Independent Technical Reference Group (ITRG) report; 2020 report of the Kosciuszko Wild Horse Scientific Advisory Panel; and National Parks and Wildlife Service (NPWS), *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021 (Kosciuszko Management Plan). Habitat degradation and loss by feral horses is also listed as a Key Threatening Process under the NSW *Biodiversity Conservation Act 2016*. These are discussed in further detail in Chapter 4.

- compete with livestock for pastures – particularly during periods of drought
- spread weeds – through their dung and in their hair
- spread disease
- pose a risk to public safety – such as on high speed roads and highways.[16]

Figure 3.1 Unimpacted waterway with intact vegetation in KNP

Source: NSW Government

3.15 The NSW Government stated that feral horses, which currently occur in 53 per cent of KNP, cause 'significant, adverse and ongoing impacts to the natural, cultural and recreational values of the park' (for instance, compare Figures 3.1 and 3.2).[17]

[16] NSW Government, *Wild horses* (accessed 9 June 2023).

[17] NSW Government, *Submission 361*, p. 3. The NSW Government's management of KNP is discussed in further detail in Chapter 4.

Figure 3.2 Damage to KNP waterway and vegetation caused by feral horses

Source: NSW Government

3.16 Damage from feral horse trampling is described in Parks Victoria's *Protection of the Alpine National Park: Feral Horse Action Plan 2021*, stating that some native animals depend on the 'complexity and intactness of the unique alpine vegetation communities…some of which are entirely restricted to alpine environments and many of which are endangered'.[18] These include skinks, as well as plants like orchids, sedges and mosses.[19]

3.17 Parks Victoria highlighted that feral horses are listed as a potentially threatening process in the *Flora and Fauna Guarantee Act 1988* (Vic), and the risk posed to sphagnum bogs and associated fens, as well as other threatened species and communities is listed at the state and Commonwealth level.[20]

3.18 Deakin University outlined the species that rely on the area to survive. Table 3.1 is adapted from the information provided in a related paper:

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18 Parks Victoria, *Protection of the Alpine National Park: Feral Horse Action Plan 2021*, 2021, p. 6.

19 Parks Victoria, *Protection of the Alpine National Park: Feral Horse Action Plan 2021*, 2021, Appendix 2. Plants and animals include: Alpine Water Skink (*Eulamprus kosciuskoi*); Alpine She-oak Skink (*Cyclodomorphus praealtus*); Slender Parrot-pea (*Almaleea capitata*); Bogong Apple-moss (*Bartramia subsymmetrica*); Austral Moonwort (*Botrychium australe*); Dwarf Sedge (*Carex paupera*); Marsh Tree-moss (*Climacium dendroides*); Cushion Rush (*Juncus antarcticus*); Snow Daphne (*Kelleria laxa*); Hump Moss (*Meesia muelleri*); and, Marsh Leek-orchid (*Prasophyllum niphopedium*).

20 Parks Victoria, *Submission 91*, p. 2.

Table 3.1 Impacts of feral horses on species in the Australian Alps

Species	What species need	Feral horse impacts	Inference
Stocky Galaxias	Sediment-free boulder and cobble stream habitats	Increase sedimentation	Situation caused by feral horses could destroy multiple home ranges throughout this species' remaining distribution
Northern Corroboree Frog	Deep moss and grass litter to build nests where eggs are laid	Destroy sphagnum moss and reduce vegetation depth to below the mean depth of nests in horse free areas	Feral horse damage is a threat, increasing risk of egg desiccation, interruption of breeding, undermining reintroduction programmes
Alpine She-Oak Skink	Tussock grasslands with sufficient native grass cover to provide protection from predators and thermal extremes	Damage to grasses and other palatable species through grazing and trampling, increase bare ground	Feral horses increase bare ground and reduce grass cover, increasing predation risk and reducing thermal buffering, ultimately reducing habitat suitability
Broad-toothed Rat	Grasses and shrubs for runways, good, insulation in winter, protection from feral predators	Reduce shrub and grass cover, height and density	Feral horses will destroy grass runways and compete for food. Could also increase predation rates and habitat fragmentation
Mountain Pygmy Possum	Deep boulder fields, shrubs for protection from predators and to create space below the snow	Increase sedimentation, trample shrubs	Feral horses will degrade habitat, reduce food resources and shelter

Source: Driscoll et al (2019), 'Impacts of feral horses in the Australian Alps and evidence-based solutions'. *Ecological Management & Restoration, 20: 63–72.*

Damage caused by trampling, wallowing and grazing

3.19 The NSW Government's Kosciuszko Management Plan notes the negative impacts of feral horses on KNP, including trampling of vegetation which leads to soil loss.[21]

3.20 In its final report, the Independent Technical Reference Group (ITRG), which provided independent and rigorous scientific and technical advice to the NSW Office of Environment and Heritage (OEH) and National Parks and Wildlife Service (NPWS) on the management of wild horses within KNP, noted documented environmental impacts of feral horses, including trampling damage to vegetation and networks of tracks, damage to soil through compaction and erosion, and damage to waterways.[22]

3.21 Fences have been set up to exclude feral horses from certain areas, which highlights the difference between areas free from horses and areas affected (see Figure 3.3). The Invasive Species Council highlighted the contrast between impacted and unimpacted areas for species like the Broad-toothed rat, which use grasses for their burrows:

> You can see really intact vegetation…Right next to that on the fence, you see what you would see in a farm paddock—heavily grazed. They're also causing damage for some species, in terms of direct damage—for example, for some of our frog species, in terms of trampling…But a lot of it is the damage to riparian areas. These are the headwaters of our major river systems—a very large percentage of the water that comes into the Murray and the Murrumbidgee systems—and they are being trashed and trampled by feral horses.[23]

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21 NSW Government, *Kosciuszko Management Plan*, p. 9.

22 Office of Environment and Heritage (OEH), NSW, *Final report of the Independent Technical Reference Group Supplementary to the Kosciuszko National Park Wild Horse Management Plan*, 2016, p. 9.

23 Mr Jack Gough, Advocacy Manager, Invasive Species Council, *Proof Committee Hansard*, 23 August 2023, p. 3.

Figure 3.3 Fencing dividing impacted and unimpacted land

Source: Reclaim Kosci, The horse damage (accessed 30 June 2023)

3.22 Deakin University described the damage to the Australian Alps observed through its research and published scientific literature, and stated that these large, hoofed herbivores graze, trample and wallow, which leads to the 'degradation, depletion and destruction of habitat'. Pressure on individual species can be through:

- trampling and grazing of vegetation, which destroys habitat cover and complexity and means that small native animals are more exposed to invasive predators such as foxes and cats. Breeding sites for Northern Corroboree Frogs are also destroyed by trampling;
- the exposed ground layer means that small animals which normally survive winter when the snow settles on the tops of plants and forms an insulating blanket around them are at risk of not surviving the colder temperatures, as the snow loses its platform; and
- soil from heavily grazed and trampled areas can wash into waterways, which destroys under water habitats for fish like the Stocky Galaxias.[24]

3.23 The Fenner School of Environment and Society added that the entire population of the Stocky Galaxias is currently protected by a fence to stop trampling, which

[24] Deakin University, *Submission 25*, p. 3.

is not a long-term solution, nor one that protects this species from reduced habitat and reduced adaptability to climate change.[25]

3.24 The destruction of areas that are breeding sites for Northern Corroboree Frogs was also highlighted by Deakin University.[26]

3.25 The Fenner School of Environment and Society highlighted that feral horses can spread into areas previously free of their presence, and impact corroboree frog populations already critically endangered. Feral horses are 'undoubtedly contributing to the ongoing decline of Northern Corroboree Frogs and their habitat quality' in state forest areas adjacent to KNP. Very small populations are currently being protected by fences:

> If feral horses expand further into the Bogong Peaks Wilderness Area, they will likely threaten and hasten the decline of all remaining Northern Corroboree Frog populations. One extant population in Kosciuszko National Park with more than ten adult frogs, and which is being significantly impacted by feral horses, is in the process of being protected via the installation of horse exclusion fencing.[27]

[25] Ms Renee Hartley, PhD Scholar, Fenner School of Environment and Society, *Proof Committee Hansard*, 7 September 2023, p. 3.

[26] Deakin University, *Submission 25*, p. 3.

[27] Fenner School of Environment and Society, answers to questions on notice, 7 September 2023 (received 14 September 2023).

Box 3.1 Corroboree frogs

Southern Corroboree Frogs (*Pseydophryne corroboree*) and Northern Corrroboree Frogs (*Pseudophryne pengilleyi*) are critically endangered, and only exist in the high country of southern NSW and the ACT. They are part of the alpine ecosystem and remove algae from ponds, even as tadpoles, thus helping to clean waterways.[28]

Source: Taronga Conservation Society Australia, Corroboree Frog

They are no more than 3cms in length, and feature distinctive yellow and black stripes. Habitat degradation by feral horses and pigs, climate change and disease are major threats to frogs.

They are listed as 'critically endangered' under the EPBC. There are fewer than 1,000 adult Northern Corroboree Frogs in the wild, and fewer than 30 Southern Corroboree Frogs in the wild.[29]

The Northern Corroboree Frog is found only in sphagnum bogs within the Brindabella and Fiery Ranges in NSW/ACT. The Southern Corroboree Frog is found only within Kosciuszko National Park at heights of 1,300 to 1,760 metres above sea level.

Northern and Southern Corroboree Frogs live in the 'horse removal area' of KNP, which means that they are currently under threat of feral horses until the Kosciuszko Management Plan is fully implemented.

3.26 Evidence provided by Deakin University contrasted areas of the Alpine parks damaged by feral horses with similar unimpacted vegetation types within the

[28] Taronga Conservation Society Australia, *Corroboree Frog* (accessed 19 July 2023).

[29] Fenner School of Environment and Society, answers to questions on notice, 7 September 2023 (received 14 September 2023). There are approximately 200 adult Southern Corroboree Frogs in quarantine field enclosures.

ACT. These images typically highlighted the damage to narrow creeks and waterways, including widening and damage to drainage and torn up soil structure known as 'pugging'.[30]

3.27 'Pugging' is the term given when hard-hooved animals like horses or cows have damaged a soil's structure through compression by standing on it. Wet soils are more susceptible to this type of damage, and it is seen at the edge of waterways (see Figure 3.4). The topsoil of a pugged area is less able to allow water to pass through, effectively becoming a seal, and damage can require minimal restoration work if the damage has been light, or full resowing of the area.[31]

3.28 Waterways are particularly attractive to feral horses, and the erosion and damage to the riparian environment (banks and edges of water) can affect the ability of animals who rely on the water to spawn, as the erosion smothers and kills fish eggs, decreases water quality and breeding and feeding habitats.[32] The effect of feral horses on waterways is discussed below.

3.29 Pugging can lead to reduced growth, reduced density of flora, and leaching of nutrients such as potassium, sulphur and nitrogen from the soil. The subsoil can have less soil aeration and water movement, which reduces root activity and density, and leads to a reduction in beneficial organisms and soil biota.[33]

30 Deakin University, *Submission 25*, p. 5.

31 Agriculture Victoria, *What is pugging* (accessed 18 July 2023).

32 Frontier Economics for the Invasive Species Council, *Reining in feral horses in Kosciuszko National Park*, January 2021, p. 20.

33 Agriculture Victoria, *What is pugging* (accessed 18 July 2023).

Figure 3.4 Pugging damage

Source: NSW Government

Box 3.2 Broad-toothed Rats

Broad-toothed Rats (*Mastacomys fuscus*) live in alpine and sub-alpine heaths and eucalypt woodlands, wet schlerophyll forests, grasslands and wet sedgelands.

Source: Australian Museum, Broad-toothed Rat.

They grow up to 17 cm in size, with a broad face, short tail and stocky body. They have soft, dense brown-tinged fur, with small ears.

Broad-toothed Rats prefer high rainfall areas with low temperatures and moderate to dense ground cover of grasses, shrubs or boulders. This species has experienced significant decline and is threatened by habitat loss and fragmentation, predation by feral foxes and cats, and climate change.

Broad-toothed Rats live in the horse retention area of Kosciuszko National Park. The NSW Government notes that feral horses 'degrade habitat/cover and disturb the species'.[34] The Kosciuszko Management Plan notes that riparian damage caused by feral horses removes habitat and food sources for the Broad-toothed Rat:

> Wild horses are known to degrade the habitat of the broad-toothed rat by grazing and trampling grasses, which alters the vegetation structure and reduces grass height, making it less suitable as habitat for the broad-toothed rat... Scientific evidence suggests that as the negative impacts of horses increases, the presence and abundance of the broad-toothed rat decreases.[35]

They are listed as 'vulnerable' under Commonwealth and NSW biodiversity conservation laws.

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34 NSW Government, *Broad-toothed Rat – profile* (accessed 19 July 2023).

35 National Parks and Wildlife Service (NPWS), *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021, p. 9.

Damage to Alpine sphagnum bogs and associated fens

3.30 A number of listed threatened plant species that rely on intact and undisturbed habitats are found in Alpine sphagnum bogs.[36] Since 2009, Alpine Sphagnum Bogs and Associated Fens have been listed as a threatened ecological community under the EPBC Act. Such threatened ecological communities are considered matters of national environmental significance (MNES), and are protected matters under the EPBC Act.[37]

3.31 A recovery plan is in place at the Commonwealth level for the Alpine Sphagnum Bogs and Associated Fens ecological community, including those in the Australian Alps. Its objective is to 'maintain or extend the current known extent (area) and maintain or improve the condition of the Alpine Sphagnum Bogs and Associated Fens ecological community over the life of the recovery plan'.[38]

3.32 The recovery plan, which was issued in 2009, sets out that the threat of feral horses has a national severity rating of 'very high'.[39] The Commonwealth's recovery plan for this ecological community notes that the persistence of feral horses 'is likely to be critical to the survival of a number of…species'.[40]

3.33 Four threatened frog species, including critically endangered, endangered, and vulnerable, use this ecological community for breeding and habitat. Three threatened species of skinks also use this ecological community, including nationally endangered, and state-listed critically endangered and endangered species.[41]

3.34 Sphagnum moss is particularly affected by being trampled by horses' hooves as it is easily crushed, and once the cover of sphagnum is lost, the alpine soil and peat are susceptible to desiccation, incision, soil erosion and channel formation.[42] Alpine sphagnum bogs and associated fens are at particular risk of damage from feral horses. Dr Jennie Whinam, University of Tasmania, noted

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36 Deakin University, *Submission 25*, p. 4.

37 Sphagnum moss beds are also protected in state and territory legislation.

38 Department of Climate Change, Energy, the Environment and Water (DCCEEW), *National Recovery Plan for the Alpine Sphagnum Bogs and Associated Fens* (accessed 31 July 2023).

39 DCCEEW, *National Recovery Plan for the Alpine Sphagnum Bogs and Associated Fens* (accessed 31 July 2023), p. 5.

40 DCCEEW, *National Recovery Plan for the Alpine Sphagnum Bogs and Associated Fens* (accessed 31 July 2023), p. 5.

41 DCCEEW, *National Recovery Plan for the Alpine Sphagnum Bogs and Associated Fens* (accessed 31 July 2023), p. 7.

42 DCCEEW, *National Recovery Plan for the Alpine Sphagnum Bogs and Associated Fens* (accessed 31 July 2023), p. 17.

that the prevention of new populations of feral species was a priority of the National Recovery Plan relating to these bogs.[43]

3.35 Sphagnum moss can absorb large amounts of water and the underlying peat can regulate the spread of water, which can prevent soil erosion.[44] Sphagnum moss acts as a natural filter, which maintains water quality. Critically endangered Southern and Northern Corroboree Frogs, among others, depend on alpine bog and fen environments for survival.[45]

3.36 Around 30 per cent of the Alpine Sphagnum Bogs and Associated Fens are within the horse-retention area as set out in the Kosciuszko Management Plan, which is detailed in Chapter 4.[46]

3.37 Deakin University submitted that a variety of listed threatened species rely on the alpine sphagnum bogs and fens to be intact and not disturbed by trampling.[47]

3.38 South Endeavour Trust owns the Crooks Racecourse reserve bordering KNP on three sides, and has taken measures to protect the bogs and fens and endangered species from feral horses and other threats:

> For this reason we have expended very substantial funds on otherwise totally unnecessary fencing to try to keep feral horses from the National Park out of our reserve. That is, we have had to spend substantial amounts of very scarce conservation funding simply on trying to keep the NSW Government's feral horses out of our conservation reserve. This is beyond a sub-optimal situation.[48]

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43 Dr Jennie Whinam, *Submission 4*, p. 1.

44 Advice to the Minister for the Environment, Heritage and the Arts from the Threatened Species Scientific Committee (the Committee) on Amendments to the List of Ecological Communities under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), *Alpine Sphagnum Bogs and Associated Fens ecological community Listing Advice*, p. 4.

45 Advice to the Minister for the Environment, Heritage and the Arts from the Threatened Species Scientific Committee (the Committee) on Amendments to the List of Ecological Communities under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), *Alpine Sphagnum Bogs and Associated Fens ecological community Listing Advice*, p. 5.

46 D. Watson, M. Watson, D. Driscoll and D. Whisson, 2021, '14,000 feral horses will continue to trample threatened species under seriously inadequate plan', Charles Sturt University https://news.csu.edu.au/opinion/14,000-feral-horses-will-continue-to-trample-threatened-species-under-seriously-inadequate-plan (accessed 30 June 2023).

47 Deakin University, *Submission 25*, p. 4. These species include: *Psychrophila introloba* Marsh Marigold (Endangered); *Brachyscome obovata* Baw Baw Daisy (Endangered); *Carex echinata* Star Sedge (Endangered); *Juncus falcatus* subsp. *falcatus* Sickle-leaf Rush (Endangered); and, *Celmisia sericophylla* Silky Snow Daisy (Critically endangered).

48 South Endeavour Trust, *Submission 41*, p. 1.

Impact of feral horses on headwaters

3.39 Australia is the driest inhabited continent on earth.[49] The Australian Alps are home to the headwaters of the Murrumbidgee, Snowy and part of the Murray Rivers. An annual average of 9,600 gigalitres of high-quality water are delivered from the Alps to the Murray-Darling Basin (around 30 per cent of the total Basin average annual flows).[50]

3.40 Feral horses directly impact water quality and catchment health, by polluting waterways and causing erosion. Deakin University stated that catchment health is worse in areas where feral horses are present.[51] Further, the Fenner School for Environment and Society set out the impact that feral horses have on waterway health:

> Horse faeces add to the nutrient pollution of alpine streams. Higher nutrient loads and temperatures exacerbate downstream water quality problems, including cyanobacteria (blue green algae) blooms and may exacerbate invasive weed populations.[52]

3.41 High-quality water from the Australian Alps, which flows to the Murray-Darling Basin has been estimated to be worth $9.6 billion annually to the Australian economy.[53] High levels of rain, and low evaporation rates in alpine areas, along with the water holding capacity of snow and alpine soils and vegetation help to distribute water downstream throughout the year.[54]

3.42 The National Heritage listing for the area recognises water harvesting for its outstanding heritage value to the nation, noting that water harvested from headwaters in the Australian Alps National Parks and Reserves contributes to the water needs of Canberra and Melbourne.[55]

3.43 The Murrumbidgee catchment is significant to the supply of water to NSW and the ACT, and almost one-third of the population living in the Murray-Darling Basin live in the Murrumbidgee catchment.

3.44 The Murrumbidgee catchment supplies water for a quarter of NSW fruit and vegetable production (including nearly half the NSW grape harvest) and half of Australia's rice production. The Tumut River, the largest tributary in the

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49 DCCEEW, *Outback Australia – the rangelands* (accessed 28 July 2023).

50 Australian Alps National Parks, *Water Catchment and the Australian Alps Factsheet* (accessed 28 July 2023).

51 Deakin University, *Submission 25*, p. 6.

52 Fenner School for Environment and Society, *Submission 69*, p. 5.

53 NSW Government, *Submission 361*, p. 2.

54 Australian Alps National Parks, *Water Catchment and the Australian Alps Factsheet* (accessed 28 July 2023).

55 Commonwealth of Australia Gazette, *No. S237*, *Friday 7 November 2008*.

Murrumbidgee catchment, houses part of the Snowy Mountains Hydro-electric Scheme.[56]

3.45 The source of the Murrumbidgee is in the Australian Alps, with an annual average rainfall in the cool temperate alpine regions of 1,600 mm. Melted snow from the alpine mountains contributes to the water supply in the catchment. Surface water makes up 98 per cent of water resources for the ACT.[57]

3.46 Icon Water (the ACT's supplier of drinking water and wastewater services) noted the 'importance of the Australian Alps as an ecological community in supplying quality raw water to the catchment'.[58]

3.47 The Commonwealth and Public Sector Union (CPSU) argued that the degradation of waterways by feral horses affects public health:

> It is more than an environmental issue, but a public health issue for our national capital to have horses' waste, increased sediment and reduced vegetation filtration, flow and volume in the water catchment.[59]

3.48 Deakin University described the damage caused by feral horses to waterways as leading to bare, unvegetated areas that diminish the catchment conditions:

> Ultimately, this leads to the loss of the functional, hydrological and water filtering role of these groundwater fed ecosystems and diminishes the reliability of high-quality water yields downstream. The damage being caused to these water-dependent ecosystems is comparable to the worst historic damage by domestic sheep and cattle grazing pressures that triggered the removal of stock from the Kosciuszko National Park, beginning in the late 1950s.[60]

3.49 Trampling and grazing increase water turbidity, which affects water quality at the site of the trampling and also downstream. The Australian Academy of Science highlighted studies conducted outside the Australian Alps region which demonstrated that in some cases 'horse affected waterways peaked at 50 times the national turbidity guideline, with summer seasonal averages seen at 8 times the national guideline'.[61]

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56 Murray Darling Basin Authority (MDBA), *Murrumbidgee* (accessed 10 July 2023).

57 Bureau of Meteorology, *National Water Account 2017 Canberra: geographic information* (accessed 30 June 2023).

58 Icon Water, *Submission 1*, p. 2.

59 Commonwealth and Public Sector Union (CPSU), *Submission 87*, p. 3.

60 Deakin University, *Submission 25*, p. 6.

61 Australian Academy of Science, answers to questions on notice, 7 September (received 20 September 2023).

Impact on Indigenous cultural heritage

3.50 The significance of Indigenous cultural heritage in the Australian Alps has been recognised in the National Heritage listing, and in the management plans of the states and territory who share management of the area.

3.51 Indigenous heritage values in National Heritage listed places are protected, by the EPBC Act, from actions which may have a significant impact on them.[62] These are assessed and managed through cooperation, particularly with Indigenous people, as set out in the National Heritage management principles:

> Indigenous people are the primary source of information on the value of their heritage and the active participation of Indigenous people in identification, assessment and management is integral to the effective protection of indigenous heritage values.[63]

3.52 The National Heritage listing for the Australian Alps recognises that it is the site of historic gatherings of Indigenous peoples for ceremonies such as the bogong moth feasting.[64] DCCEEW noted that 'there is a high risk that an excessive number of feral horses in the Australian Alps poses a danger to important First Nations heritage values', and added that the area has significant connections to Indigenous culture:

> More than 18 First Nations clan groups from across south-eastern Australia have social or spiritual connections to the Australian Alps as part of their traditional country or a place in which they have other rights. First Nations people view the Australian Alps as a country interconnected by dreaming stories and ceremonial paths. The landscape is associated with places of spiritual significance and creation ancestors and the Australian Alps have been a meeting place for several nations, where traditional practices have been carried out.[65]

3.53 In addition to the gazetted National Heritage values, DCCEEW noted the following Indigenous cultural heritage connections in the Alps:

> While not included in the gazetted National Heritage values of the place, First Nations people have identified many places of value within the Australian Alps National Parks and Reserves National Heritage place, such as dreaming trails, spiritual places, ceremonial places, story places, named places, birthing places, food and medicine collection localities, raw material collection localities, and men's and women's places.[66]

3.54 Mr James Blackwell, an Indigenous Diplomacy Research Fellow at the Australian National University, identified that feral horses cause damage to the

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62 EPBC Act, subsection 15B(4).

63 EPBC Regulations, Regulation 10.01E.

64 Commonwealth of Australia Gazette, *No. S237, Friday 7 November 2008*.

65 DCCEEW, *Submission 23*, p. 8.

66 DCCEEW, *Submission 23*, p. 8.

cultural heritage of Indigenous peoples within the alpine region, and noted rivers in the region that are of cultural significance to Ngunnuwal, Ngarigo, Ngambri, Wiradyuri, Jaithmathang and others.[67] Mr Blackwell explained that sites where communities would gather for ceremonies, to share knowledge and to trade are now 'overrun by horses' and not able to be used:

> As a Wiradyuri person, country is more than just the mere land itself, but everything on and within it; the rivers, the rocks, the plants, and the animals.
>
> We are tasked to preserve all of these things, and respect our country, and the country of others. To see and experience the Australian Alps degraded to such a point that it is now hurts every single one of us. It is a pain and an anguish over the state of our country, and our neighbours' country. It is something which offends us, and also which must be rectified if we are to live in harmony with our law again. The damage to the Alpine region is not just environmental. It is also the cultural destruction of the Indigenous peoples of the region. We are our country; if it is damaged and destroyed, so too are we damaged and destroyed.[68]

3.55 Mr Blackwell elaborated on the destruction being caused to Indigenous cultural heritage in the area, arguing that feral horses should not be given prominence over 65,000 years of Indigenous culture:

> We have responsibility to these places for future generations and to mitigate damage done to them, and we know what is causing the most damage in the alpine region: feral horses. Our cultural heritage is at risk, and the main thing preventing us fixing it is an idea that feral horses are somehow themselves worthy of protection. They are not. They are not part of this place, and they do not belong there. To argue they are worthy of protection due to the settler heritage of the region both ignores and disrespects our Indigenous cultural heritage, which has existed for over 65,000 years. It also places the environment below the said heritage. It is like arguing against cane toad management so as to preserve the cultural heritage of the Queensland sugarcane industry.[69]

3.56 The Jaithmathang Traditional Ancestral Bloodline Original Owners First Nation Aboriginal Corporation (Jaithmathang) told the committee about the impact of feral horses in the Alpine, Bogong and Omeo High Plains Country, and detailed the damage to their traditional lands caused by feral horses:

> It only takes a moment after seeing these horses in flight to imagine the amount of damage done to Bimble when 4 hoofs under a weight of a horse that weighs in the average vicinity of 700 to 1,000 kilos and can travel at speeds of 88kms without a rider and averaging 55kms with a rider. Multiply this with the current numbers of horses in the Victoria Alps it becomes mind boggling, having our home ripped up. Our pristine flora is eaten and defecated on, and our fauna habitats destroyed, leaving our slow recovering

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67 Mr James Blackwell, *Submission 82*, p. 2.

68 Mr James Blackwell, *Submission 82*, p. 2.

69 Mr James Blackwell, Private capacity, *Proof Committee Hansard,* 23 August 2023, pp. 21–22.

> sacred totems and environment traumatised and devastated with additional problems of erosion as well as hardened impacted soils. Then they urinate and defecated daily whenever it suits them.[70]

3.57 Noting the damage done by the presence of feral horses, and their origin in a colonial past, Jaithmathang expressed sympathy for the horses themselves, and stated that they are simply in the wrong place at the wrong time:

> In saying this Jaithmathang are very saddened in our heart that the horse who has been used and abused and discarded and now having to pay the ultimate sacrifice for being on the wrong continent, at the wrong place, at the wrong time, mainly through the ignorance of an Australian society who see them as more iconic than us Jaithmathang human beings.[71]

3.58 Associate Professor Richard Swain, Indigenous Ambassador for the Invasive Species Council, described the anguish caused by the lack of effective management of feral horses in the Australian Alps:

> It's 2023 and, for cultural reasons, we [the former NSW Government] are protecting feral horses within our national parks. It hurts me. It saddens me. It undoes what we could have been. We could have been a nation that had some connection to country. We could have been a nation that cared. There is a reason nobody probably drove across a river that's drinkable today. That's Australia's culture. We are protecting feral horses within the national parks under cultural and heritage values. It was a poem. It was a movie. The reality of the grazing era was not true. Grazing doesn't prevent blazing; it caused the blaze.
>
> We have one of the highest extinction rates in the world. We've lost, I think, 17 species since I was born…I'm here to ask this of you, the Senate of this country. If this country is not our water, our soil and the species that evolved here then what is it? There is a reason when we get a new immigrant to Australia that they need to know Bradman's average but they're not asked to pick up some soil and commit to the responsibility of custodianship. That reason is we don't even expect it of ourselves, and it's time we changed…
>
> This can't be about politics. If this isn't the decade of healing country it will be a decade of saying goodbye. We're going to need courageous political decisions...[72]

Committee comment

3.59 Through overgrazing, trampling and wallowing, feral horses are destroying vital habitat and food sources for critically endangered, endangered and vulnerable species protected at the Commonwealth and state levels. Feral horses

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70 Jaithmathang, *Submission 85*, p. 7.

71 Jaithmathang, *Submission 85*, p. 7.

72 Associate Professor Richard Swain, Indigenous Ambassador for the Invasive Species Council, *Proof Committee Hansard,* 23 August 2023, p. 20.

could be the difference between survival and extinction for up to a dozen threatened species found only in the Australian Alps.

3.60 As recognised in the National Heritage listing for the Australian Alps, this area is the site of historic gatherings of Indigenous peoples for ceremonies such as the bogong moth feasting, and the committee heard that Indigenous culture stretching 65,000 years has been ignored and disrespected through the increasing populations of feral horses. Sites used for ceremonies and gatherings are now not able to be used by Indigenous communities due to the damage caused by feral horses.

3.61 Waterways, which not only provide vital habitat for the critically endangered corroboree frogs and threatened plant species but also provide drinking water into our catchments, are degraded by the hard hooves of feral horses. Some of the species relying on the immediate health of waterways in the Australian Alps include the critically endangered Stocky Galaxias, which are only found in one small waterway inside the NSW horse retention area.

3.62 The quality of drinking water for a large portion of the Murray-Darling Basin is under threat from the high feral horse population in the Australian Alps. Australia is the driest inhabited continent on earth, and our water resources are precious and should be protected from pollution and damage from feral animals.

3.63 The unmanaged presence of high populations of feral horses causes compounding damage, endangering native threatened species and increasing their risk of extinction. Further, it threatens unique Indigenous cultural heritage, and degrades vital water resources.

3.64 The committee discusses the management of feral horses in the next chapter, including the NSW Government's management plan to significantly reduce the numbers of feral horses in the KNP.

3.65 Further committee comments and recommendations are made in Chapter 7.

Chapter 4
Advocate views of feral horses

Overview

4.1 During the course of the inquiry, advocates of feral horses set out a number of arguments for their retention in national parks.[1]

4.2 Advocate views on population estimates are set out in Chapter 2.

Purported benefits of feral horses

4.3 Advocates for retaining feral horses in the Australian Alps were of the view that feral horses 'should be treated differently to other introduced animals' and managed as horses by horsemen, as they hold cultural and symbolic significance to some parts of the community.[2]

4.4 Advocates for retaining feral horses argued that the presence of feral horses is beneficial for the environment by spreading seeds and nutrient-rich dung across the Alps, which was said to feed the plants and animals in the area.[3]

4.5 Other purported benefits of the presence of feral horses in the Alps included: removal of flammable vegetation by grazing, which could prevent bushfires; addition of moist dung to the environment which provides moisture to the air; detection of water which other animals can then access; the creation of natural water catchments through wallowing, which could be used by tadpoles; and, the creation of pathways through forest which could be used by kangaroos.[4]

4.6 The Snowy Mountains Horse Riders Association contended that feral horses should be considered part of the national park:

> The park was declared 150 years after the introduction of brumbies. The brumbies were a part of the park at the time and therefore a part of the deal.[5]

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1 As set out in Chapter 1, this report uses the term 'feral horse' due to that term's use by the Australian Government. 'Feral horse' is also used in the inquiry's terms of reference, and the committee notes that the Federal Court did not support the use of the term 'wild horse'. Advocates have a strong connection to the term 'brumby', and this term can be seen in quotations from those who support the retention of feral horses.

2 Snowy Mountains Horse Riders Association, *Submission 52*, p. 11.

3 See, for example, Wild Horses Kimberly Inc., *Submission 6*, p. 2.

4 Wild Horses Kimberly Inc., *Submission 6*, pp. 2 and 5; Ms Jill Pickering, President, Australian Brumby Alliance Inc., *Proof Committee Hansard*, 23 August 2023, p. 13; Mr Dean Marsland, Brumby Action Group, *Proof Committee Hansard*, 23 August 2023, p. 16.

5 Snowy Mountains Horse Riders Association, *Submission 52*, p. 1.

4.7 Advocates for retaining feral horses in the Australian Alps National Parks and Reserves considered that there were ecological, social and economic benefits to their retention in a National Heritage listed place. For example, the Snowy Mountains Horse Riders Association set out the following:

> Ecological Restoration: Large herbivores, such as horses when managed, can play a critical role in restoring degraded ecosystems. They can help control plant species and promote the growth of native grasses and vegetation by selectively grazing on certain plants and facilitating seed dispersal and nutrient cycling through their dung and urine…
>
> Ecosystem Resilience: Horses can enhance the resilience of ecosystems to disturbances, such as fire and drought. For example, their selective grazing of coarse grasses and woody plants help reduce fuel loads and alter fuel continuity, potentially reducing the intensity and spread of wildfires…
>
> Carbon Sequestration: Large herbivores can play a role in carbon sequestration, which is the process of removing carbon dioxide from the atmosphere and storing it in vegetation and soils. By promoting the growth of native vegetation, large herbivores can contribute to carbon sequestration, which can help mitigate climate change.
>
> Ecotourism and Cultural Heritage Values: Brumbies can also have socio-economic benefits, such as supporting ecotourism opportunities and cultural heritage values. Brumbies are iconic species that are valued by the community and tourists alike for their cultural significance, recreational viewing opportunities, and potential mental health and economic benefits.[6]

4.8 Wild Horses Kimberly Inc. expanded on the claim that the undecomposed seeds of native plants are dispersed by feral horse dung, stating that these plant species are able to proliferate over a more 'extensive geographical area than [they] would were it not for the [feral horses].'[7]

4.9 Wild Horses Kimberly Inc. also contended that horses provide natural fire management by forming firebreaks when they travel in a line as a herd, and by reducing the fuel load of areas that they graze on.[8]

4.10 The views of horse advocates were elaborated on at the public hearing. Ms Marilyn Nuske stated that 'they are a special class of an introduced species that have had a special relationship with the people who first settled this country, and with animals with which they have been living in the Australian alpine park'.[9]

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6 Snowy Mountains Horse Riders Association, *Submission 52*, pp. 9–10.

7 Wild Horses Kimberly Inc., *Submission 6*, pp. 1–2.

8 Wild Horses Kimberly Inc., *Submission 6*, p. 5.

9 Ms Marilyn Nuske, Brumby Action Group, *Proof Committee Hansard*, 23 August 2023, p. 14.

4.11 Ms Nuske considered that feral horses should be given 'special consideration'. Mr Dean Marsland argued that the impact of feral horses should take into account benefits:

> …there will be negative connotation, 'It's a manure pile.' A positive connotation is that it's fertiliser, roughage and fibre going back into the topsoil, which enriches the topsoil to support our native vegetation, which then supports our native wildlife. The dung piles encourage insects which again feed frogs and lizards because they carry the manure deeper into the soils. Why have we got into this realm where people will always look at the negative connotation of words like 'impact' and ignore all the positive impacts these horses actually have on that environment? I see time and time again symbiotic relationships between our brumbies and the environments they live in.[10]

4.12 Ms Jill Pickering from the Australian Brumby Alliance argued that her organisation supports management but not eradication of feral horses:

> They [feral horses] can be negative, but it's the proportion of the species that's there. Too many humans would be disastrous. That's why we certainly don't support leaving them unmanaged. We expect them to be managed but not managed to extinction, which is the current interpretation of 'management'. Managed to sustainable levels.[11]

4.13 Dr David Berman, who was cited by several horse advocates in submissions and a public hearing as an authority on the ecological impacts of feral horses, asserted that 'feral horses must not be protected at the expense of other values of the [Kosciusko National Park]' under the *Wild Horse Heritage Act 2018* (NSW). Dr Berman further argued that insufficient funding has been allocated to studying how horses influence their environment, leading to a paucity of evidence on negative and potential positive impacts on native flora and fauna, soil and water. He claims more work needs to be done to ensure that assessments of the impact of feral horses on other natural values protected under NSW legislation are accurate, and the appropriate horse management actions are taken.[12]

4.14 In arguing that that there is a lack of evidence that feral horses negatively impact other natural values, Dr Berman stated that the findings of studies that show negative correlations between feral horse activity and endangered animal activity could be explained by confounding factors or alternative causes, such as differing habitat preferences.[13]

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10 Mr Dean Marsland, Brumby Action Group, *Proof Committee Hansard*, 23 August 2023, p. 16.

11 Ms Jill Pickering, Australian Brumby Alliance Inc., *Proof Committee Hansard*, 23 August 2023, p. 15.

12 Dr David Berman, *Submission 602*, pp. 1–3.

13 Dr David Berman, *Submission 602*, pp. 3–4.

4.15 The methods of feral horse population control most commonly proposed by horse advocates were rehoming and fertility control. These methods are discussed in Chapter 5 of this report.

Feral horses in Australia's cultural history

4.16 Advocates for feral horses drew attention to references to their presence in Australia's written and oral culture since the 1800s. Herds of feral horses appeared in the Australian alpine region after colonisation, as horses were either abandoned or escaped into the area. Escape was a common occurrence, as the pastoralists of early colonial Australia usually grazed stock on unfenced land.[14]

4.17 These horses have garnered a range of social and cultural associations, which have changed over time. In the mid-19th century, feral horses were viewed by many settler farmers as a pest in need of eradication. In an article titled 'the Horse Question' published in the *Queanbeyan Age* in 1870, a veterinary surgeon wrote that there were 'no two opinions' regarding the management of feral horses, 'except about the easiest way of extinguishing them'.[15]

4.18 The 1890 poem 'The Man from Snowy River' by A.B. 'Banjo' Paterson gave a cultural importance to the Australian alpine region,[16] portraying what remained of the free-ranging pastoralism that dominated an earlier period of Australian settlement.[17] Central to this portrayal is the man from Snowy River's pursuit of 'wild bush horses' over mountainous terrain.

4.19 Banjo Paterson, a mob of feral horses being pursued by a horseman, and an excerpt from the Man from Snowy River appear on the $10 banknote introduced in 1993.[18]

4.20 Horse advocacy groups claim that many feral horses were captured and drafted for service as light horse mounts in WWI.[19] However, military records indicate that the Australian Imperial Forces only recruited horses from professional

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14 Department of Sustainability, Environment, Water, Population and Communities (DSEWPC), *Feral Horse and Feral Donkey fact sheet*, 2011, p. 1.

15 J. Pottie, 'The Horse Question', *Queanbeyan Age*, 20 January 1870.

16 A.B. 'Banjo' Paterson, The Man from Snowy River and Other Verses, Angus and Robertson, Sydney, 1895, pp. 3–9. For other cultural works that prominently feature feral horses see Elyne Mitchell's 'Silver Brumby' series of novels, which are set in the Snowy Mountains.

17 Context Pty Ltd, *National Cultural Heritage Values Assessment & Conflicting Values Report*, December 2015, pp. 45–46.

18 Reserve Bank of Australia, *Banknotes in Circulation - $10 Banknote*, (accessed 11 August 2023). The depiction of feral horses and excerpt from The Man from Snowy River were removed from the updated $10 banknote issued in 2017, while Mr Paterson and what is described as a 'horseman from the era of Paterson's writing' remained.

19 For example the Australian Brumby Alliance, *Origins of Australia's Wild Horses – Kosciuszko's Snowy Brumby*, 4 March 2016, pp. 1–2.

breeders,[20] and that these horses were destroyed or transferred to the Syrian and Egyptian imperial authorities after the war.[21]

4.21 The opening ceremony of the 2000 Olympic games in Sydney was opened with a procession of 120 stock horses. The horses were ridden into the stadium to the music from the 1982 film adaption of The Man from Snowy River.[22]

Committee comment

4.22 The committee acknowledges the views held by feral horse advocates about their presence in the Australian Alps. Many submissions, and evidence provided at a public hearing, related the deep connection felt with horses in the Alpine region, and in particular, in Kosciuszko National Park.

4.23 Feral horses have been present in the Alpine region since their initial introduction in the 19th century, and many families and communities have strong memories associated with their presence.

4.24 While horses are associated with more recent Australian culture such as Banjo Paterson and the Sydney Olympics, they are not part of the Australian natural environment, which is protected through our designation of national parks and nature reserves.

4.25 Horses are not confined to living in the Australian Alps National Parks and Reserves, and as set out in Chapter 2, are able to survive in a variety of Australian landscapes. Critically endangered native species, however, do require the rare Alpine environment, having evolved over millions of years to survive there.

4.26 As made clear by strong scientific evidence, the committee understands that feral horses have a negative impact on the Australian Alps National Park and Reserves and the native species that live within it.

4.27 Further committee comments and recommendations are made in Chapter 7.

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20 Jean Bou, *Light Horse – A History of Australia's Mounted Arm*, Cambridge University Press, Melbourne, 2010, pp. 238–239.

21 Jean Bou, *Light Horse – A History of Australia's Mounted Arm*, Cambridge University Press, Melbourne, 2010, pp. 238–239.

22 ABC Newcastle, 'It was an absolute dream': how a Scone woman and her stockhorse became a part of the Sydney Olympic Games', *ABC*, 15 September 2020.

Chapter 5
Management of feral horses in the Australian Alps

Overview

5.1 The management of feral horse populations in the Australian Alps is a challenging matter due to different perceptions of the needs of the region and its use. These different views, which have been considered in the formation of state and territory policies, have led to a range of management methods of varying suitability to control the population size.

5.2 Without active management, feral horse populations are left unchecked to increase by 15–20 per cent per annum. The RSPCA noted the impacts of large populations competing for dwindling food sources due to drought:

> You have not only physical impacts but also mental impacts associated with loss in body condition and probably an increased prevalence of disease conditions. You also have animals competing aggressively over limited food resources, which can lead to fear, stress and anxiety. There's a combination of quite significant impacts in terms of animals being faced with limited food resources.[1]

5.3 In September 2023, the Bureau of Meteorology declared that an El Niño is underway, due to which Australia will experience warmer and drier conditions.[2] This will likely lead to a loss of food resources and competition for water between animals in the Australian Alps.

5.4 The Australian Government considers feral horses to be a serious environmental pest.[3] The Australian Government's *Australian Pest Management Strategy 2017–2027* sets out best practice management of pest animals (including feral horses) as one which 'balances efficacy, target specificity, safety, humaneness, community perceptions, efficiency, logistics and emergency needs'.[4]

5.5 The strategy's priorities focus on national action and coordination, best practice management, and increased participation in a coordinated management

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1 Dr Dianne Evans, Senior Scientific Officer, RSPCA Australia, *Proof Committee Hansard*, 23 August 2023, p. 10.

2 Bureau of Meteorology, *El Niño and positive Indian Ocean Dipole* (accessed 20 September 2023).

3 Department of Agriculture, Fisheries and Forestry (DAFF), *Submission 29*, p. 3.

4 Department of Agriculture and Water Resources, Invasive Plants and Animals Committee, *Australian Pest Animal Strategy 2017 to 2027*, 2016, p. 5.

approach.[5] The two key stages of effective management of established pest animals are set out as containment and asset protection.[6]

5.6 The Commonwealth Department of Agriculture, Fisheries and Forestry (DAFF) noted that animal welfare is essential when considering control techniques, and that animal welfare is a matter for the states and territories to legislate (except for livestock animals).[7] DAFF stated that 'differing perceptions about the suitability of control methods in the broader community…contributes to a challenging management environment'.[8]

5.7 The three land manager governments have significantly different approaches to the management of feral horses in the Australian Alps. The Victorian Government requires that exotic fauna are exterminated or controlled when they are found to be residing within the boundaries of a national park.[9] Active feral horse management is undertaken by Parks Victoria, with a target of the complete removal of feral horses from the Bogong High Plains, and a significant reduction in the number of feral horses in the other Victorian Alpine areas.[10]

5.8 The ACT has no current known populations of feral horses, and undertakes active monitoring of borders shared with NSW. The ACT's zero-tolerance policy towards feral horses is discussed below.

5.9 Contrary to the approach taken by the ACT and Victorian Governments, the NSW *Kosciuszko Wild Horse Heritage Act 2018* (NSW Wild Horse Heritage Act), which was enacted under the former Berejiklian Government, has the sole object to 'recognise the heritage value of sustainable wild horse populations within parts of Kosciuszko National Park'.

5.10 This chapter examines:

- current management methods for feral horse population control in the Australian Alps;
- existing feral horse management arrangements in New South Wales, Victoria and the ACT;
- staffing levels in the Australian Alps National Parks and Reserves; and
- evidence relating to the treatment of staff in these parks and reserves.

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5 Department of Agriculture and Water Resources, Invasive Plants and Animals Committee, *Australian Pest Animal Strategy 2017 to 2027*, 2016, p. 6.

6 Department of Agriculture and Water Resources, Invasive Plants and Animals Committee, *Australian Pest Animal Strategy 2017 to 2027*, 2016, p. 25.

7 DAFF, *Submission 29*, p. 5.

8 DAFF, *Submission 29*, p. 4.

9 Parks Victoria, *Submission 91*, p. 3.

10 Parks Victoria, *Protection of the Alpine National Park: Feral Horse Action Plan 2021*, p. 3.

Current management methods

5.11 The need for active management of feral horse populations reflects their high reproduction rate, lack of natural predators, and prevention of poor animal welfare outcomes associated with prolonged drought and starvation. Feral horses are also impacted by major climatic events such as bushfires.

5.12 Associate Professor Richard Swain, Indigenous Ambassador for the Invasive Species Council, described a situation in 2018, in the lead up to the Black Summer bushfires, in which feral horses were suffering from extreme weather conditions:

> We had to paddle [on the alpine rivers] through all the dead horses. There were dead and dying horses all through the water. I did learn from a horse expert that they'd come down because their stomachs were irritated. They drank a lot of water and then they collapsed into the water.[11]

5.13 Mr Jack Gough, Advocacy Manager at the Invasive Species Council, explained that human intervention in the feral horse population size is critical:

> The only way we will get on top of this population is through human intervention. As I said, it's a difficult decision, and we acknowledge that. It is not something that is easy to talk about—killing feral animals. We find that to be an issue when talking to the public about the management of feral pigs and feral deer—the fact that this is a choice we have to make because if we do not make it then we see the decline of our native species and our native environments.[12]

5.14 The need for immediate action was set out by the Australian Veterinary Association (AVA), which stated that 'the next year or two is critical, as delaying implementation of control carries a welfare cost due to the number of horses born in that time only to be subsequently culled'.[13]

5.15 The main methods currently employed in controlling populations of feral horses include: ground or aerial shooting; trapping, transportation and then either re-homing or euthanising if rehoming is not available; and limiting the animal's ability to reproduce through fertility control.

5.16 DAFF set out that a range of factors are considered in the selection of a management method, including: number of horses; mob size and age structure; accessibility; terrain; impacts; and, season. When considering control methods,

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[11] Associate Professor Richard Swain, Indigenous Ambassador, Invasive Species Council, *Proof Committee Hansard*, 23 August 2023, p. 22.

[12] Mr Jack Gough, Advocacy Manager, Invasive Species Council, *Proof Committee Hansard*, 23 August 2023, p. 5.

[13] Australian Veterinary Association (AVA), *Submission 58*, p. 4.

the humane treatment of horses, the safety of people involved in operations, efficiency, and available resources (including existing infrastructure) are key.[14]

5.17 In all control methods, the consideration of animal welfare should be taken into consideration to ensure that the techniques are performed humanely. Model Codes of Practice (CoPs) and Standard Operating Procedures (SOPs) were developed by the Environment and Invasives Committee (EIC), and led by the NSW Department of Primary Industries, and endorsed by the former cross-jurisdictional Ministerial Standing Council on Primary Industries in 2012. These CoPs and SOPs are consistent with the Australian Animal Welfare Strategy.[15]

5.18 The CoPs note the high level of public scrutiny that the management of feral horses receive, and consider that control strategies need to take into account the viewpoints of interested groups. The CoPs set out that control methods should be sustained and take into account 'three essential requirements': necessity, effectiveness and humaneness.[16]

5.19 When choosing the control technique to be employed in feral horse management, consideration of the animal and the potential to suffer must be considered, along with the type of terrain and the need for the method to be undertaken correctly:

> Feral horse control techniques have the potential to cause animals to suffer. To minimise this suffering the most humane techniques that will achieve the control program's aims must be used. This will be the technique that causes the least amount of pain and suffering to the target animal with the least harm or risk to non-target animals, people and the environment.[17]

5.20 Control techniques have been assessed for the acceptability of the technique with regard to humaneness (when used correctly), efficacy, target specificity and cost-effectiveness.[18]

5.21 The Independent Technical Research Group (ITRG) in 2016 reviewed the range of control methods for feral horses, and assessed their impact on animal welfare. The ITRG found three methods not to be sufficiently humane for application in the park: roping (brumby running); loading and transport (long journeys); and aerial shooting where the animal cannot be rapidly shot.[19]

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14 DAFF, *Submission 29*, p. 4.

15 DAFF, *Submission 29*, p. 5.

16 PestSmart, *Model Codes of Practice* (accessed 28 August 2023).

17 PestSmart, *Model Codes of Practice* (accessed 28 August 2023).

18 PestSmart, *Model Codes of Practice* (accessed 28 August 2023).

19 Office of Environment and Heritage (OEH), NSW, *Final report of the Independent Technical Reference Group Supplementary to the Kosciuszko National Park Wild Horse Management Plan*, 2016, p. 15.

Ground and aerial shooting

5.22 Specific SOPs are in place for both ground and aerial shooting of feral horses. With regard to both ground and aerial shooting, the SOPs set out that the timing is recommended to be timed to avoid the death of mares with young foals.[20]

Ground shooting

5.23 For ground shooting, the following has been set out:

> Ground shooting is best suited to accessible and relatively flat areas where there are low numbers of problem horses. It is also used for euthanasia of sick or injured horses. It involves the shooter approaching a group of horses on foot with the intention of culling all the animals in the group. Shooting from a helicopter is considered a more humane control method, as mobile wounded animals can be promptly located and killed. It is also a more effective method of quickly reducing feral horse populations.[21]

5.24 Under the CoPs, ground shooting has been rated as being acceptable with regard to humaneness but not effective in general, nor cost-effective.[22] Animal welfare considerations in the SOPs relating to ground shooting include:

- the skill of the shooter will determine the humaneness of the method
- appropriate firearms and ammunition should be used
- the animal must be clearly visible and the shooter must be assured that a single shot can be taken
- only head (brain) and chest (heart/lung) shots must be used
- the humaneness of the killing of the animal will be affected by group flight responses, and all horses in the group should be killed before the next group is targeted
- wounded horses must be located and killed as quickly as possible[23]

Aerial shooting

5.25 Aerial shooting of feral and pest animals is widely used in Australia as it can be a humane and cost-effective method of managing invasive species.[24] Aerial shooting is rated in the CoPs as being acceptable with regard to humaneness (conditional on the skill level of the shooter), effective in general but expensive in some conditions. It is a target-specific method of control, '[s]uitable for extensive areas and inaccessible country' and is the '[m]ost effective way of achieving quick, large scale culling'.[25]

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20 PestSmart, *Ground Shooting of Feral Horses (Hor001) Standard Operating Procedure*, p. 1.

21 PestSmart, *Ground Shooting of Feral Horses (Hor001) Standard Operating Procedure*, p. 1.

22 PestSmart, *Model Codes of Practice* (accessed 28 August 2023).

23 PestSmart, *Ground Shooting of Feral Horses (Hor001) Standard Operating Procedure*, p. 1.

24 Dr Mike Braysher and Mr Terry Korn PSM, *Submission 8*, p. 5.

25 PestSmart, *Model Codes of Practice* (accessed 28 August 2023).

5.26 Aerial shooting SOPs set out that it can be a humane method when conditions are met, and that shooting should be part of a coordinated program to achieve sustained effective control.[26]

5.27 Animal welfare considerations in the SOPs relating to aerial shooting are similar to those for ground shooting, but with the additions that the terrain should suit the method, and a 'a deliberate policy of "overkill" should be used, in which a minimum of two shots should be used per animal'.[27]

5.28 The RSPCA noted a study which set out that, in relation to aerial shooting of horses, an 'instant' death was achieved for 63 per cent of horses. The mean time of a 'non-instantaneous' death was 19 seconds (with a range of 3 seconds to 4 minutes). The total time, including the pursuit of the horse, had a mean of 80 seconds (with a range of 2 seconds to 10 minutes).[28] Regarding ground shooting, the RSPCA submitted that there are 'currently no published studies on the welfare outcomes for…feral horses'.[29]

5.29 The ITRG found that aerial shooting would be the most suitable lethal control method, if certain conditions were met, such as shooter and pilot training:

> If lethal control is required, we found that best practice aerial shooting had the least potential adverse impact on wild horses, noting however that this is currently out of scope for KNP. This was dependent on a number of conditions being in place including suitable vegetation, adherence to specific standards and the use of highly trained and competent pilots and shooters. Where these conditions are not achievable, ground shooting, or passive trapping/mustering followed by on-site humane killing were the next best options.[30]

5.30 In NSW, aerial shooting is used to control a variety of pest species including cats, foxes, deer, pigs and goats. The NSW Government submitted that aerial shooting was used for more than 87 per cent of the feral deer and pigs removed from KNP under its feral animal control program, the largest program it has conducted.[31]

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26 PestSmart, *Aerial Shooting of Feral Horses (Hor002) Standard Operating Procedure*, p. 1.

27 PestSmart, *Aerial Shooting of Feral Horses (Hor002) Standard Operating Procedure*, p. 2.

28 RSPCA, *Submission 84*, p. 8.

29 RSPCA, *Submission 84*, p. 8.

30 OEH, NSW, *Final report of the Independent Technical Reference Group Supplementary to the Kosciuszko National Park Wild Horse Management Plan*, 2016, p. 15.

31 NSW Government, *Submission 361*, p. 9.

5.31 In the three years to the end of 2022, more than 10,000 pigs and 6,800 deer were removed from KNP. In the last twelve months, more than 1,500 hours of shooting were conducted without 'any significant welfare issues'.[32]

5.32 The Invasive Species Council outlined feral animal aerial control arrangements in other parts of NSW, including for feral horses:

> …while aerial control of feral horses is not currently permitted in Kosciuszko National Park, it is both a routine and effective part of feral animal management across the state.[33]

5.33 The Invasive Species Council's analysis of NSW Government data, covering the activities of NPWS and the Local Land Services, show that aerial shooting was used for 88 per cent of a total of 271,959 feral animals removed across NSW over the three-year period between July 2020 and June 2023.[34]

5.34 The *Kosciuszko National Park Wild Horse Heritage Management Plan* (Kosciuszko Management Plan) does not approve its use in KNP. It does however note that 'if undertaken in accordance with best practice, aerial shooting can have the lowest negative animal welfare impacts of all lethal control methods'. The plan sets out that the risk in using aerial shooting is the potential 'loss of the social licence to remove the wild horses from the national park'.[35] As noted below, the NSW Government has recently conducted public consultations on a proposal to use aerial shooting.

5.35 In Victoria, Parks Victoria is responsible for reaching the target of the complete removal of feral horses from the Bogong High Plains and a significant reduction in the number of feral horses in the other Victorian Alpine areas.[36] Feral horses are removed via a mixture of ground shooting by skilled professional shooters, capture and rehoming, and euthanasia on welfare grounds. All feral horse management operations follow strict safety and welfare protocols.[37] As noted below, aerial shooting of feral horses is permitted in Victoria but has not been used.[38]

5.36 In the ACT, ACT Parks staff are authorised to trap, muster, remove and lethally control feral horse population in Namadgi National Park. The preferred and

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[32] Mr Atticus Fleming, Acting Coordinator-General, Environment and Heritage Group, NSW Department of Planning and Environment, *Proof Committee Hansard*, 23 August 2023, p. 27.

[33] Invasive Species Council, *Supplementary Submission 76.2*, p. 1.

[34] Invasive Species Council, *Supplementary Submission 76.2*, p. 1.

[35] National Parks and Wildlife Service (NPWS), *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021, p. 20.

[36] Victorian Government, *Protection of the Alpine National Park: Feral Horse Action Plan 2021.*

[37] Victorian Government, *Submission 91*, p. 3.

[38] Parks Victoria, answers to questions on notice, 7 September 2023 (received 15 September 2023).

most ethical method is via ground and aerial shooting.[39] Since 2020, two horses have been shot within Namadgi National Park, and there are no established populations of feral horses in the ACT.[40]

Views on aerial shooting

5.37 Deakin University highlighted that feral horses face the threat of starvation during drought, and that aerial shooting is an option used to control populations in other jurisdictions:

> Ethically, aerial culling trades off a small and quantified level of animal suffering against the more prolonged suffering of horses that die during drought, while suffering of native animals displaced by feral horse damage to water catchments and degradation of threatened ecosystems continues, as does the risk of extinction of threatened native species.[41]

5.38 The Australian Veterinary Association (AVA) supported the use of aerial and ground shooting 'in the appropriate circumstances, if that method is justified and is used in connection with the most relevant, best practice standard operating procedures and codes of practice'.[42] Further, where there are large numbers of horses, 'the advantages of aerial culling are significant to improve the welfare outcomes of the horses, because they significantly shorten the lead-up time'.[43]

5.39 The AVA also addressed suggestions that barbiturates would be more humane than shooting, given that this approach would involve mustering, positioning the animal and then administering the drug. Although the final death from barbiturates would likely be swift, the first two of these interventions could be prolonged and cause unnecessary stress for the animals.[44]

5.40 The high feral horse population, which has resulted from the failure to control animal numbers in KNP, has led to a greater overall challenge in reducing the current population. Restoration Decade Alliance expressed the view that:

> It is important to understand that far fewer horses would ultimately be killed if higher proportions of the total population were culled earlier in a control program rather than leaving these animals to breed higher

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39 ACT Government, *Submission 83*, p. 2.

40 ACT Government, *Submission 83*, p. 3; ACT Government, answers to questions on notice, 7 September 2023 (received 15 September 2023).

41 Deakin University, *Submission 25*, p. 2.

42 Dr Michael Banyard, Conservation Biology Special Interest Group Representative, Australian Veterinary Association (AVA), *Proof Committee Hansard,* 23 August 2023, p. 11.

43 Dr Michael Banyard, AVA, *Proof Committee Hansard,* 23 August 2023, p. 11.

44 Dr Michael Banyard, AVA, *Proof Committee Hansard,* 23 August 2023, p. 12.

> populations, which would require higher levels of culling to bring the population down to an acceptable level.[45]

5.41 Many organisations and academics highlighted the need to move to aerial shooting, in addition to ground shooting, of feral horses in the Australian Alps in order to address the high numbers currently present.[46] For instance, Dr Braysher and Mr Korn, experienced pest policy managers, advocated for aerial shooting and aerial mustering to be added as control methods in NSW.[47]

5.42 Snowy Vale Incorporated, a group of 30 individuals who make use of a rural property adjacent to KNP, stated that it was time to move to aerial shooting:

> Animal welfare does not need to be compromised but all means should be adopted to reduce the horse population as humanely as possible, including through aerial shooting by qualified professionals. The problem is so vast and urgent that if only constrained population management approaches are employed there will be further detriment to the environment.[48]

5.43 Deakin University set out that aerial shooting was now necessary due to the high and increasing population of feral horses:

> Aerial culling should be among the set of tools available for horse control, because it is a humane method that can facilitate the urgent, rapid reduction of horse numbers. Aerial culling is cost effective and can be applied at the large scale that is necessary, after decades of inaction. Rapid reduction of horse numbers is critical to enable the Australian Alps to begin recovering from feral horse impacts.[49]

5.44 Regarding cost effectiveness, the Invasive Species Council highlighted the vast cost differential between aerial shooting and trapping and live removal. According to the Council's cited figures, the former is 13 times more cost effective than the latter:

> Trapping and live removal of feral horses cost over $1,116 per horse in Kosciuszko National Park, while aerial shooting was estimated to be $85.50

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45 Restoration Decade Alliance, *Submission 86*, p. 2.

46 A sample of submissions advocating for aerial culling includes: Conservation Council ACT, *Submission 11*, p. 2; Monaro Acclimatisation Society, *Submission 12*, p. 3; Professor Don White, *Submission 17*, p. 2; Public Service Association of NSW, *Submission 20*, p. 4; Dr Peter Coyne, *Submission 22*, p. 2; Victorian National Parks Association, *Submission 24*, p. 1; Deakin University, *Submission 25*, p. 1; Bushwalking NSW Inc., *Submission 26*, p. 2; Willoughby Environmental Protection Association, *Submission 30*, p. 3; Canberra Bushwalking Club, *Submission 31*, p. 2; Australian Wildlife Society, *Submission 33*, p. 1; Nature Conservation Council, *Submission 34*, p. 2; and the Australasian Cave and Karst Management Association, *Submission 40*, p. 3.

47 Dr Mike Braysher and Mr Terry Korn PSM, *Submission 8*, p. 2.

48 Snowy Vale Incorporated, *Submission 38*, p. 1.

49 Deakin University, *Submission 25*, p. 1.

> per horse if used in the Australian Alps and found to be $143 per horse when used at the Singleton Army Base.[50]

Trapping and rehoming of feral horses

5.45 Advocates of retaining feral horses in the Australian Alps often argued for 'rehoming' into a domestic setting. The Kosciuszko Management Plan and Victorian feral horse management plan provide for the use of trapping and rehoming of feral horses. The Kosciuszko Management Plan sets out that removal from the park for rehoming is approved in the following circumstances:

> Where there is pre-identified demand from suitable and approved individuals or organisations for removed horses for rehoming.
>
> Areas that are safely accessible by vehicle with trailer and/or truck and where transport of live horses does not cause unacceptable welfare impacts.[51]

5.46 Where feral horses have been removed from KNP for rehoming, but that rehoming did not occur, they may be transported to an abattoir or knackery that meets specific animal welfare criteria. Between February 2022 and August 2023, 35 per cent of the 2,201 feral horses removed from KNP have been rehomed.[52] Parks Victoria 'does not support the live capture and transport of feral horses with an ultimate destination of culling at a knackery or abattoir'. Feral horses are not sent from the Victorian Alpine National Park to knackeries.[53]

5.47 In NSW, a person may apply to rehome more than five feral horses from KNP. Since 2002, more than 1,500 feral horses have been rehomed:

> These horses are removed from the park as wild and unhandled animals, unfamiliar with the human environment. Potential rehomers will need to ensure they have the necessary skills, facilities and resources to care for these wild animals and transition them to domestic life.[54]

5.48 Professor Don White argued that rehoming had been used in the Alps for over a decade but had 'consistently failed to reduce the population'. Professor White stated that the population of feral horses is too high for this method to be effective.[55] Similarly, Dr Peter Coyne, member of the World Commission on Protected Areas and the IUCN Invasive Species Specialist Group, commented that 'capture and removal of live horses is impossible in much of the park,

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50 Invasive Species Council, *Submission 76*, p. 19, in-text references omitted.

51 NPWS, *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021, p. 20.

52 NSW Government, answers to questions on notice, 23 August 2023 (received 22 September 2023).

53 Parks Victoria, answers to questions on notice, 7 September 2023 (received 15 September 2023).

54 NSW Government, *Rehome a Kosciuszko wild horse* (accessed 7 August 2023).

55 Professor Don White, *Submission 17*, p. 5.

would cause them immense stress, and faces limited potential rehoming horses'.[56]

5.49 Many inquiry participants highlighted the lack of options for taking feral horses from the Alps and rehoming them, with minimal demand for feral horses, and limited numbers of trainers with the skills, space and capacity to rehome large numbers of animals.[57]

5.50 No feral horses have been rehomed in the Victorian Alpine area since 2020, due to a combination of 'legal challenges (injunctions), the impact of bushfires and COVID-19 restrictions and the closure of the Bogong High Plains Road'.[58]

5.51 Save the Brumbies has rehomed more than 400 horses from KNP, and noted the challenges of operating this service:

> The problems facing the numerous rehoming groups are many, firstly the lack of interest and funding by Governments to enable such dedicated people to continue their life saving work to preserve such a vital and important part of our national Heritage.
>
> The financial costs to such groups that are animal welfare approved is high, many are unable to continue long term, i.e., the cost of transportation, initial horse handling, gelding of colts and stallions, adequate land, fencing, veterinary attendances, all of which are frequent and ongoing, creates a severe drain on available resources, thus resulting in well-meaning people being unable to continue to take horses for rehoming. Some initial seed funding and financial assistance by Government is an essential necessity going forward into the future.[59]

5.52 Due to the stress placed on feral horses during trapping and transport, Save the Brumbies no longer rehomes feral horses from KNP, and noted that the last group of feral horses they sought to rehome require high level care and have resulted in significant veterinary costs.[60] Ms Jan Carter, the President and Founder of Save the Brumbies, elaborated on these circumstances:

> We took 29 horses from Kosciuszko 18 months, two years, ago. Those wild horses were two days on the trucks. When they arrived, we had several injuries. Our vet bills were enormous. We still have three of those horses from those 29 that we will never be able to place on because of their injuries…[61]

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56 Dr Peter Coyne, *Submission 22*, p. 2.

57 For example: Victorian National Parks Association (VNPA), *Submission 24*, p. 1.

58 Parks Victoria, answers to questions on notice, 7 September 2023 (received 15 September 2023).

59 Save the Brumbies, *Submission 3*, p. 2.

60 Save the Brumbies, *Submission 3*, p. 4.

61 Ms Jan Carter, President, Save the Brumbies, *Proof Committee Hansard*, 23 August 2023, p. 19.

5.53 The AVA advised that '[t]echniques which involve mustering, transportation and prolonged handling of the animals contribute significantly to the stress of those animals prior to the finality of the situation'.[62]

Other management methods

5.54 Passive trapping is currently used in NSW in working towards its reduction targets. However, NSW Government officials explained that passive trapping for rehoming or which ended with the horses sent to a knackery does not have the effectiveness of other measures. Challenges facing passive trapping include identifying suitable trap locations, accessing areas with sufficient numbers of horses, and the introduction of ground shooting. Overall, these obstacles had led to higher total numbers of feral horses needing to be removed from KNP.[63]

5.55 Fertility control methods were also raised during the course of the inquiry. Fertility control has been investigated for use in Victoria, but was not found to be a solution.[64] The Kosciuszko Management Plan states that reproductive control is a potentially viable option, but only where the density of a feral horse population is low, and the objective is to reduce the population slowly, or maintain a low density.[65] Fertility control of feral horses is not undertaken in the ACT.[66]

5.56 Ms Jan Carter told the committee that fertility trials had been conducted privately:

> At the cost of $35,000, we ran a four-year fertility trial at our Armidale and New South Wales sanctuary…and we had a 95 per cent success rate… We presented this to the national parks… Parks were not interested. They said, 'No, we can't go there because, under legislation, once horses are trapped, they have to be removed from the park.' The horses can be trapped and darted with a 3 ml injection straight into the rump. I've done it myself. On top of that, we can inject a microchip number with a GPS tracker in their neck. Horses can be released. Using GPS, the park rangers can track those horses and follow the results. Parks were not interested. They said, 'No, we can't go there; it's too expensive.' It's not. This injection cost us $3 per shot. They wouldn't even listen to us.[67]

5.57 However, the Kosciuszko Management Plan that states:

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62 Dr Michael Banyard, AVA, *Proof Committee Hansard,* 23 August 2023, p. 11.

63 Mr Atticus Fleming, NSW Department of Planning and Environment, *Proof Committee Hansard*, 23 August 2023, p. 27.

64 Parks Victoria, answers to questions on notice, 7 September 2023 (received 15 September 2023).

65 NPWS, *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021, p. 20.

66 ACT Government, answers to questions on notice, 7 September 2023 (received 15 September 2023).

67 Ms Jan Carter, Save the Brumbies, *Proof Committee Hansard*, 23 August 2023, p. 18.

> Currently, there are no reproductive control methods available that are highly effective, easily delivered, affordable and do not alter the behaviour or physiology of horses in some way.[68]

5.58 In addition, Professor White explained that fertility control is unlikely to work on large populations:

> Fertility control as a management tool is only effective for a small, geographically isolated population of feral horses where the management outcome sought is to maintain the population at its current size. It is not a viable option to reduce the feral horse population in the Alps.[69]

Feral horse management in New South Wales

5.59 The NSW Parks and Wildlife Service (NPWS) has an obligation, under the Wild Horse Heritage Act, to implement the associated Kosciuszko Management Plan and reduce the feral horse population in KNP to 3,000 by 30 June 2027. The Kosciuszko Management Plan sets out that over 30 per cent of KNP (more than 220,000 hectares) will be a horse retention area, to preserve what the plan describes as 'wild horse heritage values' such as past grazing and stock routes, association with historical stories, and viewing areas for the public to see feral horses.[70]

5.60 The Kosciuszko Management Plan divides the KNP into three 'management areas':

- feral horse retention areas (3,000 horses in 32 per cent of the park by 30 June 2027);
- feral horse removal areas (21 per cent of the park); and
- feral horse prevention areas (47 per cent of the park), which will have the population of zero horses maintained.[71]

5.61 A map of the areas is available at Appendix 3.

5.62 The feral horse retention area of KNP contains Commonwealth and/or state-listed threatened flora, fauna and ecological communities. The Kosciuszko Management Plan notes that threatened flora and fauna present in the horse retention area include species which are directly at risk from the impact of feral horses as set out in the 'Habitat degradation and loss by feral horses' key threatening process listing under the NSW *Biodiversity Conservation Act 2016*.[72]

5.63 For example, the only population of the Stocky Galaxias (*Galaxias tantangara*), listed as critically endangered under the EPBC Act, is within the horse retention

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68 NPWS, *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021, p. 20.

69 Professor Don White, *Submission 17*, p. 5.

70 NPWS, *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021, p. 13.

71 NSW Government, *Submission 361*, p. 5.

72 NPWS, *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021, p. 14.

area.[73] The Latham's Snipe (*Gallinago hardwickii*) migratory bird species is also known to be present in the horse retention area, and is listed as vulnerable under the EPBC Act.

5.64 Important sites for First Nations peoples and water catchment areas are also in this area, including 'sites of particular cultural significance identified by Aboriginal custodians, including the Snowy River corridor, Kalkite Mountain and the headwaters of the Murrumbidgee and Goobarragandra Rivers'.[74]

5.65 The Kosciuszko Management Plan, which is prescribed by the Wild Horse Heritage Act, was adopted in November 2021 following consultation with the NSW community, the Wild Horse Community Advisory Panel and the Kosciuszko Wild Horse Scientific Advisory Panel.[75]

5.66 The Kosciuszko Management Plan acknowledges the difficulty in simultaneously recognising heritage values of feral horses and environmental values:

> The overlap between the location of wild horses (and their heritage values) and the full range of other environmental values in the park presents a challenge in meeting the requirements of the *Kosciuszko Wild Horse Heritage Act*. That is, it is a challenge to both recognise and protect the heritage value of sustainable wild horse populations within identified parts of the park, while also ensuring other environmental values are maintained.[76]

5.67 The Kosciuszko Management Plan must, among other things, take into account the objects of the *National Parks and Wildlife Act 1974* (NSW), including the conservation of biodiversity, the protection of catchment values, and the identification and mitigation of threatening processes.[77]

5.68 The Wild Horse Heritage Act, however, states that the adopted Kosciuszko Management Plan 'prevails to the extent of any inconsistency between the

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73 NPWS, *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021, p. 14.

74 NPWS, *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021, p. 14.

75 NPWS, *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021, p. 2. In 2008, the NSW feral horse management framework was finalised in the form of the *2008 Horse Management Plan* (under the 2006 Kosciuszko National Park Plan of Management). In 2016, a draft management plan for feral horses in KNP was shared publicly but not finalised.

76 NPWS, *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021, p. 13.

77 *Kosciuszko Wild Horse Heritage Act 2018* (NSW) (Wild Horse Heritage Act), para. 5(2)(d). Subsection 72AA(1) of the *National Parks and Wildlife Act 1974* (NSW) lists 23 matters which must be taken into consideration when management plans are prepared for national parks, including, relevantly: the conservation of biodiversity; the protection of catchment values; the identification and mitigation of threatening processes; the regional, national and international context of the national park; the maintenance of any national and international significance and compliance with national and international agreements; and the social and economic context of the national park so as to ensure that pest species management programs are co-ordinated across different tenures.

adopted [Kosciuszko management] plan and a [National Parks] plan of management'.[78]

Required removal rate

5.69 The rate of removal of feral horses has increased since the implementation of the plan, with additional resources expected to assist the rate of removal. The rate of removal of horses, however, has been affected by significant challenges and remains lower than required to meet targets.[79]

5.70 With the implementation of the plan in February 2022, by August 2023 a total of 2,201 feral horses had been removed from KNP by the NSW Government.[80]

5.71 Reducing the overall numbers to 3,000 by mid-2027 would require an 84 per cent reduction in the current feral horse population, according to the NSW Government, which estimates that around 4,000 feral horses will require removal per annum from KNP in order to achieve the target.[81] The Australian Government view, which is shared by the NSW Government, is that the NSW Government is not currently on track to reach its target.[82]

5.72 The Invasive Species Council estimates, that given the known reproduction rate of feral horses, 'somewhere in the order of 6,000 horses per year' will need to be removed to achieve the target set by the previous NSW Government.[83]

5.73 Further, the Invasive Species Council pointed to the likely consequence of not achieving the required removal rate:

> If we continue at that level of removals—about a thousand per year—within the next four years, by June 2027, we will be at 32,000 horses. So, at a thousand removals a year, we will still see continued growth in the number of horses. Even doubling that rate of removals [to 2,000 per annum], we will end up at about 22,000 horses.[84]

Consultation on aerial shooting

5.74 Aerial shooting is not currently authorised under the Kosciuszko Management Plan. In August 2023, the NSW Government opened public consultation on a

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78 Wild Horse Heritage Act, ss. 12(1).

79 NSW Government, *Submission 361*, p. 5.

80 Mr Atticus Fleming, NSW Department of Planning and Environment, *Proof Committee Hansard*, 23 August 2023, p. 25.

81 NSW Government, *Submission 361*, p. 4.

82 Mr James Barker, Branch Head, World and National Heritage Branch, DCCEEW, *Proof Committee Hansard*, 23 August 2023, p. 44.

83 Mr Jack Gough, Advocacy Manager, Invasive Species Council, *Proof Committee Hansard*, 23 August 2023, p. 4.

84 Mr Jack Gough, Invasive Species Council, *Proof Committee Hansard*, 23 August 2023, p. 4.

proposed amendment to the plan which would authorise this control method. The amendment is being considered in order to achieve the statutory goals of a reduction to 3,000 feral horses by 30 June 2027.

5.75 The proposed amendment to the plan would 'authorise aerial shooting as an available method to control wild horses, in addition to existing methods such as ground shooting, trapping and rehoming'. The NSW Government set out that the ability to conduct aerial shooting is 'essential' to meet the target.[85]

5.76 The NSW Government highlighted that the recognition of heritage values of feral horses (as defined by NSW) would not be impacted by the proposed amendment:

> The wild horse retention areas contain evidence of wild horse heritage values, including the role of horses in pioneering history and pastoralism, traditional mountain practices, and the legends, stories and myths of the Snowy Mountains. This evidence includes tangible (for example, huts, campsites, yards, traps and tracks) and non-tangible (for example, personal and community connections) elements.[86]

5.77 Consultations on the proposed amendments closed on 11 September 2023. At the time of writing, the NSW Government had not published the results of its consultations.

Other relevant NSW legislation and policies

5.78 The NSW Government has in place a range of legislation and policy measures to protect native species from the impacts of feral horses, including:

- the 'Habitat degradation and loss by Feral Horses' Key Threatening Process;[87]
- the Saving our Species program which seeks to increase the number of threatened species (including critically endangered Southern Corroboree Frogs and Spotted Tree Frogs in the Australian Alps) that are secure in the wild, and to protect them from threats like invasive species;[88]
- Assets of Intergenerational Significance (AIS), including 49 sites in the Alps, which protect the habitats of 14 threatened species; [89]

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85 NSW Government, *Amending the Kosciuszko National Park Wild Horse Heritage Management Plan: public consultation* (accessed 7 August 2023).

86 NSW Government, *Amending the Kosciuszko National Park Wild Horse Heritage Management Plan: public consultation* (accessed 7 August 2023).

87 Schedule 4, *Biodiversity Conservation Act 2016* (NSW).

88 NSW Government, *Submission 361*, p. 10; NSW Government, *Saving our Species Program* (accessed 15 September 2023). See also, NSW Government, *Saving our Species: Year in Review 2021–22*, 2022, pp. 5–6.

89 NSW Government, *Assets of Intergenerational Significance* (accessed 31 May 2023).

- conservation action plans (CAP) for each threatened AIS species, set out risks to the area of habitat, actions to measure and report on the health of the species, as well as the priority actions to reduce risks to the habitat. These risks to the habitat can include feral animals; and
- the *NSW National Parks and Wildlife Service (NPWS) Threatened Species Framework*, which sets a target of zero new extinctions and recognises the threat posed by feral animals. The framework outlines actions to secure and restore threatened species in NSW-based national parks. NPWS is the 'first national park agency in Australia to set a zero extinctions target, and one of the first in the world'.[90]

Views on the Kosciuszko Management Plan

5.79 Many submitters including environmental groups, conservation bodies and individuals were critical of the current management of feral horses in the Australian Alps.

5.80 The Australian Veterinary Association (AVA) told the committee that the NSW Wild Horse Heritage Act provides a 'disproportionate weight' to feral horses over 'obligations to protect native habitats, fauna and flora within the park':

> The objectives of the plan now are essentially to reduce environmental damage to an acceptable level and to preserve the heritage value of sustainable wild horse populations, while ensuring that the environmental values of the park are maintained. Unfortunately, there is doubt that these two objectives can be achieved simultaneously.[91]

5.81 Professor Don Driscoll from Deakin University stated that the biggest barrier to implementing a coordinated approach to feral horse management in the alps is the NSW Wild Horse Heritage Act.[92] Professor Michael Archer from the Australian Academy of Science concurred, and stated that the act stands out 'like a sore thumb'.[93]

5.82 Dr Mike Braysher and Mr Terry Korn argued that the current management approach in KNP had failed, and referred to the management strategy as 'an unsuccessful political solution to a complex socio/political issue'.[94]

5.83 Mr Ian Pulsford, a connectivity conservation and protected area specialist, submitted that 'apart from climate change, in NSW the [Wild Horse Heritage

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90 NSW Government, *Threatened Species Framework for zero extinctions* (accessed 29 August 2023).

91 Dr Michael Banyard, AVA, *Committee Hansard*, 23 August 2023, p. 9.

92 Professor Don Driscoll, Professor of Terrestrial Ecology, Deakin University, *Proof Committee Hansard*, 7 September 2023, p. 4.

93 Professor Michael Archer, Fellow, Australian Academy of Science, *Proof Committee Hansard*, 7 September 2023, p. 6.

94 Dr Mike Braysher and Mr Terry Korn PSM, *Submission 8*, p. 2.

Act] is the single greatest current threat to the National Heritage values of KNP'.[95] Further, Mr Pulsford highlighted the contrast between NSW and Commonwealth legislation:

> [The NSW Wild Horse Heritage Act] is fundamentally contradictory to the intent and purpose of the establishment and management of the Australian Alps national parks, and works in opposition to the Commonwealth responsibilities for the protection of National Heritage listed places and the conservation of threatened and endangered ecological communities and species.[96]

5.84 South Endeavour Trust, a conservation land trust that owns and manages private conservation reserves, argued that the issues in NSW stemmed from both the operation of the NSW Wild Horse Heritage Act, as well as the previous NSW Government's inadequate approach to population control:

> In NSW the problem is not just policies and programs but obviously laws. But it must be recognized that even before the [NSW Wild Horse Heritage Act] was passed, the policies and programs enacted in NSW were grossly inadequate and totally ineffective. Just repealing the Act will in no way address the real onground shortcomings caused by the policy decision to exclude aerial shooting.[97]

5.85 The ACF submitted that the decision of the NSW Government to protect feral horse populations in the Australian Alps had led to a degradation of the natural environment, and argued that the Commonwealth should be empowered to ensure that natural heritage areas are protected.

Feral horse management in Victoria

5.86 The land manager for Victoria's national parks is Parks Victoria, which has a legal obligation to protect and manage national parks in Victoria.[98] Active feral horse management is undertaken, with a target of the complete removal of feral horses from the Bogong High Plains, and a significant reduction in the number of feral horses in the other Victorian Alpine areas.[99] Overall, Victoria manages 500,000 hectares of the Australian Alps National Parks.[100]

5.87 Parks Victoria has trialled and delivered a range of control methods for feral horse management in the last decade, including preparing action plans and

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95 Mr Ian Pulsford, *Submission 89*, p. 5.

96 Mr Ian Pulsford, *Submission 89*, p. 5.

97 South Endeavour Trust, *Submission 41*, pp. 2–3.

98 Parks Victoria, *Submission 91*, p. 3.

99 Parks Victoria, *Protection of the Alpine National Park: Feral Horse Action Plan 2021*, p. 3.

100 Parks Victoria, *Protection of the Alpine National Park: Feral Horse Action Plan 2021*, p. 13.

control program implementation, working with Traditional Owners and community partners, and monitoring and reporting on the issue.[101]

5.88 Parks Victoria noted obligations under a range of state and Commonwealth legislation, and international obligations such as the *Convention on Wetlands of International Importance* and the *United Nations Declaration on the Rights of Indigenous Peoples*. The *National Parks Act 1975* (Vic) is a key piece of legislation for management of the Alpine area.

5.89 In Victoria, feral horses are found in the Victorian Alps, with feral horse populations established in the Eastern Alps (adjacent to KNP), and the Bogong High Plains and adjacent Crown land.[102]

5.90 The management strategy for feral horse control in these areas is detailed in the *Protection of the Alpine National Park: Feral Horse Action Plan 2021*. It reflects Victoria's experience with a low interest and uptake for feral horse rehoming, bushfires, and the doubling of the feral horse population between 2014 to 2019, from 2,300 feral horses to more than 5,000.[103] Under the plan, Victoria will:

- continue to trap feral horses for rehoming to the extent that suitable rehoming applicants can be found;
- implement the most humane, safe and effective horse control techniques, including using professional shooters, to remove feral horses ranging across areas of high conservation value;
- conduct all horse management operations according to strict standards for animal welfare and public safety;
- periodically repeat surveys of feral horse populations in the eastern Alps and in the Bogong-Cobungra area; and
- monitor the condition of sensitive vegetation and habitats including alpine mossbeds, peatlands and streambanks.[104]

5.91 Parks Victoria told the committee that it had been working for more than a decade to address the damage caused by feral horses on vulnerable wildlife and ecosystems of the Australian Alps. There has been 'substantial investment by the Victorian government in feral horse control to protect vulnerable Alpine landscapes since 2008'.[105]

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101 Parks Victoria, *Submission 91*, p. 1.

102 Parks Victoria, *Submission 91*, p. 2.

103 Parks Victoria, *Protection of the Alpine National Park: Feral Horse Action Plan 2021*, p. i.

104 Parks Victoria, *Protection of the Alpine National Park: Feral Horse Action Plan 2021*, p. i.

105 Mr Matthew Jackson, Chief Executive Officer, Parks Victoria, *Proof Committee Hansard*, 23 August 2023, p. 27.

5.92 Aerial shooting is an approved method of managing feral horses in Victoria, but has not been used in the Alpine National Park to date.[106]

Box 5.1 FeralScan

Parks Victoria encourages the public to report sightings of feral animals through FeralScan.[107] DAFF and the NSW Government are project partners and supporters of the community pest animal recording and management tool.[108] This platform has been used for 10 years, hosts 350,000 records, and is powered by the Centre for Invasive Species Control, a not-for-profit organisation which seeks to address the impact of invasive plants and animals in Australia.[109] There is currently no capacity for feral horse sightings and damage to be captured by the community through this platform.

FeralScan provides a free resource for landholders, community groups, local government and professional pest controllers to locate sightings of feral animals and catalogue damage caused by their presence. Sightings and photographs of feral animals such as deer, pigs, foxes, goats and donkeys can be uploaded, which allows biosecurity groups or government agencies to be alerted to changes in feral animal populations.

A recommendation relating to FeralScan is in Chapter 7.

Feral horse management in the ACT

5.93 The ACT Government's zero-tolerance policy to feral horses in Namadgi National Park has a strong focus on managing pest animals, and to eradicate them from the park through control programs. The first plan to manage feral horses in Namadgi was prepared in 2004, and referred to management techniques including barrier fencing, trapping and removal, and ground-based shooting.

5.94 The Namadgi plan was updated in 2007 and worked to prevent the re-establishment of feral horse populations. Since 2007, 24 feral horses have been trapped and humanely euthanased in Namadgi, and there are no remaining animals present.[110]

106 Parks Victoria, answers to questions on notice, 7 September 2023 (received 15 September 2023).

107 Parks Victoria, *Feral Animals* (accessed 29 August 2023).

108 FeralScan, *FeralScan* (accessed 25 August 2023).

109 Centre for Invasive Species Solutions, *About CISS* (accessed 25 August 2023).

110 *Namadgi National Park Feral Horse Management Plan 2020* (ACT)

5.95 The current Namadgi plan uses population control methods such as trapping, mustering and removal, as well as ground and aerial shooting. The ACT Government noted that these control methods are endorsed by the RSPCA.[111] The ACT Government described the technology used to support its zero-tolerance approach:

> The ACT uses advanced thermal technology to assist in the detection of vertebrate pests including feral horses in remote and heavily forested areas of the ACT. Due to the density of horses on the ACT border, the ACT Parks and Conservation Service aerially surveys the border area using thermal imaging to detect horse incursions, and targets horses during aerial shooting operations. The ACT has also used remote cameras and remote trapping yards to monitor and prevent incursions.[112]

5.96 Further, the ACT works with conservationists and land managers to implement habitat restoration and the creation of feral horse exclusion zones, in recognition of the 'critical role' that the headwaters of the Murray, Murrumbidgee, Snowy and Cotter rivers have in the ACT region's ecological health.[113] The importance of Indigenous culture is also recognised in the ACT through consultation with local Indigenous communities to identify areas of cultural significance, and ensure that traditional ecological knowledge is incorporated into management strategies.[114]

Staffing levels in national parks

5.97 As noted above, the NPWS has a legal obligation to significantly reduce the feral horse population in KNP to 3,000 horses by 30 June 2027, and reduce the area in which feral horses occur from 53 per cent to 32 per cent. To this end, NPWS staff have been authorised to ground shoot feral horses in accordance with strict operating procedures based on expert animal welfare advice.[115]

5.98 During its inquiry, the committee received evidence that the current feral horse control program in KNP is 'chronically' under-resourced.[116] According to the Public Service Association of NSW (PSA NSW), although there are around 200 staff working in KNP, there are only 5 to 10 staff involved in the feral horse control program.[117]

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111 ACT Government, *Submission 83*, p. 2.

112 ACT Government, *Submission 83*, p. 2.

113 ACT Government, *Submission 83*, p. 3.

114 ACT Government, *Submission 83*, p. 3.

115 NSW Government, *Submission 361*, pp. 6 and 7.

116 Public Service Association of NSW (PSA NSW), *Submission 20*, p. 10.

117 PSA NSW, *Submission 20*, pp. 2 and 10.

5.99 According to the PSA, an additional 11 staff are expected to join the NSW program but this figure may not be enough to meet the legislative obligations relating to removal numbers.[118]

5.100 The Community and Public Sector Union (CPSU) highlighted that staff conducting pest management 'are on revolving contracts under one-off funding' of between 6 months and 3 years, despite the existence of 10 year plans for feral horse control. The ability to plan ongoing activities has been hampered by the uncertainty around the availability of suitable staff to carry out the work.[119] Further, the CPSU drew attention to the reduction in staffing numbers in national parks over time, which adds 'immense pressure to deliver the control plan':

> Where formerly there were a number of pest animal rangers assigned, now there is only one per region in NSW. With merging of regions there were further cuts with several of these NSW regions being larger than European Countries. Victoria appears to have an even smaller number of staff dealing with their Alpine feral horse plan, even when you include the contracted professional shooters.[120]

5.101 Ecologist numbers have also been reduced, which slows down efforts to repair the damaged environment.[121]

Treatment of national parks staff

5.102 The health and safety of government staff undertaking feral horse control programs in the Australian Alps has been threatened by some members of the community dissatisfied with the management strategies.

5.103 The PSA NSW reported that 'threats have included statements and images posted on social media; threats of violence to individual staff and the threat to firebomb the Jindabyne Visitor Centre and NPWS office and all staff therein'.[122]

5.104 According to the PSA NSW, the severity of the threats has resulted in NPWS managers:

- issuing advice to staff on how to assess threat levels and stay safe;
- deploying security guards at NPWS buildings;
- installing emergency duress alarms at the front counters of all NPWS offices in and adjacent to KNP; and

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118 PSA NSW, *Submission 20*, pp. 2 and 10.

119 Community and Public Sector Union (CPSU), *Submission 87*, p. 3.

120 CPSU, *Submission 87*, p. 3.

121 CPSU, *Submission 87*, p. 3.

122 PSA NSW, *Submission 20*, p. 11.

- directing staff not to wear uniforms outside of the workplace.[123]

5.105 The CPSU, drawing on the anonymous input of park rangers, raised concerns at the level of abuse faced by rangers and how it had affected their lives, and the lives of their families. Some contracted professional shooters had applied for intervention orders against pro-brumby activists 'for having been falsely 'outed' on social media and being harassed, stalked, abused and threatened online':

> Members have had to resort to extra security measures at home at their own expense, lying to friends, family and associates about what they do for Parks and what it entails, keeping a low profile and retreating from other community roles. The secrecy is accepted knowing they are part of something meaningful for the environment, but the deleterious safety environment is not acceptable.[124]

5.106 The NSW Government advised that various measures have been taken to protect the safety of NPWS staff involved in feral horse management, including regular engagement with NSW Police, non-release of operational program details, and provision of mental health and wellbeing support.[125]

5.107 Indeed, the NSW Government's 2022 review recognised 'the risk posed by members of the community placing themselves in shooting areas with the aim of intentionally disrupting operations and or using social media to harass those involved with the operations'.[126]

5.108 The committee heard that the abuse and targeting of staff extended beyond rangers, and included project officers, administrative support staff and visitor centre staff.[127]

5.109 Mr Kim de Govrik, a former park ranger, explained that the children of national parks staff 'can get bullied at school', and 'can be abused in the street, even if they are just walking with someone in uniform'. Mr de Govrik recounted hearing members of the public speaking 'aggressively' about NSW park rangers after the introduction of the Wild Horse Heritage Act in 2018:

> I travel around New South Wales and meet at depots and offices and talk to the national parks staff. Not long after that legislation was passed, I was having a coffee in Tumut. I couldn't help but hear this conversation, and it was just terrible. It was scathing of national parks' employees.[128]

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123 PSA NSW, *Submission 20*, p. 11.

124 CPSU, *Submission 87*, p. 3.

125 NSW Government, *Submission 361*, p. 10.

126 NSW Government, *Submission 361*, p. 10.

127 Mr Kim de Govrik, Organiser, PSA NSW, *Proof Committee Hansard*, 7 September 2023, p. 9.

128 Mr Kim de Govrik, PSA NSW, *Proof Committee Hansard*, 7 September 2023, p. 10.

5.110 Similar abusive treatment of staff was reported in other jurisdictions. For example, Parks Victoria explained that community challenges to feral horse management included 'high levels of abuse and threats (direct and virtual) to on-ground and managerial staff...Traditional Owners and, in some cases, their families'. Parks Victoria elaborated that this involved 'threats of violence, including death threats, and resulted in Victoria Police involvement and ongoing vigilance to protect staff'.[129]

5.111 In a similar vein, the National Parks Association of the ACT advised that the management of feral horses in the Australian Alps can be 'an emotive issue in neighbouring communities' and that the association 'had been advised by rangers living in these communities that they and their families have been the subject of threatening behaviour due to their involvement in control activities'.[130]

5.112 The CPSU asserted that although park rangers work with police in each state and territory, the threats faced by rangers are not taken seriously enough, and that '[t]he current regulations and law enforcement are unable to adequately deal with these behaviours'.[131] The CPSU recommended that a national campaign be trialled in the Australian Alps to generate respect for rangers, and put an end to violence, 'similar to the "Thin green line" international campaign that combats violence against our ranger colleagues around the world'.[132]

Committee comment

5.113 The Australian Government, and the state and territory governments who share the responsibility for the Australian Alps National Heritage place, have legislative responsibilities to protect the threatened native species and Indigenous heritage values of the area. The committee is of the view that fulfilling these obligations must be a key priority.

5.114 To meet these responsibilities, active management of feral horses is critical, as the only natural threats to the feral horse population are bushfire and drought.

5.115 The committee heard that the restrictions placed on NPWS were the biggest barrier to cooperative engagement to manage the threat of feral horses in the Australian Alps.

5.116 NSW's reduction target is to reach 3,000 from the estimated population in 2022 of 19,000 in just under four years. This reduction is a much-needed step towards the protection of the Australian Alps. Unfortunately, the historical record has

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129 Parks Victoria, *Submission 91*, p. 4.

130 National Parks Association of the ACT, *Submission 53*, p. 6.

131 CPSU, *Submission 87*, p. 8.

132 CPSU, *Submission 87*, p. 9.

shown that urgent reduction cannot be reached solely with methods previously relied upon, such as rehoming.

5.117 The committee acknowledges that shooting any animal is a potentially confronting and an unfortunate reality faced by land managers. However, evidence has been clear that feral horse population control is urgent, and aerial shooting under strict conditions is the most humane and effective management option. Given the urgency of the task at hand, with El Niño conditions underway and the imminent threat of extinction faced by several critically endangered species, the committee supports the use of aerial shooting as a management option if deemed appropriate under strict safety, scientific and humane practice.

5.118 The committee takes this opportunity to highlight the important work of conserving the heritage values of the Australian Alps being undertaken by the dedicated staff of the NSW National Parks and Wildlife Service, Parks Victoria and the ACT Environment, Planning and Sustainable Development Directorate. It is critical for the staff who work in Australia's national parks to be safe when doing their jobs.

5.119 The committee heard that staff have performed their work against a backdrop of threats, abuse, and harassment. The evidence highlights that the staff who work in national parks, in ranger, policy, program and visitor service roles, have been impacted by abusive and threatening behaviour. The committee heard that digital stalking, abuse via social media, and other forms of threatening behaviour are taking place. This behaviour is criminal, and those responsible should be held responsible for their actions. The committee condemns violence, or threats of violence, towards staff of our national parks. Everyone has the right to feel safe in their workplace, no matter where their workplace is or what their work requires of them.

5.120 Further committee comment and recommendations are made in Chapter 7.

Chapter 6
Commonwealth responsibility

Overview

6.1 The Australian Alps region extends across three state and territory jurisdictions: New South Wales (NSW), Victoria and the Australian Capital Territory (ACT). Each of these state and territory governments are the relevant land managers within their jurisdictions, and have developed different laws, policies and management plans to manage feral horses. The Australian Government has powers and responsibilities to protect matters of national environmental significance (MNES), such as national heritage places and threatened species and ecological communities.

6.2 The individual parks and reserves which make up the Australian Alps National Parks and Reserves are gazetted under state and territory legislation. The Australian Alps National Parks and Reserves are state land and are managed through a Memorandum of Understanding in relation to the Co-operative Management of the Australian Alps national parks. This MOU has been in place between the Commonwealth, NSW, ACT and Victorian governments since June 1986 (1986 MOU). The 1986 MOU, which does not give rise to legal obligations, confirms that the relevant states and territory have primary responsibility for the management of the parks which make up the nationally-listed Australian Alps National Parks and Reserves National Heritage place.

6.3 The ACT Government has a strong view that feral horses should not be retained in national parks. It stated that there is a need for coordination and harmonisation across the jurisdictions to manage feral horses, noting that 'the overall success of feral horse management and control is only as successful as the weakest link'.[1]

6.4 Cooperation between the jurisdictions was strongly recommended by many inquiry participants, in order to address the impacts of feral horses on the Alps, which covers a wide geographic area and extends across two states and one territory.[2]

6.5 The Fenner School of Environment and Society submitted that the Commonwealth Government has 'both the power and the responsibility to intervene to address the threat of feral horses', but that 'cooperative federalism

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1 ACT Government, *Submission 83*, p. 4.

2 See for example: ACT Government, *Submission 83*, p. 3; Labor Environment Action Network, *Submission 35*, p. 3; Research Centre for Applied Alpine Ecology, *Submission 56*, p. 1.

means that these landscapes are not being managed holistically'.[3] The Fenner School suggested a 'whole of landscape' approach was needed, which could cross jurisdictional boundaries in order to meet the obligation to protect matters of national environmental significance (MNES).[4]

6.6 South Endeavour Trust was clear in its assessment of the existing legislation, and stated that 'the Senate would not be holding this inquiry if existing laws, policies and programs were adequate'.[5]

6.7 The Samuel Review of the EPBC Act observed that the operation of the EPBC Act with regard to state and territory land management lacks integration:

> The lack of integration between jurisdictions is exacerbated by the construction of the EPBC Act and the way the Commonwealth implements it. Significant efforts are made to assess and list threatened species. However, once listed, not enough is done to deliver improved outcomes for them.[6]

6.8 Department of Climate Change, Energy, the Environment and Water (DCCEEW) representatives submitted that the Commonwealth is 'using the levers at its disposal' on this matter, including using it's 'convening power' to reinstate the Alps Ministerial Council.[7] The work of this council is discussed below.

Matters of national environmental significance

6.9 The Australian Government's primary environmental legislation is the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), which sets out the legal framework for environmental protection at the Commonwealth level.[8] The Commonwealth Environment Minister has authority over matters of national environmental significance (MNES). In the Australian Alps, this includes a National Heritage listed place, wetlands of international importance, migratory species and threatened species and threatened ecological communities (discussed later in this chapter). Australia's

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3 Fenner School of Environment and Society, *Submission 69*, p. 3.

4 Fenner School of Environment and Society, *Submission 69*, p. 3.

5 South Endeavour Trust, *Submission 41*, p. 2.

6 Professor Graeme Samuel AC, *Independent Review of the EPBC Act – Final Report*, Department of Agriculture, Water and the Environment, 2020, p. 1.

7 Ms Rachel Parry, Acting Deputy Secretary, Department of Climate Change, Energy, the Environment and Water (DCCEEW), *Proof Committee Hansard*, 23 August 2023, p. 36.

8 State and territory environmental protection legislation is also in place, including the *Biodiversity Conservation Act 2016* (NSW), *Environment Protection Act 2017* (Vic*), Flora and Fauna Guarantee Act 1988* (Vic) and *Environment Protection Act 1997* (ACT).

responsibilities under international agreements, which to varying degrees are reflected in the EPBC Act, also rest with the Australian Government.

6.10 Matters of national environmental significance are 'protected matters' and, in relation to the Australian Alps, include:

- the Australian Alps National Parks and Reserves National Heritage place;
- two wetlands of international importance (Ramsar sites) which are both located within the National Heritage place;
- threatened ecological communities listed under the EPBC Act;
- multiple listed threatened species; and
- a migratory species.[9]

6.11 Actions which may have a 'significant impact' on any of the protected matters must be referred to the Commonwealth Environment Minister for consideration and approval.[10] This self-referral mechanism is the main one used for potential consideration under the EPBC Act.

6.12 Under the EPBC Act, the Commonwealth Environment Minister may also request that a person (or state), planning to undertake a proposed action, refer it for assessment and approval (a call in power).[11]

6.13 Once an action has been referred and determined to be a 'controlled action', the minister then follows the assessment and approval pathways in the EPBC Act, including the requirement to act consistently with:

- recovery plans for threatened species and ecological communities;
- threat abatement plans for key threatening processes; and
- management principles for National Heritage listed places.

6.14 The Minister must also consider conservation advice for threatened species and ecological communities.

6.15 The term 'action' has a defined meaning under the EPBC Act. This has implications for the types of activities that are not required to be referred to the Environment Minister, which is discussed below.

National Heritage listed places

6.16 National Heritage listed places are protected under the EPBC Act, which requires ministerial approval for actions that could have a significant impact on the National Heritage values of a National Heritage place.[12] Special agreements

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9 DCCEEW, *Submission 23*, p. 9. These are discussed in Chapter 3.

10 DCCEEW, *What's protected under the EPBC Act* (accessed 26 May 2023).

11 Subsection 70(1), *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

12 EPBC Act, Part 3. See in particular s. 15B.

with state and territory governments, First Nations peoples and private owners can also be established to protect National Heritage listed places.

6.17 The Australian Alps National Parks and Reserves National Heritage place (Australian Alps National Heritage place) was listed in 2008. There are 11 national parks and nature reserves within the Australian Alps National Heritage place, extending over three jurisdictions.[13]

6.18 The listing documentation for the Australian Alps National Heritage place describes the place's heritage values, including glacial and periglacial features; fossils; a collection of karst features; biological heritage; moth feasting; transhumant grazing including huts, the former grazing landscapes, stock yards and stock routes; scientific research; water harvesting; and recreation.[14]

6.19 The management principles for National Heritage places provide a framework for managing heritage properties, and are intended to be used in the preparation and implementation of management plans and programs. The principles set out the objectives of identifying, protecting, conserving, presenting and transmitting to all generations, the National Heritage values of the place.[15]

6.20 Under the EPBC Act, the regulations governing National Heritage management principles may prescribe obligations to implement or give effect to these principles.[16] This includes regulations relating to the values of a National Heritage place in an area in respect of which Australia has obligations under Article 8 of the Biodiversity Convention.[17]

6.21 Where a National Heritage place is in a state or territory (that is, not in a Commonwealth area), the Australian Government 'must endeavour to ensure that a management plan is prepared and implemented in cooperation with the relevant state or territory government'.[18]

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13 The parks and nature reserves include: Tidbinbilla Nature Reserve (ACT); Namadgi National Park (ACT); Bimberi Nature Reserve (NSW); Brindabella National Park (NSW); Kosciuszko National Park (NSW); Scabby Range Nature Reserve (NSW); Alpine National Park (Vic); Avon Wilderness (Vic); Baw Baw National Park (Vic); Mt Buffalo National Park (Vic); and Snowy River National Park (Vic).

14 Commonwealth of Australia Gazette, *No. S237, 7 November 2008*. Section 10.01A(1) of the EPBC Regulations sets out that a list site may have natural heritage values, indigenous heritage values and/or historic heritage values. Section 10.01A(2) then specifies the criteria that must be met to have any of those values.

15 Regulation 10.01E, *EPBC Regulations 2000*.

16 EPBC Act, ss. 324Y(2).

17 EPBC Act, para. 324Y(2)(e).

18 DCCEEW, *Managing National Heritage Places* (accessed 12 July 2023). This is provided for in the EPBC Act under ss. 324Y(2).

6.22 In relation to the Australian Alps National Heritage place, DCCEEW submitted that '[w]hile there is no single management plan covering the National Heritage place, there are management plans for various components of the place'.[19]

6.23 The states and territory that share the Australian Alps National Heritage place have management plans for all parks and reserves within the Australian Alps listed place. Additionally, as detailed in Chapter 5, each jurisdiction has a management plan specific to the control of feral horses.[20] DCCEEW officials explained that:

> For state agencies…there is an obligation for the Commonwealth to use its best endeavours to ensure that plans are not inconsistent with National Heritage management principles. Those are the principles around which we hope to, and do, cooperate with the states to ensure that they're consistent.[21]

6.24 DCCEEW officials further set out Commonwealth concerns regarding the level of implementation of the NSW Kosciuszko Management Plan, and noted the role of the Ministerial Council as a forum for the Commonwealth Environment Minister to raise these concerns.[22]

6.25 Several inquiry participants called for management principles to prescribe the removal of feral horses from the National Heritage listed place.[23] DCCEEW explained that the Commonwealth Environment Minister may prescribe further regulations under the management principles for the development of management plans, but acknowledged that the Commonwealth's powers to directly regulate activity in the National Heritage listed place is constrained.[24]

6.26 The 2020 Samuel Review of the EPBC Act highlighted that National Heritage listings lack practical application and appear more focussed on the listing stage than the ongoing conservation of identified heritage values: 'Despite considerable attention at nomination and listing, the ongoing expectations and

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19 DCCEEW, *Submission 23*, p. 10.

20 DCCEEW, *Submission 23*, p. 10. There are specific plans for the management of feral horses, including the *Namadgi National Park Feral Horse Management Plan 2020* (ACT), the *2021 Kosciuszko National Park Wild Horse Heritage Management Plan* (NSW) and the *Protection of the Alpine National Park: Feral Horse Action Plan 2021* (Victoria).

21 Mr James Barker, Branch Head, World and National Heritage Branch, DCCEEW, *Proof Committee Hansard*, 23 August 2023, p. 45.

22 Mr James Barker, DCCEEW, *Proof Committee Hansard*, 23 August 2023, p. 45.

23 For example: Water for Rivers, *Submission* 5, p. 2; Dr Mike Braysher and Mr Terry Korn PSM, *Submission 8*, p. 2; Professor Don White, *Submission 17*, p. 6; Public Service Association of NSW (PSA NSW), *Submission 20*, p. 8.

24 Mr James Barker, DCCEEW, *Proof Committee Hansard*, 23 August 2023, p. 35.

obligations of property owners and site managers are often unclear and ill-defined'.[25]

Actions impacting a National Heritage listed place

6.27 This section explains the implications for actions which may have a significant impact on the National Heritage values of a National Heritage listed place. It also covers Australia's obligations under the Convention on Biological Diversity (CBD).

6.28 Governmental authorisations by a state or territory, or their agencies, are not considered 'actions' under the EPBC Act.[26] Governmental authorisations can include approvals for work granted by a government body, the issuing of permits and the granting of licences.[27] Actions taken subsequently however may not be exempt.

6.29 An academic paper on the scope of Commonwealth environmental decision making explains that, although the governmental authorisations provisions would exclude NSW ministerial approvals in relation to feral horses in KNP, it is possible that activities carried out under the Kosciuszko Management Plan could fall within the meaning of 'actions' under the EPBC Act.[28]

6.30 On this question, the Australian Conservation Foundation (ACF), while acknowledging the powers under the EPBC Act to intervene, noted the Commonwealth's reluctance to become involved when state cooperation fails:

> …there is a [Commonwealth] reticence to apply the Act to state government programs and activities and a reluctance to construe a course of management as an action for the purposes of the Act. This seems an overly narrow interpretation of the provisions of the EPBC Act, the adoption of which undermines the intent of the Act to protect matters of national environmental significance.[29]

6.31 The ACT Government was supportive of the Australian Government reviewing its options under the EPBC Act to protect the region from the impacts of feral horses.[30]

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25 Professor Graeme Samuel AC, *Independent Review of the EPBC Act – Final Report*, Department of Agriculture, Water and the Environment, 2020, p. 44.

26 EPBC Act, ss. 524(1).

27 Department of Sustainability, Environment, Water, Population and Communities (DSWEPC), *Environment Protection and Biodiversity Conservation Act 1999 (Cth) Policy Statement: Definition of 'action': Section 523, section 524, and section 524A of the EPBC Act*, p. 2.

28 Alice Menyhart, 'Wild horses and the limitations of Commonwealth environmental decision-making', *Environment and Planning Law Journal* 36 (2019), p. 148.

29 Australian Conservation Foundation (ACF), *Submission 73*, p. 3.

30 ACT Government, *Submission 83*, p. 3.

Threatened ecological communities, threatened species and migratory species

6.32 A range of threatened ecological communities, threatened species and migratory species living in the Australian Alps are listed under the EPBC Act.[31] These species are protected as matters of national environmental significance (MNES), with management and recovery promoted through conservation advice, recovery plans and other documents. The assessment and approval provisions of the EPBC Act apply, as outlined above.[32]

6.33 At least 16 EPBC-listed threatened species are directly impacted by feral horses in the Australian Alps.[33] The National Heritage listing also recognises species 'intrinsic to the National Heritage values of the place', including the critically endangered Corroboree and Baw Baw frogs, and endangered skinks, among others.[34] The Australian Alpine Sphagnum Bogs and Associated Fens is a nationally threatened ecological community, and was listed in 2009. This ecological community was discussed in Chapter 3.

6.34 There are civil penalty and strict liability provisions relating to the taking of an action which has, will have, or is likely to have a significant impact on a critically endangered, endangered or vulnerable threatened species or ecological community, and similarly for migratory species.[35]

Recovery plan

6.35 The Commonwealth Environment Minister may decide to have a recovery plan for one or more listed species or ecological community. The Minister has an initial obligation to consider making this decision but can also make this decision at any time.[36]

6.36 If the Minister decides not to have a recovery plan, the Minister must ensure that there is approved conservation advice for each species and ecological community listed as threatened.[37]

6.37 For the EPBC-listed species directly impacted by feral horses, recovery plans are in place for:

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31 Part 13, EPBC Act.

32 DCCEEW, *Submission 23*, p. 10.

33 Threatened Species Scientific Committee (TSSC), *Submission 19*, p. 3.

34 DCCEEW, *Submission 23*, p. 20. Part 13 of the EPBC Act provides for the listing of threatened species and the making of recovery plans. Division 1 of Part 3 of the EPBC Act provides that actions that have a significant impact on MNES are an offence, unless an appropriate approval or exemption is in place. The assessment and approval processes are provided in Parts 7, 8 and 9 of the EPBC Act.

35 EPBC Act, ss. 18(2)-(6), and s. 18A(1)-(2).

36 EPBC Act, s. 269AA.

37 EPBC Act, s. 266B.

- Alpine Sphagnum Bogs and Associated Fens ecological community (2015);
- Northern and Southern Corroboree Frogs (2012); and
- Swamp Everlasting (2011).

6.38 The recovery plan for sphagnum bogs and fens specifically lists feral horses as the largest animals to impact on the ecological community, and recognises that feral horses 'represent a threat that requires complex management strategies'.[38] It highlights that the populations of feral horses in NSW and Victoria had grown at a rate that outpaced active management, and noted the increase of around 20 per cent annually. The recovery plan cited research that:

> …observed the direct impacts of a 'very large number of horses' and considered the damage to be comparable to the worst historic domestic grazing pressures that triggered the removal of stock from Kosciuszko National Park in the 1940s.[39]

6.39 In 2015 when the recovery plan was issued, feral horse numbers in KNP were around 6,000. By 2022 their estimated numbers had more than tripled to around 19,000.[40] Within the *Manage Invasive Species* action item, the recovery plan listed as its highest priority rating to: 'Prevent establishment of new populations of hoofed animals, particularly feral horses, feral pigs and deer', followed by 'Manage, contain or control existing populations of feral horses, feral pigs, deer, rabbits and hares'.[41]

6.40 Dr Jennie Whinam set out that the alpine sphagnum peatlands have been under significant pressure:

> Since the National Recovery Plan was published in 2015, significant areas of Sphagnum peatlands have been burnt (some for a second time) and the numbers of feral horses have increased and expanded. This cumulative damage to the ecosystem in turn makes it more vulnerable to other threats such as use of water resources, weeds and disease and future fires.[42]

6.41 The Monaro Acclimatisation Society (MAS) asserted that despite the listing and recovery plan, 'it is hard to see action on the ground', and that the only work being undertaken relates to the culling program for pigs and deer. The MAS

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38 Department of the Environment, *National recovery plan for the Alpine Sphagnum Bogs and Associated Fens ecological community*, 2015, p. 18.

39 Department of the Environment, *National recovery plan for the Alpine Sphagnum Bogs and Associated Fens ecological community*, 2015, p. 18. A full review of the recovery plan for sphagnum bogs and fens is due in 2025.

40 NSW Government, *Submission 361*, p. 3.

41 Department of the Environment, *National recovery plan for the Alpine Sphagnum Bogs and Associated Fens ecological community*, 2015, p. 28.

42 Dr Jennie Whinam, *Submission 4*, p. 1.

noted that '[t]here are some weed programs underway, but these activities are in themselves insufficient'.[43]

6.42 The recovery plan for Northern and Southern Corroboree Frogs notes that feral horses are a threat, and that there 'is an immediate need for increased feral animal control in Northern Kosciuszko National Park where horses are causing substantial environmental damage' to breeding habitat.[44]

6.43 Feral horses are noted as a threat from grazing to the Swamp Everlasting, a yellow-flowering native daisy found in KNP.[45]

Wetlands of international importance (Ramsar sites)

6.44 The Convention on Wetlands of International Importance (known as the Ramsar Convention) aims to halt the loss of wetlands worldwide, and conserve those that remain. Wetlands include a range of habitat types, such as swamps, marshes, and billabongs. There are 66 Ramsar-listed wetlands in Australia.

6.45 Listed Ramsar sites in the Australian Alps include the Ginini Flats Subalpine Bog Complex Ramsar Site, which sits within Namadgi National Park in the ACT, and the Blue Lake Ramsar site in NSW.

6.46 Under the Ramsar Convention, Australia is obliged to maintain the ecological character of the listed sites as they are representative, rare or unique, and important for conserving biological diversity.[46]

6.47 Management plans for Ginini Flats are in place.[47] Ginini Flats is the largest intact sphagnum bog and fen community in the Australian Alps. It provides habitat for the critically endangered Northern Corroboree Frog and supports the Alpine Water Skink, Mountain Swamp Skink and Latham's Snipe. Namadgi National Park is the main water supply catchment for the ACT. The ACT Government has stated that a key risk to the wetland is impacts from feral animals and weeds entering the area.[48]

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43 Monaro Acclimatisation Society (MAS), *Submission 12*, p. 3.

44 DSWEPC, *National Recovery Plan for the Southern Corroboree Frog Pseudophryne corroboree and Northern Corroboree Frog Pseudophryne pengilleyi*, 2012, p. 18.

45 Australian Government, *National Recovery Plan for the Swamp Everlasting Xerochrysum palustre*, 2011, p. 8.

46 DCCEEW, *Submission 23*, p. 12.

47 Including the *Namadgi National Park Feral Horse Management Plan 2020*, the Draft *ACT High Country Action Plan for Bogs and Fens 2021* and the G*inini Flats Wetland Complex Ramsar Site Management Plan 2017*.

48 ACT Environment, Planning and Sustainable Development Directorate, *Ginini Flats Wetland Complex Ramsar Site* (accessed 31 May 2023).

6.48 The ACT Government stated that the highest concentration of feral horses in KNP is immediately to the west of the wetland, which means that feral horses are a 'significant and increasing threat' to the area.[49]

6.49 The Blue Lake site in the KNP high country is recognised within the 2006 *Kosciuszko National Park Plan of Management* and related management plans for invasive species, recovery plans and conservation advice for threatened species and ecological communities. Blue Lake is a 'rare example of near-natural alpine wetlands and supports nationally threatened species such as the mountain pygmy-possum, the alpine tree frog and the anemone buttercup'.[50]

6.50 The Blue Lake site is within the current horse prevention area, as defined by the KNP management plan, and feral horses found in the prevention area will be removed to keep the population at zero.[51]

Key Threatening Processes

6.51 Under the EPBC Act, processes which threaten or may threaten the survival, abundance or evolutionary development of a native species or ecological community are 'threatening processes'. Key threatening processes include:

- a process in which a native species or ecological community may be caused to become eligible for inclusion in a threatened list (other than the conservation dependent category); or
- a process which causes an already-listed threatened species or threatened ecological community to become more endangered; or
- a process which could adversely affect two or more listed threatened species or threatened ecological communities.[52]

6.52 In 2013, the impacts of feral horses have been recognised in the Commonwealth's Key Threatening Process of *novel biota and their impact on biodiversity* (Novel biota key threatening process).[53] DCCEEW set out that feral horses can impact an environment in multiple ways, including through competition, herbivory and habitat degradation, and noted that there are 'at

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49 ACT Government, *Submission 83*, p. 2.

50 DCCEEW, *Submission 23*, p. 12.

51 NSW Government, *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021, p. 17.

52 DCCEEW, Key threatening processes under the EPBC Act (accessed 26 May 2023).

53 *Advice to the Minister for Sustainability, Environment, Water, Population and Communities from the Threatened Species Scientific Committee (the Committee) on Amendments to the List of Key Threatening Processes under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*, 23 February 2013.

least seven other stand-alone' Key Threatening Processes in the Australian Alps.[54]

6.53 The impacts of feral horses are not currently identified as a separate key threatening process under the EPBC Act. This is in contrast with the NSW Government, which listed habitat degradation and loss by feral horses as a key threatening process under its biodiversity conservation legislation in 2018.[55]

6.54 The Australian Conservation Foundation (ACF) highlighted the general listing of novel biota rather than a specific listing for feral horses as an issue:

> The way that that's being managed at the moment has proven unsatisfactory in the sense that a generic category of novel biota and the threats posed by them have been listed under the EPBC Act as a key threatening process for some time, but a decision has been made not to have a threat abatement plan and to take a softer approach around the development of guidelines.[56]

Threat Abatement Plan

6.55 Under the EPBC Act, a threat abatement plan can be introduced for a key threatening process, which provides for the:

> …research, management and other actions necessary to reduce the key threatening process concerned to an acceptable level in order to maximise the chances of the long-term survival in nature of native species and ecological communities affected by the process.[57]

6.56 The threat abatement plan must have regard to:

- the most efficient and effective use of the resources that are allocated for the conservation of species and ecological communities;
- minimising any significant social and economic impacts consistently with the principles of ecologically sustainable development;
- meeting Australia's international obligations; and
- the role and interests of Indigenous people.[58]

6.57 DCCEEW advised that the then-Environment Minister decided in 2013 not to have a threat abatement plan for the novel biota key threatening process as:

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54 DCCEEW, *Submission 23*, p. 11. These include: competition and land degradation by rabbits; fire regimes that cause declines in biodiversity; infection of amphibians with chytrid fungus resulting in chytridiomycosis; loss of climatic habitat caused by anthropogenic emissions of greenhouse gases; predation by European red fox; predation by feral cats; and, predation, habitat degradation, competition, and disease transmission by feral pigs.

55 NSW Government, *Habitat degradation and loss by feral horses (Equus caballus) Linnaeus 1758 – key threatening process* 30 November 2018, p. 1.

56 Mr Brendan Sydes, National Biodiversity Policy Adviser, Australian Conservation Foundation (ACF), *Proof Committee Hansard*, 23 August 2023, p. 5.

57 EPBC Act, s. 271.

58 EPBC Act, ss. 271(3).

> Following independent advice and public consultation, it is considered that a threat abatement plan would not be the most feasible, effective or efficient mechanism to manage such a broad threatening process. In addition to existing management measures that are in place at a national scale, state and territory governments have management measures in place for plant and animal weeds and pests that contribute to the management of threats arising from novel biota.[59]

6.58 Overarching threat abatement guidelines were developed in 2013 to accompany the listing and interact with existing management measures.[60]

6.59 The Threatened Species Scientific Committee set out, in the guidelines, that there were threat abatement actions which could be undertaken nationally in order to reduce threats from the novel biota included within that key threatening process listing.

6.60 The Threatened Species Commissioner, Dr Fiona Fraser, told the committee that the novel biota key threatening process is a catch-all listing, and that legal advice had been received by DCCEEW that there cannot be more than one threat abatement plan under a key threatening process. Dr Fraser noted that there are limitations to the Commonwealth's ability to undertake work in relation to the novel biota key threatening process, and that the EPBC Act reforms currently under way would attempt to address this and provide clearer and more effective options for threat abatement plans at the Commonwealth level.[61] Committee comment and recommendations relating to this matter are made in Chapter 7.

6.61 Dr Fraser highlighted a national action plan for feral deer, which can fulfill a threat abatement plan's functions.

Threatened Species Action Plan

6.62 The recent *Threatened Species Action Plan 2022–2032* (TSAP) sets out the Australian Government's plan for threatened species conservation and recovery over the next decade. It prioritises 110 species and 20 places for conservation, which were identified by independent scientists.

6.63 The Australian Alps were identified as one of the twenty priority places due to the high number of threatened species and ecological communities in the area.[62] The identification of priority places is intended to 'provide a place-based focus for research, support and recovery action for threatened species and threatened

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59 DCCEEW, *Novel biota and their impact on biodiversity* (accessed 30 May 2023).

60 DCCEEW, *Submission 23*, p. 12.

61 Dr Fiona Fraser, Threatened Species Commissioner, Biodiversity Division, DCCEEW, *Proof Committee Hansard*, 23 August 2023, p. 37.

62 DCCEEW, *Submission 23*, p. 13.

ecological communities that are present'.[63] One of TSAP's four objectives is: 'the condition is improved for all priority places.'[64]

6.64 Priority species which are found within the Australian Alps priority place include the Southern Corroboree Frog, Mountain Pygmy-possum and Stocky Galaxias.[65] One of TSAP's objectives is specific to priority species: 'the risk of extinction is reduced for all priority species', while another states that 'new extinctions of plants and animals are prevented'.[66]

6.65 Over the next five years, the Australian Government will partner with land managers to address threats and improve the place and species. Actions that could be taken to improve the condition of the area could include the elimination of invasive pests or improvements to habitat quality.[67]

6.66 The Threatened Species Commissioner explained that identification as a priority place would enable measures to be taken at the Commonwealth level:

> …there are integrated recovery actions for those assets, such as the threatened ecological community of the alpine sphagnum bogs and fens and the multitude of threatened species... There will be a focus on funding through the Natural Heritage Trust but also through the government's new Saving Native Species Program, both for species-specific actions and for place-based actions that might look at addressing threats at the landscape scale.[68]

Provisions in the *Water Act 2007*

6.67 Professor Don White, Board Member of the Nature Conservation Council NSW, suggested that the *Water Act 2007* may provide the Australian Government with powers to ensure that feral horses are not causing damage and pollution to the catchments of the Murray and Murrumbidgee Rivers.[69]

6.68 The Water Act provides for Commonwealth regulation of certain aspects of water management, including the establishment of the Murray-Darling Basin Authority (MDBA), sustainable diversion limits, and a Basin Plan, among other matters. The *Murray-Darling Basin Agreement* is contained within a schedule of the Water Act, which confers on the MDBA the power to co-ordinate, carry out or cause to be carried out investigations and studies regarding measures for 'the

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63 DCCEEW, *Threatened Species Action Plan 2022–2032*, 2022, p. 45.

64 DCCEEW, *Threatened Species Action Plan 2022–2032*, 2022, p. 2.

65 These species are discussed in Chapter 3.

66 DCCEEW, *Threatened Species Action Plan 2022–2032*, 2022, p. 2.

67 DCCEEW, *Submission 23*, p. 13.

68 Dr Fiona Fraser, Threatened Species Commissioner, DCCEEW, *Proof Committee Hansard*, 23 August 2023, p. 38.

69 Professor Don White, *Submission 17*, pp. 2–3.

protection and improvement of the quality of river water' and 'the conservation, protection and management of aquatic and riverine environments', with the consent of the relevant state.[70]

6.69 The *Murray-Darling Basin Agreement* provides for the protection of the catchment of Hume Reservoir, and requires the NSW and Victorian governments to 'take effective measures to protect the portions of the catchment of the Hume Reservoir within their respective States from erosion'.[71] Further, the following provisions apply:

> If at any time the Authority considers that there is need for special action to protect the catchment of the Hume Reservoir from erosion…the Authority may, in consultation with the Committee, require the Contracting Government, in whose territory the special action is to be carried out, to investigate the position and to take such special action as may be required by the Authority.[72]

6.70 The Hume Reservoir is within the definition of the upper River Murray storages, and upper River Murray, for which the consent of the relevant state is not required. The catchment 'encompasses a considerable portion of the Australian Alps'.[73]

6.71 Water quality monitoring of the River Murray is undertaken by the MDBA, including measuring for turbidity (caused by erosion).[74]

Commonwealth funding for feral horse management

6.72 DCCEEW submitted that Australian Government funding is available to assist with the conservation of threatened species and ecological communities, which become 'key targets for Australian Government funding programs for research, management and recovery activities'.[75]

6.73 DCCEEW explained that Commonwealth funding specifically for the lethal control of feral horses had amounted to $1.73 million in the last two years, across Victoria and New South Wales.[76] NSW Government officials stated that

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70 *Murray-Darling Basin Agreement*, subclause 43(1); *Murray-Darling Basin Agreement*, subclause 43(3).

71 Clause 51, Schedule 1, *Water Act 2007*.

72 Clause 51(5), Schedule 1, *Water Act 2007*.

73 Murray-Darling Basin Authority (MDBA), *Hume Reservoir* (accessed 28 August 2023). See subclause 43(2) MDB Agreement, Schedule 1, Water Act.

74 MDBA, *River Murray Water Quality Monitoring Program* (accessed 20 September 2023).

75 DCCEEW, *Submission 23*, p. 10.

76 DCCEEW, answers to question on notice, 23 August 2023, (received 6 September 2023). The NSW Government received $1.3 million with $1.1 million provided under the bushfire recovery package in November 2021 and $200,000 under the Saving Native Species program in June 2023. The remaining $430,000 was provided to the Victorian Government through the bushfire recovery package in July 2021. An additional $4.7 million had been provided for integrated pest control in

Commonwealth funding in the post-bushfire period had made 'a big difference'.[77]

The need for greater cross-border cooperation

6.74 There is a long history of cross-jurisdictional cooperation to protect the alps. In 1986, the Australian Alps National Parks Co-operative Management Program was formed by the Commonwealth, NSW, Victorian and ACT governments to 'promote cooperative conservation management and sustainable use' of the national parks and reserves which make up the Australian Alps.[78]

6.75 The 1986 MOU was signed by the national park authorities to provide the framework for the cooperation, but with no legal obligation placed on the partners. This agreement sets out that the Australian Alps national parks should be managed cooperatively to protect the special character of the area.[79]

6.76 The Fenner School noted the 'long-standing efforts' of a cross-jurisdictional committee for landscape-wide management, but stated that the Commonwealth is still not leveraging its powers to effectively protect biodiversity in the high country.[80]

6.77 Since the May 2022 federal election there has been an increase in cooperation between governments, which has built momentum towards effective feral horse management in the Australian Alps.

6.78 In July 2022, the *Australian Alps National Parks Cooperative Management Program Strategic Plan 2023–26* was released, which sets a collaborative framework for the next three years. The Strategic Plan has the theme 'People Working Together' and sets four key core values areas, including: environment; cultural heritage; connecting people; and, program management.[81] Under the key core theme

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the Alps (such as weeds, feral herbivores, and invasive predators) but this funding was not specific to feral horses (Dr Fiona Fraser, Threatened Species Commissioner, Biodiversity Division, DCCEEW, *Proof Committee Hansard*, 23 August 2023, p. 38). Relating to Indigenous culture, a Commonwealth grants program of $5.5 million is forthcoming. This grant program will allow for the addition of Indigenous heritage values to places that are already on the National Heritage List to support the protection and promotion of Indigenous cultural heritage (Mr James Barker, DCCEEW, *Proof Committee Hansard*, 23 August 2023, p. 43).

77 Mr Atticus Fleming, Acting Coordinator-General, Environment and Heritage Group, Department of Planning and Environment, New South Wales, *Proof Committee Hansard*, 23 August 2023, p. 32.

78 DCCEEW, *Submission 23*, p. 22.

79 DCCEEW, *Submission 23*, p. 22.

80 Fenner School of Environment and Society, *Submission 69*, p. 3.

81 Australian Alps National Parks, *Australian Alps National Parks Cooperative Management Program Strategic Plan 2023-26* p. 2 (accessed 14 June 2023).

'environment', reducing the impact of invasive species on natural systems, flora and fauna is a priority. The actions to achieve this outcome are listed as:

- Promote a shared approach to invasive species management;
- Facilitate the cooperation of partner agency efforts on emerging and known invasive species threats in particular ungulates [which include feral horses]...; and
- Promote and share knowledge and assist agencies in building capacity regarding new and emerging technologies in the control of invasive species.[82]

6.79 Another key development has been the re-establishment of the Alps Ministerial Council, which last met in 2010. The Victorian National Parks Association (VNPA) the Nature Conservation Council, and other inquiry participants called for the Australian Alps Ministerial Council to be reinvigorated.[83]

6.80 On 9 June 2023, the Commonwealth, NSW, Victorian and ACT ministers for the environment agreed to reform the Alps Ministerial Council. The Alps Ministerial Council 'will allow four jurisdictions to come together to manage one of Australia's unique areas of biodiversity and heritage values'.[84] Ministers will use the forum to discuss shared challenges and opportunities, allowing stronger coordination of action.

International obligations and treaties

6.81 Australia is a signatory to a range of multilateral environmental agreements and is required to meet various obligations under them. In the context of the Australian Alps, the two key agreements are the Convention on Biological Diversity (CBD) and treaties on a migratory bird species.

Obligations under the Convention on Biological Diversity

6.82 Australia has been a Party to the CBD since 1993. DCCEEW submitted that the CBD obliges Australia to establish 'systems of protected areas where special measures need to be taken to conserve biological diversity, and to the control or eradication of alien species that threaten ecosystems, habitats or species.'[85]

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82 Australian Alps National Parks, *Australian Alps National Parks Cooperative Management Program Strategic Plan 2023-26,* p. 2 (accessed 14 June 2023).

83 Victorian National Parks Association (VNPA), *Submission 24*, p. 10; Nature Conservation Council, Submission 34, p. 4.

84 The Hon Tanya Plibersek MP, Minister for the Environment and Water; the Hon Penny Sharpe MLC, New South Wales Minister for the Environment; Ingrid Stitt MP, Victorian Minister for Environment; and Rebecca Vassarotti MLA, Australian Capital Territory Minister for the Environment, *Joint media release: Alps Ministerial Council to be reformed,* 9 June 2023 (accessed 13 June 2023).

85 DCCEEW, *Submission 23*, p. 12.

6.83 The Department of Agriculture, Fisheries and Forestry (DAFF) set out that, along with DCCEEW, they have portfolio responsibility for the implementation of policies and programs relating to the CBD:

> As a signatory to the CBD, Australia has committed to 'preventing the introduction of, controlling or eradicating those alien species which threaten ecosystems, habitats or species' and 'promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings'.[86]

6.84 In late 2022 Australia adopted the Kunming-Montreal Global Biodiversity Framework (GBF) (the CBD strategic plan for the period 2022 to 2030). Target 6 of the GBF relates to the impacts of invasive alien species such as feral horses in the Australian Alps, under which Australia is obliged to:

> Eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 per cent by 2030, and eradicating or controlling invasive alien species, especially in priority sites, such as islands.[87]

6.85 DCCEEW submitted that Australia is required to align the Strategy for Nature 2019-2030 with the GBF by the middle of 2024. This will include 'setting national targets that outline Australia's planned contributions to the achievement of each of the global goals and targets in the GBF'. The process will be done in collaboration with states and territories 'taking into consideration respective powers and responsibilities'.[88]

6.86 As a party to the CBD, Australia is obliged to manage feral animals in protected areas and protect threatened species and ecological communities from their impacts. A state or territory would need to comply with obligations imposed through regulations made under the EPBC Act.[89]

6.87 In 2021, former Environment Minister the Hon Sussan Ley MP wrote to the former NSW Minister for Energy and Environment, the Hon Matt Kean MP, to notify of the Commonwealth's intention to enact regulations to address the damage caused by feral horses in the Australian Alps National Parks and Reserves National Heritage listed place:

> I consider the NSW Government is currently failing in its obligations to protect the National Heritage values of the Australian Alps National Parks

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86 Department of Agriculture, Fisheries and Forestry (DAFF), *Submission 29*, p. 6.

87 Convention on Biological Diversity (CBD), *15/4. Kunming-Montreal Global Biodiversity Framework*, Target 6.

88 DCCEEW, *Submission 23*, p. 13.

89 EPBC Act, ss. 324Y(3).

> and Reserves National Heritage Place from feral horse damage. For this reason the Australian Government is considering the development of regulations under the Act that oblige protected area managers to take specific action on feral horses, including the responsible, evidence-based, and humane reduction and management of populations, to safeguard the unique biodiversity and heritage values of this nationally significant place.[90]

6.88 At the same time the Commonwealth offered funding support for feral horse control activities.[91]

6.89 DCCEEW officials acknowledged that legal advice on the Commonwealth's regulation-making powers and related constitutional matters under the EPBC Act had been sought and obtained by the department prior to Minister Ley writing to Minister Kean. DCCEEW declined to provide this advice to the committee on request, and set out that it is their long-standing practice not to provide the Commonwealth's legal advice. DCCEEW advised that the current Environment Minister's office had been informed about the advice.[92]

6.90 The committee wrote to DCCEEW and the Hon Tanya Plibersek MP, Minister for the Environment and Water, to clarify that the Senate has resolved that legal professional privilege is not an acceptable ground for the refusal of information in a parliamentary forum. As set out in Odgers' *Australian Senate Practice*, the Senate has rejected government claims that there is a long-standing practice of not disclosing privileged legal advice to conserve the Commonwealth's legal and constitutional interest.[93]

6.91 Minister Plibersek responded stating she is 'not personally opposed to providing the requested information' to the committee. She concluded, however, that 'to do so would be against the public interest and breach established convention…not to disclose legal advice...'.[94]

6.92 On this basis, the committee would have rejected a claim of public interest immunity in accordance with the Senate's previous rejection of this ground to refuse to provide information.

6.93 The committee subsequently wrote to the Minister to reiterate that the Senate has resolved that legal professional privilege, and advice to government, are not acceptable grounds for claiming public interest immunity. The committee

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90 Correspondence from the Hon Sussan Ley MP to the Hon Matt Kean MP, MS21-000806, 17 June 2021.

91 Correspondence from the Hon Sussan Ley MP to the Hon Matt Kean MP, MS21-000806, 17 June 2021.

92 DCCEEW, answers to questions on notice, 23 August 2023 (received 5 September 2023).

93 *Odgers' Australian Senate Practice*, 14th ed, pp. 668–669.

94 Correspondence from the Hon Tanya Plibersek MP to Senator Sarah Hanson-Young, MC23-030380, received 28 September 2023.

extended its inquiry in order to allow time for the Minister to reconsider her response and to provide the committee with more information on the questions originally posed during the committee's public hearing.

6.94 The Minister's subsequent response acknowledged that feral horses damage the fragile alpine and sub-alpine ecosystems and emphasised her hope to have feral horses removed from the Australian Alps. It also noted the actions of the current Australian Government to protect the Australian Alps. These actions include funding for feral horse control to the states and territory, the identification of the Alps as a priority place under the Threatened Species Action Plan, and scientific work to improve the Alps. The committee thanks the Minister for her constructive response.[95]

6.95 The Minister's correspondence also indicates that 'the Commonwealth is restricted from imposing obligations on states without their consent.'[96]

6.96 The Minister's response sets out that the harm which could be caused by the release of the legal advice to the committee, even confidentially, would be to 'the administration of justice', as it 'could prejudice the Commonwealth's position in the event of future legal proceedings'.[97]

6.97 Odgers' sets out that prejudice to legal proceedings is a potentially acceptable ground on which to claim public interest immunity, but the legal proceedings must be 'in the offing', that is, pending.[98]

6.98 The committee considered the Minister's public interest immunity claim and concluded that the statement does not sufficiently justify the withholding of the information, as it relies on a ground previously rejected by the Senate and there are no ongoing or pending legal proceedings that the committee is aware of. In accordance with the Senate's Procedural Orders, the committee reports this matter to the Senate.

6.99 The substance of this is issue is discussed below in relation to inconsistency between jurisdictions' legislative frameworks.

Obligations towards migratory birds

6.100 Three bilateral treaties concern the Latham's Snipe (also known as the Japanese Snipe, *Gallinago hardwickii*). The Latham's Snipe is a medium-sized, long-billed migratory snipe from northern Japan. The entire population migrates to eastern

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95 Correspondence from the Hon Tanya Plibersek MP to Senator Sarah Hanson-Young, MC23-032020, received 10 October 2023.

96 Correspondence from the Hon Tanya Plibersek MP to Senator Sarah Hanson-Young, MC23-032020, received 10 October 2023.

97 Correspondence from the Hon Tanya Plibersek MP to Senator Sarah Hanson-Young, MC23-032020, received 10 October 2023.

98 *Odgers' Australian Senate Practice*, 14th ed, pp. 662.

Australia for the non-breeding season, including within the KNP horse retention area.[99]

6.101 The Latham's Snipe is listed under three separate bilateral agreements with Japan, China and Republic of Korea, and is a migratory species under the EPBC Act.

6.102 The agreements with Japan, China and Korea set out that Australia is obliged to take measures to protect the Latham's Snipe, including preventing damage to the birds and their environment.[100] The agreement with Korea specifically refers to an obligation to protect the Latham's Snipe from the threat of invasive animals.

6.103 The threat of invasive animals on migratory species such as the Latham's Snipe is noted in the Australian Government's *Wildlife Conservation Plan for Migratory Shorebirds*.[101]

6.104 A threatened listing assessment for the Latham's Snipe under the EPBC Act is expected in October 2023.[102]

Withdrawal of UNESCO Biosphere Reserve status for Kosciuszko National Park

6.105 Australia has been a participant in the United Nations Educational, Scientific and Cultural Organization (UNESCO) Man and the Biosphere (MAB) Programme since the 1970s.[103]

6.106 KNP was designated as a UNESCO Biosphere Reserve in 1977, contributing to the objectives of the Convention on Biological Diversity (CBD).[104] In 2020, at the request of the Biosphere Reserve manager—the NSW Government, the Australian Government withdrew KNP's designation due to its inability to

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99 DCCEEW, *Species Profile and Threats Database – Gallinago hardwickii — Latham's Snipe, Japanese Snipe* (accessed 26 July 2023); and National Parks and Wildlife Service, *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021, p. 14.

100 *Agreement between Australia and Japan for the protection of migratory birds in danger of extinction and their environment*, Tokyo, 6 February 1974, entry into force 30 April 1981, [1981], ATS 6, Article 6; *Agreement between Australian and the People's Republic of China for the protection of migratory birds and their environment*, Canberra, 20 October 1986, entry into force 1 September 1988, [1981], ATS 22, Article 4; *Agreement between Australia and the Republic of Korea on the protection of migratory birds*, Canberra, 6 December 2006, entry into force 13 July 2007, [2007], ATS 24, Article 5.

101 Department of Environment, *Wildlife Conservation Plan for Migratory Shorebirds*, p. 15.

102 DCCEEW, *Species Profile and Threats Database – Gallinago hardwickii — Latham's Snipe, Japanese Snipe* (accessed 26 July 2023).

103 United Nations Educational, Scientific and Cultural Organization (UNESCO), *Biosphere Reserves* (accessed 24 July 2023).

104 UNESCO, *Biosphere Reserves – Designation and Review Process* (accessed 24 July 2023).

comply with the necessary criteria to function effectively as a Biosphere Reserve.[105]

6.107 Deakin University queried whether the withdrawal was due partially to inaction on the matter of feral horses: '[KNP] as a former internationally renowned biosphere reserve, threats including feral horses were required to be actively managed and reduced.'[106]

6.108 Deakin University went on to argue that a KNP Biosphere Reserve re-designation was possible with renewed efforts to manage feral horse populations:

> Effective feral horse control, coupled with realignment with the 2020 listing requirements, would enable Kosciuszko to be relisted as a biosphere reserve, with beneficial ecological and economic outcomes.[107]

6.109 When asked about the requirement for a management plan for the Kosciuszko Biosphere Reserve to be consistent with the management principles in the EPBC Act, DCCEEW responded that the management plan for the Biosphere Reserve was the responsibility of the NSW Government. DCCEEW further stated that it was the responsibility of the NSW Government to announce the withdrawal of the listing and also to determine whether to apply for re-listing.[108]

Inconsistency between jurisdictional legislative frameworks

6.110 Concerns over legislative inconsistencies between the Commonwealth and NSW were identified during the inquiry as a significant complicating factor for the overall effective management of feral horses in the Australian Alps National Heritage place.

6.111 In the Australian Constitution, the Commonwealth's power to legislate on environmental matters comes from a range of heads of power—of relevance to this matter are the: external affairs power; the quarantine power; the power to enact laws on matters referred by one or more States; and the territories' power.[109]

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105 DCCEEW, answers to questions on notice, p. 1, 23 August 2023 (received 5 September 2023); and *Australia's Biosphere Reserves* (accessed 24 July 2023). Between 2018 and 2020, ten Australian Biosphere Reserves were withdrawn from the program. There are now just four Biosphere Reserves in Australia.

106 Deakin University, *Submission 25*, p. 25, citing Article 6.3 of the UNESCO World Heritage Convention.

107 Deakin University, *Submission 25*, p. 25, citing Article 6.3 of the UNESCO World Heritage Convention.

108 DCCEEW, answers to questions on notice, p. 1, 23 August 2023 (received 5 September 2023).

109 *Australian Constitution*, ss. 51 and 122.

6.112 DCCEEW representatives explained that the Commonwealth is limited in its ability to intervene on the impacts of feral horses in a National Heritage listed place:

> In the case of state legislation and matters of the state creation of regulation, there are constitutional limitations around what the Commonwealth is able to regulate in that space…in relation to the national heritage layer of protection, the scope of the Commonwealth's responsibility is set out in the [EPBC] Act according to the constitutional heads of power, so there are more limitations around that than there might be for some other matters of national environmental significance.[110]

6.113 As set out above, there are several matters of national environmental significance in the Australian Alps, under the EPBC Act. These include:

- the Australian Alps National Parks and Reserves National Heritage place;
- two Ramsar sites which are both located within the National Heritage place;
- threatened ecological communities listed under the EPBC Act;
- multiple listed threatened species and a migratory species.[111]

6.114 One of the stated objects of the EPBC Act is 'to assist in the co-operative implementation of Australia's international environmental responsibilities', such as the CBD.[112] The EPBC Act clarifies, however, that:

> This Act is not intended to exclude or limit the concurrent operation of any law of a State or Territory, *except so far as the contrary intention appears*.[113]

6.115 Section 109 of the Australian Constitution provides that:

> When a law of a State is inconsistent with a law of the Commonwealth, the latter shall prevail, and the former shall to the extent of the inconsistency, be invalid.

6.116 Under the management principles for National Heritage places, '[t]he objective in managing National Heritage places is to identify, protect, conserve, present and transmit, to all generations, their National Heritage values'. Further, '[t]he management of National Heritage places should ensure that their use and presentation is consistent with the conservation of their National Heritage values'.[114]

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110 Mr James Barker, DCCEEW, *Proof Committee Hansard*, 23 August 2023, p. 36.

111 DCCEEW, *Submission 23*, p. 9.

112 EPBC Act, para. 3(1)(e).

113 EPBC Act, s. 10, emphasis added.

114 Regulation 10.01E, *Environment Protection and Biodiversity Conservation Regulations 2000* (EPBC Regulations).

6.117 At the Commonwealth level, there is a recognition that feral horses are a threat to the Australian Alpine region, and feral horses are not considered to be part of the heritage values recognised in the National Heritage listing.[115]

6.118 In 2020, the Federal Court also found that feral horses are not recognised in the National Heritage values of the Australian Alps.[116]

External affairs

6.119 As set out above, Australia's international obligations rest with the Commonwealth. Regarding the Australian Alps these relate to:

- Article 8 of the CBD, which relates to establishment of protected areas and the control or eradication of alien species which threaten ecosystems, habitats and species;[117]
- three bilateral treaties relating to the Latham's Snipe migratory species; and
- the management of Ramsar listed wetlands through the Australian Ramsar Management Principles.[118]

6.120 While there is no direct power for the Commonwealth to legislate on environmental affairs,[119] a range of Constitutional heads of power do allow the Commonwealth some scope to legislate on environmental matters. Dr Sangeetha Pillai and Prof George Williams set out that the external affairs power in relation to treaties has value in allowing the Commonwealth to legislate:

> …the capacity to implement treaties in reliance on the external affairs power considerably expands the scope of federal power over environmental regulation, allowing the Commonwealth to legislate on matters that otherwise would be outside its competence.[120]

6.121 According to DCCEEW representatives, the Australian Government has a 'very active engagement in the regulation of those matters [MNESs] that are going to have a significant impact':

> Australia has obligations under conventions such as the biodiversity convention and the Ramsar convention, and that's the primary basis for the Commonwealth regulating in those spaces. I can say, generally, that is a significant basis for the operation of the EPBC Act. There are more difficult questions, however…about the extent to which the Commonwealth can

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115 Regulation 10.01A sets out National Heritage criteria which are taken as a heritage value.

116 *Australian Brumby Alliance Inc v Parks Victoria Inc* [2020], FCA 605, para 19.

117 Subsection 324Y(2) of the EPBC Act gives the Commonwealth regulation making powers to implement the National Heritage management principles, provided they are appropriate and adapted to give effect to Australia's obligations under Article 8 of the CBD.

118 Regulation 10.02 sets out the Australian Ramsar management principles.

119 Except with respect to Australian territories.

120 Sangeetha Pillai and George Williams, 'Commonwealth power and environmental management: Constitutional questions revisited', *Environmental and Planning Law Journal* 32 (2015), p. 395.

> constrain the legislative power of the states, but certainly we have a very active engagement in the regulation of those matters that are going to have a significant impact in the ordinary way that they're characterised under the act.[121]

6.122 A treaty must also have obligations that are capable of implementation, and cannot be 'purely aspirational in nature'.[122] Article 8 of the CBD obliges Australia to control or eradicate alien species which threaten ecosystems, habitats or species. This obligation is recognised in the EPBC Act, within the National Heritage management principles.

6.123 The EPBC Act requires the Environment Minister to 'not act inconsistently' with three bilateral treaties relating to the Latham's Snipe migratory species when approving actions, and to not act inconsistently with Ramsar site management principles.[123]

6.124 Committee comment and recommendations are made in Chapter 7.

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121 Mr James Barker, DCCEEW, *Proof Committee Hansard*, 23 August 2023, p. 38.

122 Sangeetha Pillai and George Williams, 'Commonwealth power and environmental management: Constitutional questions revisited', *Environmental and Planning Law Journal* 32 (2015): 395–408 at p. 399.

123 EPBC Act, s. 140.

Chapter 7
Committee view and recommendations

Overview

7.1 Australia is considered internationally as a megadiverse country. It is one of the most biologically rich countries in the world. It is not surprising therefore, that when the Australian Alps was National Heritage listed in 2008, its biodiversity was described as 'a rich and unique assemblage of cold-climate specialist species that have evolved unique physiological characteristics'.[1]

7.2 During this inquiry it has become unambiguously clear that the Australian Alps are under pressure from significant threats. Key among these is the threat posed by feral horses.

7.3 Feral horse populations in parts of the Australian Alps have been allowed to expand their range and grow largely unchecked, allowing significant damage to occur and exacerbating other existing threats such as climate change.

7.4 Feral horses are increasing the risk of extinction for up to a dozen highly threatened species found only in the Australian Alps. Vital habitat and food sources for protected species and ecological communities are being severely degraded by approximately 25,000 feral horses currently in the Australian Alps.

7.5 Despite the listing of threatened species and ecological communities, and migratory species, at both the Commonwealth and state and territory levels, critically endangered species are under genuine threat from the continued presence of feral horses at an unprecedented scale.

7.6 The committee acknowledges differing views on estimates of feral horse population numbers in Kosciusko National Park (KNP) and the Australian Alps more broadly, however notes that best-practice scientific methodology clearly shows a worrying upwards trend over the past decade.

7.7 This chapter draws together the committee's view on key themes raised through the inquiry, and makes several recommendations.

Strong need for coordination and cooperation

7.8 The successful implementation of a plan to remove feral horses from the Australian Alps National Heritage place depends on the cooperation of the Commonwealth, state and territory governments. All jurisdictions will need to coordinate control methods and align their targets to ensure that this shared landscape is protected.

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1 Commonwealth of Australia Gazette, *No. S237, 7 November 2008*.

7.9 Both the ACT and Victoria are impacted by the limitations of the NSW Government to address the increasing and spreading feral horse population in KNP.

7.10 The committee notes the limitations of currently available management methods used in NSW and Victoria (including ground shooting by skilled professional shooters, capture and rehoming, and euthanasia when rehoming is not available). These limitations relate to the inaccessibility of significant sections of the alps as well as the lack of suitable rehoming placements. Animal welfare concerns were also raised regarding trapping and transportation prior to rehoming. These limitations have resulted in the significant increase in the feral horse population and range across KNP and the northern parts of the Victorian alps.

7.11 The committee acknowledges that the humane feral horse management approaches of the ACT Government allow the ACT to focus on critical nature restoration work and to protect the ACT's key drinking water supply. Similarly, the committee notes the challenges faced by Victoria in managing feral horse populations in difficult terrain, and with incursions from NSW, and commends it for the protection of Bogong High Plains through active and humane management.

7.12 The committee observes that there is an inherent and undeniable tension between the Australian Government listing of the Australian Alps for National Heritage protection, and the NSW *Kosciuszko Wild Horse Heritage Act 2018*. The objectives of the NSW Kosciuszko Management Plan for feral horses presents a paradox—namely, that feral horses and the heritage values of the national park they occupy cannot both be protected.

7.13 Feral horses occupy national park land at the expense of other plant and animal species. This means that protection of the threat as well as the threatened species is not possible. This tension underlies the inconsistency between the threatened species protections under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and its rejection of feral horses having heritage values, and the NSW legislation which directly contradicts this.

7.14 The committee notes that over the past decade, the Commonwealth has not played an active role in the management of the Australian Alps, despite Commonwealth legislation and international obligations.

7.15 The committee considers that it is not currently possible for both the EPBC Act and the NSW *Kosciuszko Wild Horse Heritage Act 2018* (NSW Wild Horse Heritage Act) to be complied with. The EPBC Act does not recognise feral horses as having heritage value, and the Commonwealth considers them a threat under the novel biota key threatening process. Conversely, the NSW Wild Horse Heritage Act recognises the heritage value of feral horses within the KNP. In concurrence with the views of the scientific contributors to this inquiry, the

committee supports the welfare and ongoing existence of Australian native threatened species and ecological communities being prioritised over invasive species.

7.16 The committee considers that there may be an issue relating to the constitutional validity of the NSW Wild Horse Heritage Act to the extent it is inconsistent with the EPBC Act. Noting that the Australian Government already has constitutional advice on the matter, the committee also urges the NSW Government to seek expert legal advice regarding the validity of the *Kosciuszko Wild Horse Heritage Act 2018*.

New South Wales' legislative constraints

7.17 The NSW Government's Kosciuszko Management Plan is actively at cross purposes not only with its own legislation, but with the other state and territory who share the responsibility of protecting the Australian Alps. The Kosciuszko Management Plan sets out that 32 per cent of the national park is a feral horse retention area. This same area includes habitat for threatened species and ecological communities, and areas of First Nations cultural significance. Significant sphagnum bogs and associated fens also occur within this area, as does a migratory species protected under international obligations.

7.18 The committee considers the approach taken by the former NSW Government to be inconsistent. Under separate NSW laws, feral horses are simultaneously protected and considered a threat. There is an irreconcilable inconsistency in applying management actions required by the listing of feral horses as a Key Threatening Process under the NSW Biodiversity Conservation Act, and the protection owed to threatened species under the NSW Assets of Intergenerational Significance framework (enabled by the National Parks and Wildlife Act), while at the same time enforcing the NSW Wild Horse Heritage Act.

7.19 The NSW Government is now required, through its own legislation, to implement conservation action plans for species that the NSW Government is endangering through the retention of feral horses in parts of KNP. This will make it difficult for the NSW Government to find a pathway to achieve its statutory reduction targets.

7.20 The committee notes the *Final Report of the Independent Review of the NSW Biodiversity Conservation Act*, released in August 2023, conducted by Dr Ken Henry. This review found that the NSW Biodiversity Act is unlikely to ever achieve its objectives, and is not meeting its primary purpose.[2] The review stated

[2] Dr Ken Henry, *Independent Review of the Biodiversity Conservation Act 2016 (NSW): Final Report*, pp. iii and 1.

that biodiversity across NSW is at risk from a range of environmental disturbances, including that:

> Feral animals are competing with native wildlife for resources, overgrazing native plants, and preying on native animals.[3]

7.21 The review also asserted that the Act's 'objectives lack primacy, being undermined by a range of other legislation', and recommended that the act 'have primacy over competing pieces of legislation'.[4]

7.22 The committee agrees with Dr Henry's assessment of the NSW Government's environmental legislation.

The need for stronger Commonwealth leadership

7.23 Former Commonwealth Environment Ministers have had minimal engagement to address the impact of feral horses in the Australian Alps, in respect of the area being listed as a National Heritage place. While the committee notes the legislative constraints placed on the Commonwealth to directly intervene in NSW, evidence provided shows that there are other levers to allow the appropriate and necessary protection of the Alps environment.

7.24 The new Minister for the Environment and Water has agreed with the Samuel Review of the EPBC Act that 'Australia's environment laws are broken'.[5] Long-awaited reform to the EPBC Act is coming, and the Threatened Species Action Plan has set the goal of no new extinctions.

7.25 A more focused approach to the Australian Alps is needed, in order to first stop the degradation caused by feral horses, and then to repair and regenerate the environment.

7.26 The committee is encouraged by the recent reinvigoration of the Australian Alps Liaison Committee (AALC) and Ministerial Council as fora for the Commonwealth to work cooperatively with the states and territory, as well as an avenue to set expectations for the proper protection of the Australian Alps National Heritage place. This is an important step to reset the relationship across the four relevant jurisdictions.

7.27 The Hon Tanya Plibersek MP, Minister for the Environment and Water, stated in correspondence to the committee that the re-establishment of the Ministerial Council would allow the Commonwealth to work collaboratively with the states and territories on this matter. Minister Plibersek also stated that she 'want[s]

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3 Dr Ken Henry, *Independent Review of the Biodiversity Conservation Act 2016 (NSW): Final Report*, p. iii.

4 Dr Ken Henry, *Independent Review of the Biodiversity Conservation Act 2016 (NSW): Final Report*, pp. 3–4.

5 The Hon Tanya Plibersek MP, Minister for the Environment and Water, *Labor's Nature Positive Plan: better for the environment, better for business*, Media Release, 8 December 2022.

feral horses removed from the Australian Alps as much as anyone. They damage our fragile alpine and sub-alpine ecosystems.'[6]

The Commonwealth's international obligations

7.28 Australia's international obligations in relation to the Australian Alps may not be being met. Article 8 of the UN Convention on Biological Diversity (CBD), relating to in-situ conservation, is provided for under the National Heritage provisions of the EPBC Act. This legally-binding international treaty obliges Australia to control or eradicate alien species which threaten ecosystems, habitats or species. Feral horses directly impact twelve Australian Alp animal species that are threatened with extinction. While the Australian Government is responsible for upholding Australia's international obligations, previous administrations appear to have failed to act adequately.

7.29 Similarly, the Latham's Snipe is a listed migratory species which spends part of each year in the horse retention area of KNP. Australia has three bilateral agreements with Japan, China and the Republic of Korea which provide for the protection of this species and its environment. The agreement with Korea, for example, specifically sets out that the Australian Government will 'endeavour to take measures to control the impact of invasive animals and plants on the conservation of such birds and their environment'.[7]

Committee comment and recommendations

National leadership to manage feral horses

A national feral horse population assessment

7.30 The committee is concerned that the national population estimates for feral horses are more than a decade old. This is particularly important given the compounding population growth rate, which can double every five years. In order to lead a coordinated national effort, the Australian Government needs to understand the current population across Australia, to be developed in collaboration with states and territories.

Recommendation 1

7.31 The Committee recommends that the Department of Climate Change, Energy, the Environment and Water, in collaboration with its state and territory counterparts, undertake an impact and population assessment of feral horses at the national level.

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6 Correspondence from the Hon Tanya Plibersek MP to Senator Sarah Hanson-Young, MC23-032020, received 10 October 2023.

7 Republic of Korea–Australia Migratory Bird Agreement, Article 5.

List feral horses as a Key Threatening Process

7.32 The committee heard that the existing Key Threatening Process for Novel Biota is too general to allow for targeted action to control feral horses. The Australian Government should address this weakness as part of broader reforms to the EPBC Act.

7.33 The committee considers that, after urgently addressing the limitations of the current novel biota key threatening process, the Commonwealth Environment Minister list feral horses as a Key Threatening Process, alongside other invasive species in the Alps such as feral deer and pigs, leading to the implementation of a Threat Abatement Plan.

7.34 Through this process, the Commonwealth Environment Minister should consider what other avenues within the EPBC Act would assist in facilitating an urgent, coordinated approach to managing feral horses and protecting national heritage values.

Recommendation 2

7.35 The Committee recommends that the Minister for Environment and Water list habitat degradation, competition and disease transmission by feral horses as a Key Threatening Process under *the Environment Biodiversity and Conservation Act 1999.*

Recommendation 3

7.36 The Committee recommends that, after the Key Threatening Process is in place, the Minister for the Environment issue a Threat Abatement Plan as soon as is practicable, in order to reduce the threat of feral horses in the Australian Alps.

Protection of headwaters

7.37 The Australian Alps are home to the headwaters of the Murrumbidgee, Snowy and part of the Murray River. These rivers provide high-quality water to the Murray-Darling Basin worth nearly $10 billion per annum. Feral horses cause damage by increasing erosion, which leads to turbidity, which can greatly affect local and downstream water quality. Studies outside the Alps region have shown turbidity levels at up to 50 times the national guidelines.[8]

7.38 The presence of high populations of feral horses will continue to cause damage to our precious waterways. The Murray-Darling Basin Authority (MDBA) has the ability to measure, monitor and record the condition of water-dependent

[8] Australian Academy of Science, answers to questions on notice, 7 September (received 20 September 2023).

ecosystems that use the Basin's water resources, and in the case of the Hume Reservoir's catchment, to take effective measures to protect against erosion.

Recommendation 4

7.39 The Committee recommends that in partnership with the states and territory, the Murray-Darling Basin Authority undertake work to measure, monitor and record the quality of Basin water resources in and flowing from the Australian Alps, with particular reference to the impact of feral horses.

Recommendation 5

7.40 The Committee recommends that in partnership with the states and territory, the Murray-Darling Basin Authority undertake an immediate assessment of the condition of the catchment of the Hume Reservoir, with particular reference to the impact of feral horses.

Australian Alps National Heritage listing

7.41 The committee heard that the Commonwealth's ability to regulate National Heritage listed places is limited when the individual parks and nature reserves are on state land. This potentially frustrates the functioning of the listing, particularly if there is disagreement between the state government—the land manager—and the Commonwealth, which is responsible for the National Heritage listing.

7.42 The EPBC Act's National Heritage provisions only allow the Commonwealth to use its 'best endeavours' to facilitate cooperation with the states and territories in the formulation of management plans where National Heritage listed places are on state or territory land. States and territories should ensure that they comply with the management principles for National Heritage listed places.

7.43 The listing of a National Heritage place, the listing of threatened species and ecological communities, and the listing of migratory species for protection, should result in land managers taking concerted active steps to prevent further degradation. The committee heard that a failure of jurisdictions to act in line with a National Heritage listing has put national heritage values at risk. The Commonwealth should consider mandating an obligation for action within the scope of the large-scale EPBC reform that is underway.

Recommendation 6

7.44 The Committee recommends that the Australian Government take a lead role to achieve cooperation between state and territory governments in the formulation of management plans for National Heritage listed places, including in the Australian Alps National Heritage place. The Australian Government should establish agreed mechanisms to resolve disputes

between jurisdictions to ensure that National Heritage values are being protected.

7.45 The management principles for National Heritage listed places, as set out in the EPBC Regulations, do not reflect the Australian Government's international obligations. These include the Convention of Biological Diversity (CBD), the Ramsar Convention, and bilateral agreements to protect migratory species. The management principles should clearly refer to the need to uphold international obligations.

Recommendation 7

7.46 The Committee recommends that the EPBC Regulations, which set out the management principles for National Heritage listed places, be amended to include reference to international obligations.

7.47 The committee notes that the Australian Government is currently working towards aligning the strategic plan for the Convention on Biological Diversity (known as the Kunming-Montreal Global Biodiversity Framework) with the Strategy for Nature 2019–2030. This work is set to be completed by the middle of 2024.

7.48 The committee considers that this should be enshrined in the EPBC Act's National Heritage provisions, alongside the Convention on Biological Diversity, in order to underscore the significance of Australia's international obligations in this regard.

Recommendation 8

7.49 The Committee recommends that the National Heritage provisions of the EPBC Act be amended to include that regard must be given towards Target 6 as adopted in the Kunming-Montreal Global Biodiversity Framework.

7.50 The committee is concerned that, as the population of feral horses grows by 15 to 20 per cent per year, their increasing impacts on EPBC Act-listed species is not being measured. The committee urges the Australian Government to undertake monitoring the numbers of critically endangered species such as Southern and Northern Corroboree Frogs and Stocky Galaxias.

Recommendation 9

7.51 The Committee recommends that the Australian Government commission urgent monitoring to assess the current status of EPBC Act-listed species, ecological communities and migratory species in the Australian Alps.

7.52 Further, the Australian Government should work with the NSW, Victorian and ACT governments to urgently implement recovery plans to better protect critically endangered species such as the Stocky Galaxias and Southern Corroboree Frog.

7.53 The Australian Government's *Threatened Species Action Plan 2022-2032* has set an ambitious goal of no new extinctions, and the Australian Alps have been designated as a priority place. Priority species also identified in the plan, which are found within the Australian Alps, include the Southern Corroboree Frog, Mountain Pygmy-possum and Stocky Galaxias. In the committee's view, the Commonwealth has both an international obligation and a domestic commitment that requires it to co-invest in the protection of native species in the Australian Alps, including through management of their key threats. Based on evidence to the inquiry, the level of co-investment required would be modest.

7.54 In order to achieve this worthy and necessary goal, the Australian Government should provide adequate co-funding to the land manager governments for the Australian Alps National Heritage listed place.

7.55 The committee's view is that the Australian Government should urgently provide a significant boost in funding to NSW, Victoria and the ACT in order to facilitate effective management of feral horses in line with best practice and following strict humane conditions. The Commonwealth has a coordination role to play as this is a National Heritage listed place, protected under the EPBC Act.

7.56 This co-funding should be reviewed by the Department of Climate Change, Energy, the Environment and Water after two financial years, with the remaining to be delivered subject to the completion of agreed project milestones.

Recommendation 10

7.57 The Committee recommends that the Australian Government increase funding to the states and territory, who are the primary land managers of the Australian Alps National Parks and Reserves, to enable them to ensure National Heritage values are upheld and threatened species are protected from extinction.

7.58 The committee notes that Parks Victoria has encouraged the use of the FeralScan website and apps to log sightings of invasive species, although feral horses are not currently included. This website is partly funded by the Commonwealth and the NSW Government. The committee considers that this facility could be expanded to include feral horse sightings and damage to be recorded, uploaded and provided to biosecurity and pest management agencies.

7.59 The committee notes that the vast majority of submissions received were from individuals who are frequent visitors to the Australian Alps, or who have a connection with the area, who are concerned at the damage they have seen. An expanded FeralScan data collection service would allow these individuals to contribute to the improvement of the Alpine region and assist agencies with targeted monitoring and reduction.

Recommendation 11

7.60 The Committee recommends that the Australian Government expand its partnership with FeralScan to develop a platform for the monitoring and logging of feral horses.

7.61 The committee notes the range of population management techniques provided by witnesses, and acknowledges views that the exclusion of aerial shooting from NSW's Kosciuszko Management Plan has created limitations to adequate feral horse management. Given the urgency of the task at hand, with El Niño conditions underway, and the imminent threat of extinction faced by several critically endangered species, the committee believes all management options should be available to the states and territory to allow feral horse management in accordance with the best science and humane practice.

Recommendation 12

7.62 The Committee recommends that the NSW Government update the Kosciuszko National Park Wild Horse Heritage Management Plan to allow the use of aerial shooting as one of the available feral horse control methods if deemed appropriate under strict safety, scientific and humane practices.

Impact on Indigenous cultural heritage

7.63 Indigenous inquiry participants explained that feral horses, with their recent connection to Australian culture, have been given primacy over the area's long-standing Indigenous cultural heritage and deep connection to the area. Sites which were traditionally used for ceremonies and gatherings are now too impacted by feral horses to continue those uses.

7.64 Indigenous people should be the primary source of information on the value of their heritage, and should be involved in the identification, assessment and management of these sites, according to the National Heritage management principles. The committee questions whether this is occurring to a satisfactory level, given the evidence heard during the inquiry.

7.65 First Nations knowledge should be provided through bodies such as the Australian Alps Liaison Committee.

Recommendation 13

7.66 The Committee recommends that the Australian Alps Liaison Committee membership include Indigenous representation, to ensure that Indigenous knowledge and culture is properly considered at each stage of its processes.

7.67 The committee acknowledges the dedicated work of national parks staff—as rangers, pest managers, visitor service staff, administrative support staff, and a variety of other roles—contributing to the care for our precious national parks and nature reserves. Maintaining our national parks is a very significant job, and

the committee heard that staff have performed their roles while at times enduring abusive threats and harassment from certain members of the broader pro-brumby network.

7.68 The committee heard that digital stalking, abuse via social media, and other forms of threatening behaviour are taking place, and reiterates that this behaviour is criminal. Everyone has the right to feel safe in their workplace, no matter where their workplace is or what their work requires of them.

7.69 The committee agrees that the safety of frontline staff in national parks should also be urgently reviewed by the Australian Alps National Parks and Reserves land manager governments.

Recommendation 14

7.70 The Committee recommends that the NSW, Victoria and ACT Governments urgently review the safety of staff working in and around national parks, and work with local law enforcement agencies to ensure that staff are properly protected in their workplaces.

Senator Sarah Hanson-Young
Chair

Coalition Senators' Dissenting Report

Introduction

1.1 The Australian brumby is an important icon of Australian culture[1] - celebrated in verse by Banjo Patterson, and featuring in the 2000 Sydney Olympics opening ceremony, Elyne Mitchell's The Silver Brumby series and the iconic film *The Man from Snowy River*. Within the Australian Alps, brumbies have also co-existed with humans, and a multitude of other animal and plant species, for over 200 years. By complete contrast, in the course of this Inquiry and in the Majority Report, the Australian brumby has instead been routinely depicted as a pest inflicting undesirable and untold damage throughout the region.

1.2 The inquiry process and the Majority Report have repeatedly relied upon troubling methodology and anecdotal data. In a number of respects, we believe that this has overplayed the brumbies' environmental impact and has failed to pay due regard to the views and evidence of those whose chief (and very worthy) concern is the welfare of the brumbies.

1.3 To make matters worse, there has been staunch disagreement between some committee members and the relevant Federal Environment Minister, the Hon Tanya Plibersek MP regarding public interest immunity over Commonwealth regulation-making powers and related constitutional matters under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) in relation to brumby management.

1.4 It should also be noted that the public hearings for this inquiry were staged over only two days – and that this led to multiple concerns over the treatment and time afforded to the pro-brumby advocates who attended to present evidence. Many of these witnesses were sufficiently moved to subsequently contact the Committee with a series of questions and concerns over why they were not provided with the same opportunities, respect and consideration in the provision of their evidence that they felt was afforded to other witnesses. In their view, witnesses such as Dr David Berman had their credibility and qualifications extensively questioned rather than being subjected to probative questioning within the scope of the Terms of Reference for the inquiry.

1.5 We also share the view that substantially lower levels of time and respect were afforded to pro-brumby advocates relative to other witnesses. Unfortunately, we also therefore do not regard it as an epiphany or even as a surprise that the content of the Majority Report has fallen strongly on the side of those witnesses advocating for significant brumby culling.

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1 Brumby Action Group, *Submission 71*, p. 17.

Methodology/Data Reliability

1.6 The inadequacies of the available data on brumby populations and their impact, and indeed the methods of the collection of that data were raised by Australian brumby advocates throughout this inquiry. Foremost among these were the concerns raised by Ms Galea[2] and Dr Berman[3] regarding the implausible data that was provided regarding population estimates, and was supported by concerns regarding the methodology and findings by the University of St Andrews.[4]

1.7 Ms Galea questioned the reliability of cluster size collection with many of the clusters provided by Cairns (2019) being well below the 60-80 number required for reliable modelling of the detection function (Buckland et al, 2001). Further concerns were raised in the Cairns estimates as samples were combined, and the range of cluster size was 1-28 with a cluster being more than 1. The use of this cluster methodology is not best practice and does not allow for a determination of a reliable population estimate of Australian brumbies.

Recommendation 1

1.8 Further studies, including longitudinal studies, be undertaken using an agreed method of collection across three time periods to meet the requirements of complex statistical modelling techniques.

1.9 We also question the reliability of some of the data presented in this report, including 'figure 2.2 Distribution of feral horses in Australia, 2000' due to its lack of currency. In this particular case, we find it difficult to believe that there is much relevance to data from 23 years prior to the current inquiry.

1.10 In our view, the Majority Report also does not adequately examine horse gestation periods and the impact of environmental events, and rate of increase discrepancies such as environmental impacts and amendments to Park Management Plans on population estimates. Similarly, there has been little to no consideration of studying the efficacy of the intervention of stockmen and locals to control the Australian brumby population using methods developed over time such as trapping and 'brumby running'.[5]

Recommendation 2

1.11 Further studies be undertaken on alternative options to contribute to the control and reduction of Australian brumby populations.

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2 Ms Claire Galea, *Submission 801.*

3 Dr David Berman, *Submission 602*.

4 Ms Claire Galea, *Submission 801*, p. 15.

5 NSW Government, *Submission 361*, p. 4.

1.12 The estimates of Australian brumby numbers in the Alps provided throughout the inquiry are varied, with many questioning the reliability of collection and accuracy of the numbers reported. The lack of a scientifically credible population estimate has led to confusion and the conflation of data and concerns over the unreliability of the models presented.

1.13 Ms Galea expressed concern as there was no significant increase in the overall population of Australian brumbies from 2020 (12,511 Australian brumbies) to 2022 (12,774 Australian brumbies).[6] This does not equate with the Majority Report's claims that numbers are increasing at 15 to 20 per cent each year, rather a 3 per cent increase over 2 years. An independent study to identify accurate methods of data collection would create a better and stronger baseline for future work.

1.14 We dispute the validity of the claim that feral horse populations in the Australian Alps are rapidly increasing at a rate of 15 to 20 per cent per annum as this data was provided in 2011,[7] and since this date the Australian Alps have been subject to various Management Plans,[8] impacted by a number of natural disasters which would have severely reduced the reproductive abilities of the Australian brumby herds,[9] as well as the rate of increases of such herds.

1.15 The RSPCA recommends that an impact evaluation be conducted considering various species and their impacts on the Australian Alps.[10] The Australian Brumby Alliance supports this position and would like to see native species counts conducted using dung counts adjusted to decay results and repeat for introduced species. Ensuring these studies relate to specific species and measuring both the positive and negative impacts of species on the Australian Alps will provide a more holistic overview of the health and sustainability of the region.

1.16 The Brumby Action Group has called for a population count of Australian brumbies living in the Australian Alps using a methodology other than computer distance modelling to ensure an accurate and real number be established.[11]

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6 Ms Claire Galea, *Submission 801*, p. 13.

7 See: Professor Don White, *Submission 17*, p. 5; DSWEPC, *Feral horse and donkey fact sheet*, 2011.

8 *2021 Koscuiszko National Park Wild Horse Management Plan* (NSW); *Namadgi National Park Feral Horse Management Plan 2020* (ACT); *Feral Horse Action Plan 2021* (Vic).

9 NSW Government, *Submission 361*, p. 3.

10 RSPCA, *Submission 84*, p. 14.

11 Brumby Action Group, *Submission 71*, p. 17.

Recommendation 3

1.17 Impact evaluation studies be conducted on the impact, both positive and negative, of Australian brumbies in the Australian Alps instead of focusing on the raw numbers.

Recommendation 4

1.18 Study on population of Australian brumbies be undertaken using reliable methodology with a higher rate of accuracy with evaluations after 3 and 6 years.

Recommendation 5

1.19 Federal funding options be considered for the use of drones to aid in the population counts and the delivery of their management plans.

1.20 When discussing the numbers and the rate of removal of brumbies from the Australian Alps, many who presented evidence were supportive of number reduction as swiftly as possible. However, the major source of disagreement relates to the numbers of brumbies present in the Australian Alps.[12]

Aerial culling and non-lethal control methods

1.21 We have no issue with aerial culling as a means for feral animal control; however, this means of culling is currently precluded under the 2021 NSW Kosciuszko National Park Wild Horse Heritage Management Plan (Kosciuszko Management Plan) and should not be considered as a means to control Australian brumbies in the Australian Alps until all other control methods have been adequately employed, together with studies conducted to determine an accurate number of Australian brumbies in this region. Non-lethal controls should be continuously monitored and evaluated for effectiveness and consultation be conducted for efficacy.

1.22 There are various control techniques available for the management of Australian brumby numbers, including fertility control, mustering and trapping, exclusion fencing and ground culling. The RSPCA submits that aerial culling is significantly less humane than other methods in the Relative Humaneness Matrix for Feral Horses matrix,[13] however this matrix does not consider control methods such as roping, loading and transport to abattoirs or for domestication, fertility control or exclusion fencing. Further research needs to be undertaken regarding control methods.

1.23 Brumby rehoming organisations made many submissions relating to the positive outcomes when rehoming Australian brumbies after capture.

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12 RSPCA, *Submission 84*, p. 6.

13 RSPCA, *Submission 84*, p. 6.

Consideration should be given to developing a best practice to capture, transport and provide funding to these organisations who work to rehome the Australian brumby. Funding and support may also be considered to support organisations to develop brumby rehoming infrastructure[14] close to the Australian Alps, thereby minimising any stress from transport following capture.

1.24 Save the Brumbies have had success with their adoption program which has seen more than 400 Australian brumbies successfully rehomed. With adequate funding and support for these rehoming organisations, a reliable rehoming program could be developed as a non-lethal reduction control for the Australian brumbies. In our view, the feasibility of all non-lethal methods must continue to be explored before lethal control methods are considered.

1.25 In order for aerial culling to be even considered a humane practice, there needs to be optimal conditions. Professional shooters whose skills are better the gold medal Olympian shooters, optimum terrain and visibility. Aerial shooting is currently available for pigs and deer in New South Wales, however the current NSW Management Plan prohibits aerial culling of the Australian brumby.

1.26 Ground shooting is seen as a preferred alternative to aerial culling and does not require a helicopter to run down the Australian brumby for extended periods of time and would have increased accuracy. The RSPCA and the Australian Veterinary Association discussed levels of humane pursuit times of Australian brumbies.[15] Four minutes is considered a humane period of time to run down horses whilst aerial shooting from a helicopter, with pursuit times of up to 11 minutes recorded. Whilst horses can move at speeds up to 75km/hr, this may not be sustainable across challenging terrain and whilst mares are pregnant or with foals at foot.

1.27 Based on the evidence provided, we do not agree with complete removal of the Australian brumby from the Australian Alps, however we do support the recommendations to reduce these numbers to retain genetically and environmentally safe Australian brumby levels.[16] There is an enhanced community concern when it comes to the treatment of animals that can also be domestic pets, such as horses, cats and dogs and the community is generally not supportive of the shooting of these animals as evidenced by the culling of the Australian brumbies at Guy Fawkes River National Park in 2000.

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14 Save the Brumbies Inc., *Supplementary to Submission 3.2*.

15 Dr Michael Banyard, Conservation Biology Special Interest Group Representative, Australian Veterinary Association, *Proof Committee Hansard* 23 August 2023, p. 11; Dr Dianne Evans, Senior Scientific Officer, RSPCA Australia, *Proof Committee Hansard* 23 August 2023, p. 11.

16 Name Withheld, *Submission 14*, p. 2.

1.28 The RSPCA submitted that studies should be undertaken to study the welfare of trapped horses as this is not widely known. The Invasive Species Council suggested that rounding up the Australian brumbies in shooting corrals would also achieve a large number reduction, however raised concerns over the public perception of this practice. Further research should be undertaken on the best welfare practices for the treatment and the reduction of numbers of Australian brumbies. If non-lethal alternatives are not adequately considered, there will be a continued reliance on lethal outcomes.

Recommendation 6

1.29 Greater investment in developing and refining humane non-lethal methods for the reduction of numbers of Australian brumbies.

Recommendation 7

1.30 Support be given to the current NSW policy for number reduction as outlined in the Kosciuszko National Park Wild Horse Heritage Management Plan.

Recommendation 8

1.31 The Federal Government should offer the NSW Government additional funding to support control methods, provided they do not take up aerial culling.

Environmental impacts

1.32 Based on the evidence provided throughout this hearing, the Australian brumby is widely depicted as the most significant risk to various animals and plants within the Australian Alps. Yet this view does not sufficiently consider the rates of disease such as Amphibian Chytrid Fungus within populations of frog species such as the Corroboree frog,[17] with the risk of extinction instead being ascribed largely to the hard-hooved Australian brumby.

1.33 There is considerable evidence in the public domain that outlines that horse tracks are damaging for grasses and various species of animals. However, the tracks and damage created by SnowyHydro 2.0, bike tracks, alpine ski infrastructure and vehicles has not been considered as part of this inquiry. Further study into the impacts of the damage caused to habitats and structures, and how this relates to the damage specifically caused by Australian brumbies, should be undertaken. The impact of introduced trout in the waterways of the Australian Alps on endangered species should also be taken into account for future examination of impacts to the Australian Alps.

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17 Dr David Berman, *Proof Committee Hansard*, 7 September 2023, p. 17.

1.34 The limited mapping provided shows significant endangered species habitats outside the horse retention zones and doesn't warrant the eradication of the Australian Brumby from the entire park.[18]

Legal powers of the Commonwealth, States and Territories – and the Albanese Government's inaction

1.35 Despite the Committee providing an extension of time to her, Minister Plibersek refused to provide details of the legal advice received by Department of Climate Change, Energy, the Environment and Water regarding Commonwealth regulation-making powers on brumby management and related constitutional matters under the EPBC Act. However, she did indicate that the 'Commonwealth is restricted from imposing obligations on states without their consent.' The Minister asserted that the full text of this advice could not be released as it 'would be against the public interest and breach established convention…' and despite the Committee's best efforts to reiterate that the Senate had resolved that this was not grounds for claiming public interest immunity, the Minister opted not to provide this legal advice to the Senate.

1.36 It therefore appears that the Albanese Government's philosophy is that the Commonwealth has no legal method to take over responsibility for park management from the states and territories. Notwithstanding that there are many differences in their approaches, methods and beliefs, the states and territories impacted by Australian brumbies variously maintain control over their National Parks and the development of any management plans for the control of numbers of Australian brumbies in the Australian Alps.

Recommendation 9

1.37 Legal advice be sought regarding Commonwealth regulation-making powers and related constitutional matters under the EPBC Act.

1.38 This approach of the Albanese Government seems to be a continuation not only of its broader inability to embrace serious reform and to make difficult decisions – but also its unwillingness to continue the hard work that had already been undertaken by the former Coalition Government.

1.39 After her nearly 18 months as the Federal Environment and Water Minister, there is now a widespread view that Minister Plibersek has little interest in making meaningful and beneficial changes.

1.40 This has been particularly true of her approach to her long-flagged changes to national environmental laws. Despite much rhetoric about the apparent urgency of these changes, and a promise (in her 'Nature Positive Plan' document of 8 December 2022) that 'a package of new national environmental legislation will

[18] Deakin University, answers to questions on notice, 7 September 2023 (received 18 September).

be prepared in the first six months of 2023', there is still no sign of any such package.

1.41 In the area of brumby control, she has shown equally little appetite to act.

1.42 Tellingly, at the inquiry hearing of 23 August, DCCEEW officials were asked by Senator Hughes if they could nominate even one specific action that the Minister has taken to reduce feral horse activity and populations, especially in the context of her 2022 pledge to achieve zero plant and animal extinctions. More than once, they were unable to identify anything other than the formation of another bureaucratic body.

1.43 Similarly, despite DCCEEW officials' reluctance to initially directly answer Senator David Pocock's questions about differences between funding for brumby management under Minister Plibersek and the former Coalition Environment Minister, the Hon Sussan Ley MP, the true answer eventually emerged in the answer to Question on Notice IQ23-000253.[19] This showed that the former Coalition Government provided $1,530,000 of such funding, but that the Albanese Government has allocated only $200,000 in new money.

1.44 That answer to Question on Notice IQ23-000253 has also cast very serious doubts on a claim made by Minister Plibersek, in a letter of 10 October 2023 to the Committee, that her government has 'provided over $2 million to the states and territory for feral horse control'.

Murray Darling Basin Authority

1.45 We find the recommendations regarding the Murray Darling Basin Authority concerning as they propose the authority undertake work that is not part of their core responsibilities.

1.46 The Murray Darling Basin Authority is not a catchment management authority, and these recommendations only serve to give more work to the Murray Darling Basin Authority outside their core responsibilities at a time when they should be focusing on delivering on their core responsibilities. The state and territory catchment authorities are already empowered to undertake research of this nature and these recommendations are the Commonwealth extending themselves into areas that already have a designated authority.

Conclusion

1.47 The 2021 Kosciuszko Management Plan has a number of safeguards in place to ensure the welfare of the Australian brumby is considered, such as no aerial culling.

1.48 Whilst it is noted that there is momentum and shared commitment across the four relevant governments, this is ultimately a state/territory issue and there is

[19] DCCEEW, answers to questions on notice, 23 August 2023 (received 6 September 2023).

no legal basis for the Commonwealth to be involved in this issue without the consent of the States or Territories, other than an advisory capacity and this inquiry is an exercise to extend the powers of various Commonwealth agencies rather than focus on the impact and management of Australian brumbies in the Australian Alps.

1.49 Based on the submissions and the evidence presented, there is a clear desire for pro-brumby advocates to work with the state and territory governments to develop an agreeable action plan relating to the control of Australian brumby numbers in the Australian Alps, however this is not reciprocated by the government departments and anti-brumby groups. The concerns raised by biostatistician, Ms Galea, and other reputable parties brings the data provided into dispute and effort should be made to examine how data is collected without bias and the obstinate belief that the data provided should be enough.

1.50 We agree that the impacts of Australian brumbies in the Australian Alps should be minimised and managed, but we do not accept the data provided in this report and would request that further studies and community consultation be undertaken to ensure an accurate snapshot of the numbers of Australian brumbies there.

1.51 Once population numbers of Australian brumbies are determined, and best practice methods implemented to reach the target and numbers are stabilised, a process of impact control could be used as a process to determine areas for reduction. Further studies into the positive and negative impacts of Australian brumbies in the Australian Alps are required before lethal control methods are employed on a widespread basis.

1.52 It is worth observing, of course, that one point that has universal agreement is that the impact of brumbies on the Australian Alps is an emotive subject. Passionate arguments are evident on all sides of this very difficult and complex topic. Efforts should be made to mediate between parties to have respectful conversations and interactions.

Senator Hollie Hughes
Member

Senator Ross Cadell
Member

Additional Comments from Senator David Pocock

Introduction

1.1 I thank the Senate Environment and Communications References Committee (the committee) for undertaking this significant inquiry into the impacts of feral horses on the fragile Australian Alps.

1.2 Feral horses do not belong in our National Parks or in our National Heritage Places. Federal, state and territory governments should not adopt policies or management plans which include goals to retain feral horses or other invasive species in National Parks or other protected areas.

1.3 In the Australian Alps, feral horses pose an urgent and intensifying threat to a spectacular but vulnerable landscape. The Australian Alps environment is rare on our continent, with high peaks, glacial lakes and unique plants and animals which have adapted to the cold climate. It is home to threatened ecological communities and species, wetlands of international importance, migratory species and the headwaters of the Murray and Murrumbidgee Rivers.

1.4 Invasive species affect more endangered animals than any other threatening process and have been identified as major threats to insect and plant life.[1] The plants and animals in the Australian Alps have evolved to exist together in a unique ecosystem, with water flowing to our major rivers regulated by the sphagnum moss and fen communities, which also provide habitat for the critically endangered corroboree frogs. The Mountain Pygmy Possum, also critically endangered, relies on the migratory bogong moth for its main food source. The presence of feral horses puts all parts of this complex ecosystem at risk.

1.5 Climate change is making the alpine region drier and warmer. Winter temperatures are predicted to rise by more than 2°C in the future, meaning alpine flora and fauna which have adapted to a narrow ecological niche will be under even greater threat. With the NSW Government reporting in 2018 that only 15 per cent of the state's remnant native vegetation remains in near natural condition, the need to protect what remains only becomes clearer and more urgent.[2] Grassy woodlands, montane lakes, bogs and fens, all of which provide habitat for alpine plants and animals, will be under an enormous amount of pressure.[3]

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1 Dr Ian Cresswell, Dr Terri Janke and Professor Emma Johnston, *State of the Environment Report 2021 – Overview*, pp. 56–65.

2 Dr Ian Cresswell, Dr Terri Janke and Professor Emma Johnston, *State of the Environment Report 2021 – Land*, pp. 25–27.

3 NSW Government, *Climate change impacts on our alpine areas*.

1.6 The threats of climate change are existential, and our future depends on our ability to halt the damage and find ways to repair our landscapes. With feral horse numbers increasing at 15–20 per cent a year, the damage will be irreparable if change is not made soon. The feral horse population in the Australian Alps has been allowed to proliferate, predominantly in NSW, with resulting numbers increasing in Kosciuszko National Park (KNP) from an estimate of 14,300 to more than 18,800 in just over two years, from 2020 to 2022.

1.7 The numbers are predicted to double again in the Australian Alps in five years without active management.[4]

1.8 The idea of culling horses is a difficult one. But the reality is that after so much inaction, the time for alternative approaches like re-homing has passed. NSW will need to achieve an 84 per cent reduction to meet their target by 2027, and that will still leave 3,000 feral horses damaging the environment. At their estimated reproduction rate of 15–20 per cent a year, this will require around 450 to 600 horses to be culled annually to keep the population stable at 3,000. The cycle will continue as long as feral horses are left unchecked in the Alps.

1.9 Scientific evidence shows that even small numbers of feral horses damage landscapes. While removing some will reduce the overall impact, any remaining horses will continue to destroy this fragile ecosystem.[5] Even as few as 13 feral horses can have negative impacts on an ecosystem, by developing and expanding tracks, creating roll pits, grazing and trampling grasslands, and scattering dung.[6]

1.10 There is no minimum population of feral horses which would avoid degradation to the landscape.[7]

1.11 Associate Professor Richard Swain, the Indigenous Ambassador for the Invasive Species Council, stated with great clarity:

> This can't be about politics. If this isn't the decade of healing country it will be a decade of saying goodbye.[8]

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4 Professor Christopher Johnson, Member, Threatened Species Scientific Committee, *Proof Committee Hansard*, 7 September 2023, p. 3.

5 Dr Arn Tolsma and Dr James Shannon, Arthur Rylah Institute, *Assessing the Impacts of Feral Horses on the Bogong High Plains, Victoria: Final Report*, 2018, p. 1.

6 Dr Arn Tolsma and Dr James Shannon, Arthur Rylah Institute, *Assessing the Impacts of Feral Horses on the Bogong High Plains, Victoria: Final Report*, 2018, p. 25.

7 Dr Arn Tolsma and Dr James Shannon, Arthur Rylah Institute, *Assessing the Impacts of Feral Horses on the Bogong High Plains, Victoria: Final Report*, 2018, p. 25.

8 Honorary Associate Professor Richard Swain, Indigenous Ambassador, Invasive Species Council, *Proof Committee Hansard*, p. 20.

Feral horses are destroying the fragile Australian Alps ecosystem

1.12 This inquiry has collected evidence that feral horses have damaged the ecosystem in the Australian Alps, and will continue to damage the landscape until it is severely degraded. Feral horses trample the ground at the edge of creeks and rivers, causing soil and sediment to be swept into the waters.[9] They compact the soil to the extent that oxygen cannot get in and roots can't take hold, preventing growth from coming back.[10] Feral horses destroy the vegetation that our vulnerable marsupials shelter in,[11] and pollute waterways which provide critical hydration to the plants and animals, and flow to our vital river systems.[12]

1.13 Contrasting the alpine ecosystems between NSW and the ACT, the results of effective management are clear. In NSW, the lack of action on feral horse population management has led to trampled ('pugged') soil, erosion and overgrazing. In the ACT, which has a zero-tolerance policy towards feral horses, waterways are healthier, and the effects of climate change can be monitored more thoroughly.

1.14 South Endeavour Trust, a land trust privately conserving 20 reserves in NSW and Queensland, have taken on the task of protecting and conserving fragile alpine moss and native species. It has spent precious money donated for protection and conservation on constructing fences to protect the ecosystem from feral horses running unchecked across the boundaries of KNP.[13]

1.15 The only practical solution to ensure that this environment exists for future generations is a full eradication of feral horses in the Australian Alps National Parks and Reserves.

1.16 The vast majority of submissions received during the course of this inquiry were from people passionate about the Australian Alps and who value this unique environment and want to preserve it for future generations. I thank each person who took the time to write to the committee about their love of this precious landscape, their frustration at the lack of management of feral horses, and their sense of urgency at the need to protect it.

Indigenous cultural heritage

1.17 Indigenous heritage values are at significant risk from feral horses. Mr James Blackwell, a Wiradjuri man, told the committee:

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9 Threatened Species Scientific Committee, *Submission 19*, p. 1.

10 Agriculture Victoria, *What is pugging*.

11 Deakin University, *Submission 25*, p. 3.

12 DCCEEW, *Submission 23*, p. 11.

13 South Endeavour Trust, *Submission 41*.

> Our cultural heritage is at risk, and the main thing preventing us fixing it is an idea that feral horses are somehow themselves worthy of protection. They are not. They are not part of this place, and they do not belong there. To argue they are worthy of protection due to the settler heritage of the region both ignores and disrespects our Indigenous cultural heritage, which has existed for over 65,000 years. It also places the environment below the said heritage.[14]

1.18 The Australian Alps have been the site of social and spiritual connections for First Nations clan groups as part of their traditional country for tens of thousands of years.[15] Indigenous heritage values are set out in the National Heritage listing for the Australian Alps, and should be protected from actions against them under the EPBC Act.

1.19 The management principles for National Heritage listed places set out that Indigenous people should be listened to when it comes to Indigenous heritage:

> Indigenous people are the primary source of information on the value of their heritage and the active participation of indigenous people in identification, assessment and management is integral to the effective protection of indigenous heritage values.[16]

1.20 Mr Blackwell set out clearly that Indigenous cultural heritage should be prioritised over feral horses:

> Indigenous cultural heritage and environmental heritage of all Australians is not something that exists only if it does not conflict with the interests of those damaging said heritage.[17]

Native plant and animal species need to be prioritised

1.21 The Atlas of Living Australia records more than 8,500 species of mammals, birds, insects, amphibians, plants and fungi living in the Australian Alps region.[18]

1.22 The Australian Alps are home to critically endangered species, including the only known populations of some species. Once gone, these animals are not coming back. We are down to the last remaining populations of Southern Corroboree Frogs, Stocky Galaxias fish and other vertebrates. These critically endangered species that have been lost from other areas have found refuge in tiny remnant ecosystems within the Australian Alps, only to be under threat from an introduced pest animal.

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14 Mr James Blackwell, *Proof Committee Hansard*, 23 August 2023, p. 21.

15 Department of Climate Change, Energy, the Environment and Water (DCCEEW), *Submission 23*, p. 8.

16 EPBC Regulations, Regulation 10.01E.

17 Mr James Blackwell, *Submission 82*, p, 4.

18 Atlas of Living Australia, *Australian Alps*.

1.23 There are only around 30 adult Southern Corroboree Frogs left in the wild.[19]

1.24 The only population of the Stocky Galaxias fish is currently protected from feral horses by a temporary fence.[20] This might stop the trampling at the water's edge, but it does not provide a long-term solution or stop their habitat being polluted and degraded.

1.25 Luckily, important habitat for the critically endangered Northern Corroboree Frog is located in the ACT, with no feral horse population established. This area is under threat, however, from neighbouring NSW feral horses which could impact the survival of the Northern Corroboree Frog in the near future. Horses trample the moss and leaf litter which these frogs rely on for breeding, meaning that if incursions happen, these already small populations will rapidly decline.[21]

1.26 Native species need to be prioritised. Horses do not require the Australian Alps habitat for their survival, but so many of our native plants and animals do. Professor Don Driscoll at Deakin University stated:

> There's a whole range of species that are just one or two little dots down in that corner [the Australian Alps], and then you draw the map of feral horses, and they're scattered across the entire country. It beggars belief that, through the [NSW] Kosciuszko Wild Horse Heritage Act, they've given priority to horses in an area that's critical for a whole range of our native species that only occur in Kosciuszko or in the Australian Alps.[22]

More coordination is needed to address this problem

1.27 The current EPBC Act does not put an obligation on the Commonwealth to act to repair or regenerate matters of national environmental significance. The current EPBC Act is silent on failures to mitigate damage to protected matters such as National Heritage values, threatened ecological communities, threatened species, and migratory species.

1.28 The final report of the Independent Review of the EPBC Act, led by Professor Graeme Samuel, set out the following critique of the Act as a whole:

> The EPBC Act itself does little to support environmental restoration. Stabilisation of decline or a net improvement in the state of the environment

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19 Fenner School of Environment and Society, answers to questions on notice, 7 September 2023 (received 14 September 2023).

20 Ms Renee Hartley, Fenner School of Environment and Society, *Proof Committee Hansard*, 7 September 2023, p. 3.

21 Ms Renee Hartley, PhD Scholar, Fenner School of Environment and Society, *Proof Committee Hansard*, 7 September 2023, p. 3.

22 Professor Don Driscoll, Professor of Terrestrial Ecology, Deakin University, *Proof Committee Hansard*, 7 September 2023, p. 7.

> cannot be achieved under the current system. Restoration is required to enable future development to be sustainable.[23]

1.29 The failure to stop damage is just as harmful as actively causing it. The EPBC Act is in desperate need of reform, and the next iteration of this legislation should put an obligation on the Commonwealth to intervene to protect matters of national environmental significance.

1.30 Importantly, the failure to act is not generally a 'controlled action' under the EPBC Act. Under the Act, only a 'deliberate action (rather than doing nothing)' can be assessed by the Environment Minister.[24]

1.31 A failure to mitigate the damage done by an increasing feral pest population which risks the extinction of threatened species, is not by itself an action. The inaction of the NSW Government to stop the damage caused by feral horses is unlikely to be a referrable action under the Act, and so the Commonwealth Environment Minister is not able to intervene. In addition to this, under the EPBC Act, state governments are effectively exempt from seeking the Environment Minister's approval for actions.[25]

1.32 The Commonwealth needs to take a more active role in the management of the Australian Alps National Parks and Reserves.

1.33 Despite the name 'national park', the 11 parks and reserves which make up the Australian Alps are not on Commonwealth land. Instead, they are on state land and are managed by the relevant state or territory government. This arrangement has led to three very different approaches to the management of feral horses between NSW, Victoria and the ACT.

1.34 In complete disregard of the important ecosystem values of the Australian Alps, NSW enacted legislation which protects this feral pest in more than 30 per cent of KNP. The 'horse retention area' includes Indigenous heritage sites, important ecological sites, listed threatened ecological communities and species, a migratory bird subject to international treaty, significant rivers within the Murray-Darling Basin, and many other environmental values.[26]

1.35 The NSW Government announcement of the potential use of aerial culling is welcome, but is only a good start. Keeping any remaining population of feral horses will only lead to the same problem in the future.

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[23] Professor Graeme Samuel AC, *Independent Review of the EPBC Act – Final Report*, 2020, p. 44.

[24] Subsection. 70(1), EPBC Act. If the Minister thinks that a state or agency of a state is proposing to take a controlled action, the Minister may request that the proposed action be referred.

[25] Section. 524, EPBC Act.

[26] National Parks and Wildlife Service, *Kosciuszko National Park Wild Horse Heritage Management Plan*, 2021, p. 14.

1.36 At the public hearing, the Department of Climate Change, Energy, the Environment and Water (DCCEEW) pointed to constitutional barriers for its lack of intervention. These barriers relate to the ability for the Commonwealth to regulate according to the heads of power in the constitution, which leads to 'more limitations…than there might be for some other matters of national environmental significance'.[27]

1.37 The committee heard that 'the government is concerned about the activities in the park' and is using 'the levers at its disposal', but that 'Commonwealth laws can't curtail or interfere with the capacity of a state to function as a government'. NSW legislation protects feral horses in approximately a third of KNP and limits the control methods to remove horses from the other areas by not allowing aerial shooting.

1.38 DCCEEW could not clearly set out the powers it has to regulate National Heritage listed places. DCCEEW officials told the committee that the Commonwealth Environment Minister could prescribe more regulations and new principles for the development of management plans. These, however, seem to be constrained by the same constitutional barriers:

> …the extent to which [regulations] can restrict a state's own legislative capacity is a more complicated constitutional area. There will be limitations in that sense in how the Commonwealth might intervene vis-a-vis the states.[28]

1.39 The former Environment Minister clearly believed that it was within the Commonwealth's power to address the increasing threat of feral horses in the Australian Alps, as evidenced in the letter sent to the former NSW Environment Minister in 2021. The letter set out that the Commonwealth considered that the NSW Government was 'failing in its obligations to protect the National Heritage values [of the Alps] from feral horse damage' and that:

> For this reason the Australian Government is considering the development of regulations under the Act that oblige protected area managers to take specific action on feral horses, including the responsible, evidence-based, and humane reduction and management of populations, to safeguard the unique biodiversity and heritage values of this nationally significant place.[29]

1.40 The department was asked to provide the legal advice they sought and obtained relating to the Commonwealth's regulation-making powers and related constitutional issues before the letter was sent in 2021. DCCEEW declined to

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[27] Mr James Barker, Branch Head, World and National Heritage Branch, DCCEEW, *Proof Committee Hansard*, 23 August 2023, p. 36.

[28] Mr James Barker, Branch Head, World and National Heritage Branch, DCCEEW, *Proof Committee Hansard*, 23 August 2023, p. 36.

[29] Correspondence from the Hon Sussan Ley MP to the Hon Matt Kean MP, MS21-000806, 17 June 2021.

provide the advice, and stated that it was long-standing practice not to disclose privileged legal advice. As discussed in the committee's report, the committee wrote to the department and the Environment Minister to clarify that privileged legal advice is not a ground accepted by the Senate for the refusal to provide information.

1.41 The Minister was given the opportunity to provide the advice confidentially, but this was also declined.

1.42 This is a disappointing outcome for this inquiry, as it appears that there is uncertainty as to the extent of the Commonwealth's power to regulate and protect National Heritage values. Also, it is concerning that the Australian Government has advice that sets out that it does or does not have the power to enact legislation relating to National Heritage values but does not feel that the Australian Parliament should have access to that advice.

1.43 At the end of this lengthy and complex inquiry, one question is left unanswered: to what extent is the Commonwealth responsible for the protection of matters of national environmental significance in the Australian Alps from the threat of feral horses?

Our water quality is under threat

1.44 We can't afford to compromise the quality of water in our rivers. We rely on rivers with headwaters in KNP for human consumption, biodiversity and agriculture.

1.45 The committee heard that 'the worst catchment health is reported where feral horses are present'.[30] Natural vegetated land—to promote the highest yield of water, and waterways free from erosion—is required in order to sustain clean water supply to south-eastern Australia.

1.46 Our water is one of our most precious and vital resources for sustaining our communities, as well as the agriculture which feeds us. Deakin University told the committee that feral horses are associated with poor conditions in NSW at these critical headwaters:

- Murray River Headwaters—overall ecosystem health is poor, with damage to the sphagnum bogs;
- Murrumbidgee River Headwaters—overall ecosystem health is very poor, with low numbers of fish and poor vegetation condition on the slopes; and
- Snowy River Headwaters—overall ecosystem health is poor, with damage caused by feral horses to increase erosion and silt, and polluted by large amounts of horse dung. Feral horses have disrupted the flow regime and water quality into this catchment.

30 Deakin University, *Submission 25*, p. 6.

1.47 The Murrumbidgee River is a water source for 16 nationally significant wetlands, and its poor health is a threat to the Northern Corroboree Frog and Stocky Galaxias.[31] The Murrumbidgee catchment is the supplier of water which supports agriculture—a quarter of fruit and vegetable production in NSW relies on this water. This includes around half the grapes grown in NSW and half of Australia's rice production.[32]

1.48 In stark contrast, Deakin University stated that the Cotter River Headwaters in the ACT have an excellent overall ecosystem health, despite bushfire impacts, due to the absence of feral horses. This catchment is critical to the ACT, and supplies the majority of its water requirements. The ACT Government stated that:

> Within the ACT, feral horses have the potential to cause catastrophic damage to the high value biodiversity and sensitive sub-alpine wetlands in the National Heritage listed Namadgi National Park. This includes areas of the Cotter Catchment that supply water to Canberra and Queanbeyan. Namadgi National Park protects the Ginini Flats Wetland Complex, the most significant intact Sphagnum bog and fen community in the Australian Alps which is listed under the Ramsar Convention on Wetlands. With the highest feral horse density in Kosciusko National Park occurring immediately to the West of this wetland, feral horses are a significant and increasing threat. It is on this basis that the ACT adopts a zero-tolerance policy on feral horses.[33]

The ACT has paid the price for NSW inaction

1.49 The former NSW government's failure to address this issue has put the cost onto neighbours of KNP. The ACT Government told the committee that they received $250,000 in 2022-23 under the Commonwealth's *Enhancing National Pest Animal and Weed Management* agreement, with another $250,000 provided in 2023-24 if project milestones are reached.[34] This funding extends to established pest animals and weeds—not specifically for managing feral horses which may stray into the territory from NSW.

1.50 This is not enough to tackle this problem without action to stop the horses coming into the ACT, given the NSW feral horse population will double in the next five years without urgent action.

Innovative thinking is needed

1.51 There are no easy solutions to the problem of feral horses in the Australian Alps. The population has been left to multiply, and this will continue to increase

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31 Deakin University, *Submission 25*, p. 6.

32 MDBA, *Murrumbidgee*.

33 ACT Government, *Submission 83*, p 2.

34 ACT Government, answers to questions on notice, 23 August 2023 (received 1 September 2023).

exponentially over time without action. Without significant amendments to the control methods permitted by the NSW Government, including the introduction of aerial shooting, rangers are fighting a losing battle.

1.52 Even with aerial shooting, and even if NSW is able to meet its legislated reduction target of 3,000 horses remaining in the next four years, the job is enormous.

1.53 Making the task more difficult, the committee heard that feral horses have spread from national parks onto adjoining land, including state forests, causing significant costs to landholders to construct fencing and repair damaged landscapes, as discussed above. Feral horse populations in NSW state forests adjacent to KNP could move between state forests and KNP, increasing the overall population.

1.54 Further work is needed to determine the best management practices that will control population numbers in areas adjoining KNP and prevent further feral horse incursions into the park.

Recommendation 1

1.55 The NSW Government should urgently repeal *the Kosciuszko Wild Horse Heritage Act 2018*, which has been identified as presenting the biggest threat to the Australian Alps.

Recommendation 2

1.56 The NSW and Victorian governments should adopt the ACT Government's zero-tolerance approach to feral horse management, to ensure that the Australian Alps are not further destroyed by feral horses.

Recommendation 3

1.57 The Australian Government should provide immediate and ongoing funding to the ACT Government in order to allow the work of feral horse monitoring and management to continue, for as long feral horses persist in Kosciuszko National Park.

Recommendation 4

1.58 Section 523 of the EPBC Act should be amended to add "the failure to act", as a definition of 'action', where the result of that failure is likely or be known to have a significant impact on a matter of national environment significant.

Senator David Pocock
Participating Member

Appendix 1
Submissions and additional information

1 Icon Water
2 Shoalhaven Bushwalkers Inc
3 Save the Brumbies Inc
- 3.1 Supplementary to submission 3
- Attachment 1

4 Dr Jennie Whinam
5 Water for Rivers
6 Wild Horses Kimberley Inc
- Attachment 1

7 Australian Brumby Alliance Inc
- 7.1 Supplementary to submission 7

8 Dr Mike Braysher and Mr Terry Korn PSM
- Attachment 1

9 HOOFS2010 Inc
10 Mr Andrew Turner
- Attachment 1

11 Conservation Council ACT Region
12 Monaro Acclimatisation Society
13 Heritage Horse and Environment Protection Alliance
- 13.1 Supplementary to submission 13

14 *Name Withheld*
15 Byron Hikers' Club
16 White Alpine Equine
17 Professor Don White
18 Native Fish Australia Victoria Branch
19 Threatened Species Scientific Committee
20 Public Service Association of New South Wales
21 Ryde Hunters Hill Flora and Fauna Preservation Society
22 Dr Peter Coyne
23 Department of Climate Change, Energy, the Environment and Water
24 Victorian National Parks Association
25 Deakin University
26 Bushwalking NSW Inc.
27 Frog and Tadpole Study Group
28 Dubbo Environment Group
29 Department of Agriculture, Fisheries and Forestry

30 Willoughby Environmental Protection Society
31 Canberra Bushwalking Club
32 Parramatta Hills District Group Australian Plants Society of NSW
33 Australian Wildlife Society
34 Nature Conservation Council of NSW
35 Labor Environment Action Network
36 Blue Mountains Conservation Society
38 Snowy Vale Incorporated
39 Wagga Wilderness Walkers
40 Australasian Cave and Karst Management Association
- Attachment 1
- Attachment 2

41 South Endeavour Trust
42 NSW Bird Atlassers
43 Kuranda Conservation
44 Friends of the Earth Australia
45 Victorian Deer Control Community Network
46 The Sydney Bush Walkers Inc.
47 Ecological Society of Australia
48 Mountain Cattlemen's Association of Victoria
49 Friends of Currango
- Attachment 1
- Attachment 2

50 Indigo Brumbies
51 Animal Justice Party
52 Snowy Mountains Horse Riders Assoc
53 National Parks Association of the ACT
54 National Parks Association of NSW (Milton Branch)
55 Australian Deer Association
56 Research Centre for Applied Alpine Ecology (RCAAE)
- Attachment 1

57 Australian Academy of Science
58 Australian Veterinary Association
59 Australian Mammal Society
60 Australian Association of Bush Regenerators
61 Kasees Apartments & Mountain Lodge
62 NSW Nordic Ski Club
63 National Parks Association of NSW
- Attachment 1

64 Inland Rivers Network
65 Vertebrate Pest Managers Association of Australia
66 Australasian Wildlife Management Society

67 Wilderness Society
68 Sentient
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70 Environmental Justice Australia
71 Brumby Action Group Inc
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72 Braidwood Greens
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74 Catholic Bushwalking Club Inc
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77 Friends of the Cobberas Inc
78 Bendigo Bushwalking and Outdoor Club Inc
79 Bushwalking Victoria
- Attachment 1

80 Victorian Brumby Association
81 Dr Joseph McGirr
82 Mr James Blackwell
83 ACT Government
84 RSPCA Australia
85 Jaithmathang
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- Attachment 2
- Attachment 3
- Attachment 4
- Attachment 5

86 Restoration Decade Alliance
87 CPSU
88 Associate Professor Mark Lintermans
89 Mr Ian Pulsford
90 Director of National Parks
91 Parks Victoria
92 Ms Justine Curatolo
93 Mr Stephen Dovey
94 Ms Kerry Strzina
95 Mr Dan Vickers

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96 Mr Norman Hamilton
97 Dr Susan Gould
98 Mr Chris Andrews
99 Mr Alex McLeod
100 Mr Robert Salijevic
101 Ms Jan Allen
102 Mr Barry Richardson
103 Mr Kentaro Timms
104 Greer Allen
105 Mr Jay-Jay Werny
106 Ms Sue De Pater
107 Mr Merv Renton
108 Mr Brett Davis
109 Mr Edward Thexton
110 Ms Leonie Stubbs
111 Mr Jeff Cartwright
112 Mr Russell Phegan
113 Ms Sally Borrell
114 Mr Garry Mayo
115 Ms Ann Fardell
116 Mr Ray Coulton
117 Ms Patricia Edwards
118 Ms Jennifer Bourke
119 Mr Paul Anderson
120 Mr Jack Haley
121 Mr Ian Cormack
122 Mr David Simons
123 Ms Roz Skidmore
124 Mr Trevor Costa
125 Mr Paul Allen
126 Mr Christopher Cooper
127 Ms Karen Davis
128 Ms Sheryl Gildea
129 Mr Russell Alan Julian
130 Dr Susan Steggall
131 Dr Louis O'Neill
132 Ms Julie Bakalor
133 Mr David Frelek
134 Ms Ann McCoy
135 Mr Hamish Murchison
136 Mr Tim Hackney
137 Mr Chris Packett

138 Mr Jan Cupa
139 Dr Christine Hosking
140 Mr Paul Harris
141 Mr Lachlan Thurtell
142 Ms Elisabeth Dark
143 Ms Kirsten Duncan
144 Dr Noelene Kelly
145 Mr Ian Thomas
146 Mr Simon van Wyk
147 Ms Linda Thomas
148 Mr Matthew McAuley
149 Ms Judith Miles
150 Ms Catharine Errey
151 Ms Lynn Roberts
152 Ms Janice Peake
153 Mr Garry Duursma
154 Mr Owen Hayford
155 Mr Bruce Harris
156 Mr John Paterson
157 Dr John Smart
158 Mr Frank Bergersen
159 Mr Brynn Mathews
160 Mr Michael Bull
161 Mr Patrick Dodd
162 Mr John Miller
163 Mr Martijn van Eijkelenborg
164 Mr Peter Card
165 Mr Jason Edwards
166 Mr Howard Cross
167 Mr Hugh Myers
168 Ms Karen Scroope
169 Dr Jill Brown
170 Mr Michael Tee
171 Mr Greg Hutchison
172 Girts Ozols
173 Dr Roger Carolin
174 Mr Stephen Parker
175 Mr David Darmanin
176 Mr Ron Newman
177 Ms Louise Frodyma
178 Mr Peter Nixon
179 Ms Pamela Reeves
180 Ms Simone Parkes

181 Mr Phillip Starr
182 Ms Janice Hughes
183 Mr Ian Thomas
184 Mr Don Norris
185 Mr Michael Maley PSM
186 Ms Sarah Moles
187 Ms Julie Griffin
188 Ms Christine Daley
189 Mr George Paras
190 Mr Garry Smith
191 Miss Jill Pickering
192 Mr Greg Pritchard
193 Mr Greg Buckman
194 Mr Andy Marr
195 Mr William Thomas
196 Ms Virginia Newnham
197 Mr Raymond Kennedy
198 Ms Pam La Brooy
199 Dr Carolyn Pettigrew
200 Mr David Finnigan
201 Ms Julie Matthews
202 Mr Chris Williams
203 Mr Paul Bourne
204 Mr Laurence Outim
205 Ms Catherine Merchant
206 Ms Gabriele Harding
207 Ms Rosie White
208 Ms Amanda King
209 Ms Julia Grattan
210 Mr Malcolm Hughes
211 Ms Rhonda Daniels
212 Ms Kathryn Russell
213 Ms Jennifer Savigny
214 Ms Jeannie Douglass
215 Ms Marita Macrae
216 Mr Michael Stenning
217 Ms Lyndal Breen
218 Chris Bell
219 Mr Martin Cubby
220 Ms Sarah Ryan
221 Dr Rachel Yerbury
222 Professor Justin Yerbury
223 Mr Philip Maughan

224 Dr Hanne Falkiner
225 Ms Deborah Campbell
226 Mr David Bourne
227 Mr Damian McCrohan
228 Ms Meredith Kefford
229 Mr Ian Howley
230 Ms Sheila McInnes
231 Dr Angela Munro
232 Meryl and Hartley Tobin
233 Ms Margaret Carey
234 Mr Peter Blackband
235 Ms Linda Brook
236 Mr Graham Parton
237 Ms Susie Herbert
238 Ms Vera Yee
239 Mr Ken Brash
240 Mr Ross McKinney
241 Mr Peter Shaw
242 Ms Patricia Daly
243 Ms Bernadette Systa
244 Ms Helen Rommelaar
246 Ms Sylvia David
247 Mr Ian Large
248 Mr Warren Birkinshaw
249 Ms Lyn Harwood
250 Mr Edwin Flynn
251 Mr Geoffrey Vitlin
252 Mr Ross Lincolne
253 Dr Tanya Meares
254 Ms Megan Ballinger
255 Mr Frances Scarano
256 Ms Jane Holloway
257 Ms Susan Blanchfield
259 Mr Robert Turton
260 Mr Fred Tropp-Asher
261 Mr Ian Temby
262 Mr John Pointing
263 Mr Geoff Lockhart
264 Associate Professor John Raftos
265 Ms Margaret Young
266 Ms Barbara Lowson
267 Ms Irene Tognetti
268 Mr Jeffrey Passlow

269 Mr Henry Handley
270 Mr Peter Alexander
271 Ms Fiona McMullin
272 Ms Natalie Mollett
273 Ms Tracy Skippings
274 Mr Huw Kingston
275 Ms Jacqueline Trenbath
276 Mr Richard Swinton
277 Mr Robert Campbell
278 Chris Bradford
279 Jack Ferrari
280 Ms Regina Bos
281 Ms Sue Raverty
282 Mr Stephen Dixon
283 Ms Katherine Handel
284 Ms Martina Meyer-Witting
285 Mrs Jenny Medd
286 Mr David Nugent
287 Mr Jim Cassady
288 Dr Adrian Plaskitt
289 Mr Laurence Anderson
290 Mr Phillip Luck
291 Dr Janet Wellington
292 Ms Susannah Spittle
293 Ms Sally Wylie
294 Ms Cynthia Alexander
295 Mr Ian Malkin
296 Ms Pauline Downing
297 Dr Don Fletcher PSM
- 297.1 Supplementary to submission 297

298 Mr Peter St Clair-Baker
299 Friends of Grasslands
300 Mr Charles Buer
301 Dr Kate Sawford
302 Ms Clare Rhodes
303 Ms Sue Toomer
304 Ms Karen Goodall
305 Ms Angelika Erpic
306 Mr Kenneth Jensen
307 Mr James Harker
308 Mr Ross Dearden
309 Mr William Risby
310 Dr Onn Ben-David OAM

311 Mr Chris Roper
312 Ms Diane Francis
313 Ms Carolyn Risley
314 Mr Paul Campbell
315 Mr Bruce Campbell
316 Mr James Turton
317 Mr Garth Wimbush
318 Mr Edwin Hammet
319 Mr Richard Gough
320 Mr John Byrne
321 Ms Patricia Evans
322 Mr Greg Johnston
323 Ms Nicola Williams
324 Ms Dianne Johnston
325 Mr Brett Riley
326 Ms Pauline Haydock
327 Ms Sue Acheson
328 Mr Adam Logan
329 Ms Norma O'Hara Murphy
330 Ms Wendy Goldstein
331 Ms Taryn Haynes
332 Mr David Cummings
333 Ms Jennifer Cooper
334 Robin Massey
335 Mr Chris Ryan
336 Meika Loofs Samorzewski
337 Ms Maryann Lees
338 Dr Rob Taylor
339 Ms Wendy Buckingham
340 Greg Chapman
341 Dr Blair Parsons
342 Mr Nick Tapp
343 Mr Michael Gill
344 Mr Warren Lloyd
345 Ms Liz Milner
346 Ms Georgia Angus
347 Lou Baxter
348 Mr Gary Thompson
349 Dr Alex Negoescu
350 Mr Alex Smith
351 Mr Daniel Uden
352 Mr Douglas Wright
353 Mr Graeme Smith

354 Ms Angela Cowan
355 Chris Read
356 Mr Neil Williams
357 Mr William Wright
358 Ms Sarah Park
359 Mr Wayne Gregson
360 Ms Elizabeth Timmins
361 NSW Government
362 Mr Patrick Swain
363 Ms Jenny Norvick
364 Mr Charles Street
365 Ms Alison Ramsay
366 Lea Adams
367 *Name Withheld*
368 Ms Louise Litchfield
369 Dr Ron Sinclair OAM
370 Mr Zachary Smith
371 Mr Ian Fraser
372 Mr Marco Veronesi
373 Mr John Bardsley
374 Ms Jill Thio
375 Elliot Condous
376 Ms Deborah Stevenson
377 Mr Scott Honeysett
378 Mr Neville Harrison
379 Mr Bruce Collett
380 Ms Bea Bleile
381 Mr Derrick Brown
382 Ms Pam Atkins
383 Ms Robyn Kercher
384 Ms Janet Howe
385 Dr Sharron Pfueller
386 Mr Kenneth Webster
387 Mr Geoff O'Connell
388 Ms Katherine Hewitt
389 Ms Lynne Walker
390 Ms Jo Hume
391 Mr John Sim
392 Mr John Cox
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393 Mr Andrew Curthoys
394 Mr Greg Choat
395 Mr Jim Phimister

396 Mr Neil Bevege
397 Mrs Terrylea Reynolds
398 Ms Margot Allatt
399 Mr Stephen Nelson
400 Ms Jenny Horsfield
401 Mr Dave Lemcke
402 Ms Jennifer Shaw
403 Mr Gerard McCosker
404 Mr Alistair Paton
405 Mr Rob Emerson
406 Mr Michael Easton
407 *Name Withheld*
408 Mr Stephen Gye
409 Ms Jillian Dirou
410 Mr John Morison
411 Ms Sarah Neal
412 *Name Withheld*
413 Ms Marion Braslin
414 Mr Graeme Stainlay
415 Ms Kylie Baker
416 Ms Helen Clemens
417 Ms Colleen Krestensen
418 Ms Joanne Oakley
419 Ms Eve Conroy
420 Ms Jill Steverson
421 Ms Deanna Hedley
422 Ms Diana Moran
423 Ms Stephanie Knox
424 Alik Lacrosse-Young
425 Ms Shirley Handy
426 Mr Rob Pullar
427 Mr Peter Conroy
428 Mr Ben Ewald
429 Mr Don Stokes
430 Linden Gillbank
431 Confidential
432 Mr John Nelki
433 Ms Madeleine Cruise
434 Ms Kathryn Smith
435 Jaden Harris
436 Mr Rupert Macgregor
437 Ms Lynden Macgregor
438 Ms Sara Maywood

439 Dr Greg Terrill
440 Russell Carrington
441 Mr David Millsom
442 Ms Patricia Law
443 Mr Neil Fisher
444 Ms Annette Smith
445 Ms Barbara McCubbin
446 Mr Robert Holderness-Roddam
447 African Wildlife Management and Conservation
448 Ms Sue Sutton
449 Chao Foong Yi
450 Ms Carol Beattie
451 Ms Brigid Dowsett
452 Ms Isabel Skeates
453 Mr David Samuelsdorff
454 Mr Martin Langford
455 Mr David Whitelaw
456 Ms Carolyn Learoyd
457 Indigenous Plants for Health
458 Kerry Wood
459 Ms Jane Gye
460 Mrs Georgina Cusack
461 Enmoore Lin
462 Jeanette Robertson and Alan Foster
463 Ms Sandra Berry
464 Mr Kenneth (Ken) Barnett
465 Mr Martin Stock
466 Lance Carter
467 Ms Helen Simpson
468 Frances Simons
469 Ms Tracy Balzer
470 Ms Christina Weiss
471 Mr Richard Pinnock
472 Mr Kenrick Riley
473 Ms Mary Ann Irvin
474 Mr Stephen Fitts
475 Dr Helen Monks
476 Dr Linda Thomson
477 Mr Ross Smith
478 Ms Helen McGregor
479 Mr Ian Olsen
480 Mr Chris Patterson
481 Ms Gabrielle Leago

482 Ms Melanie Booth
483 Ms Jennifer Stroh
484 Ms Ann Wykes
485 Ms Janet Page
486 Rev Dr Mark Mickelburough
487 Mr Phillip Cornelius
488 Ms Alicia Mielnik
489 Mr Scott Butler
490 Mr Alan Crowe
491 Ms Jeanette Woolerton
492 Ms Michelle Fischer
493 Dr Bronwen Evans
494 Ms Deborah Carraro
495 Ms Anthea Fleming
496 Moira and Mike Ryan
497 Ms Jessica Wysser
498 Mr John Walton
499 Mr Alan Ginns
500 Mr Roy Dixon
501 Mr Michael Podbury
502 SLE352 students at Deakin University
503 Mr Paul McIver
504 Mr Charlie England
505 Mr Richard Swain
506 Ms Kirsten Garlick
507 Ms Kristine Nash
508 Mr Tim Hager
509 Mr Benjamin Harrold
510 Mr Peter Stuart
511 Ms Jacinta Shrimpton
512 Mr Philip Griffin
513 Mr Ian Houghton
514 Ms Bernadette Gould
515 Mr Peter McCrorey
516 Ms Alicia Crossley
517 Mr William Harris
518 Ms Nathalie Verellen
519 Mr Martin O'Rourke
520 Mr Matthew Harris
521 Mr Keith Brister
522 Mr Stephen Worley
523 Mr Peter Enge
524 Ms Ann Walker

525 Ms P. Jane Wilson
526 Ms Louise Nicholas
527 Dr William Howard
528 Mr Tim Shepherd
529 Ms Caroline Lee
530 Jolyon Hawdon
531 Mrs Angela Stock
532 Kim Bourke
533 Ms Chloe Mason
534 Ms Jenny Brown
535 Ms Barbara Cameron-Smith
536 Ms Susan Brown
537 Christian Wilson
538 Ms Marg Mclean
539 Ms Mel Reidy
540 Mr James King
541 Ms Deirdre Stuart
542 Ms Helen Wilson
543 Ms Sandra Warn
544 Mr Martin Lenard
545 Ms Julia Burns
546 Chris Waring
547 Ms Jane Sutton
548 Ms Mary Edwards
549 Mr John Heathers
550 Mr Tim Scrace
551 Mr Peter Parr
552 Ms Karen Cooper
553 Mr David Widdowson
554 Mr Stuart Rowland
555 Ms Susie Russell
556 Mr Sean Keenan
557 Ms Geraldine Ryan
558 Ms Margaret Tinnock
559 Mr Peter Green
560 ThaÏs Turner
561 Mr Garry Allan
562 Mr Paul Carroll
563 Mr Dominic Hyde
564 Ms Susan Romane
565 Mrs Louise Maguire
566 Ms Diana Gibson
567 Ms Helen Fischer

568 Mrs Renee Neubauer
569 Ms Lauren Swain
570 Ms Michelle Penrose
571 Mr Peter Prineas OAM
572 Ms Colleen Turner
573 Dr Isa Menzies
574 Mr Shane Trengove
575 Ms Sue-Ellen Smith
576 Mr Graeme Little
577 Mr Chris Harvey
578 Dr Ben Saul
579 Ms Kylie Hitchman
580 Ms Jenni Gamble
581 Ms Colleen Wysser
582 Ms Julie Moffat
583 Mr Robert Read
584 Ms Pamela O'Brien
585 Ms Alison Swain
586 Dr Tim Kingston
587 Mr John Blyth
588 Mr Ross Kingsland AM
589 Mr Michael Pain
590 Mr Jean-Michel Perraud
591 Mr John Flint
592 Alina Olivares-Panucci
593 Ms Yvonne Honey
594 Ms Padma Chaplin
595 Ms Karen Avery
596 Ms Sandra Kaitler
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597 *Name Withheld*
598 Ms Jan Ardill
599 Ms Lorraine Cairnes
600 Ms Luisa Bertoggi
601 Emeritus Professor Reuben Rose
602 Dr David Berman
603 Mr Douglas Humann AM
604 Ms Lynette Evans
605 Ms Janice Brown
606 Ms Elizabeth Cameron
607 Mr Anthony O'Leary
- Attachment 1

608 Ms Pamela Mort

609 Mr Matt McKay
610 Ms Lucy Moore
611 Ms Donna Harkess
612 Ms Liz Zetzmann
613 Arcadia Callow
614 Ms Jennifer Lang
615 Mr John Smith
616 Mr Andrew Cox
617 Ms Kathryn Woolfe
618 Mr Neil Walker
619 Dr Jonathon Howard
620 Ms Nikki Ward
621 Dr Linda Tabe
622 Mr Andrew Love
623 Mr David Barlow
624 Mr Damian Rudd
625 Chris Keenan
626 Ms Patricia Gardiner
627 Mr Mark Strelnikow
628 Ms Bethany McLeod
629 Ms Margot Sharp
630 Ms Ellie Herodes
631 Mrs Helen Daniels
632 *Name Withheld*
633 Mr Paul Wilcock
634 Dr Helen Jeges
635 Mr Philip Ingamells
636 Mr Walter Thomas Trevorah
637 Mr Ian Hill
638 Ms Faye Lewis
639 Ms Vicki Hardaker
640 Ms Catherine Rouse
641 Ms Simone Cooper
642 Ms Vera Zaccari
643 Ms Jill Green
644 Professor Barry Pogson
645 Mrs Deirdre Slattery and Dr Rachel Fitzhardinge
646 Ms Katherine Westle
647 Ms Ann Sharp
648 Mrs Helen Milliken
649 Mr Paul Jennings
650 *Name Withheld*
651 Ms Denise Hall

652 Mr Tim Sindle
653 Ms Stella Fulton
654 Mr David Eden
655 Mr Kevin Taylor
656 Ms Penny McMullin
657 Mr Peter Wills and Mrs Jennifer Wills
658 Ms Caitlin Coulston
659 Ms Heather Colman
660 Dr Coral Wynter
661 Mr Craig Bellamy
662 Mr David Linton
663 Nan Seuffert
664 Mr John Harris
665 Ms Fiona Webb
666 Mr David Perry
667 Ms Paloma Llamazares
668 Mr Robert Lawrence
669 Mr Stuart MacLeod
670 *Name Withheld*
671 Ms Janina Price
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703 Ms Linda Groom
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718 Kim Nolan
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738 Confidential
739 Confidential
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741 Confidential
742 Confidential
743 Mr Rowan Huxtable
744 Ms Judith Kidson
745 Ms Patricia Hoelmer
746 Ms Lynn Newberry
747 Mrs Lynette Desmond
748 Ms Margaret King
749 Mr Tom Bagnat
750 Mr Andrew Wilesmith
751 Miss Helen Guy
752 Mr Gary Cotchin
753 Mr Alistair Henchman
754 Ms Carol Tucker
755 Confidential
756 Confidential
757 Ms Colette McNeill
758 Ms Sheree Stepney
759 Mr Patrick Murphy
760 Ms Penelope Mavrides
761 Ms Colleen O'Brien
762 Mr Peter Usher
763 Mr Paul Bourke
764 Ms Jennifer Smith
765 Ms Billie Dean
766 Mr Richard McNee
767 Confidential
768 Ms Anne Reeves OAM
769 Ms Emma Chapman-Davies
770 Confidential
771 Ms Sue Little
772 Mr David Darlington
773 Confidential
774 Acacia Rose
775 Talara Nicholas
776 Kerry Knights
777 Christine Ekinsmyth
778 Danina Anderson
779 Freya Headlam
780 Sue McBurnie

781 Dawn Kneen
782 Keith Muir
- Attachment 1

783 Iain Cummings
784 John Mulham
785 Fabio Cavadini
786 Chris Michaelides
787 Kate Conroy
788 Leontine Barnett
789 James Stranger
790 Mora Main
791 Lorraine Dixon
792 Justin Egan
793 Mark Richardson
794 Hannah Agnew-Elliott
795 Theresa Huxtable
796 Dr Patrick Conaghan
797 Kylee Hepburn
798 Margie Jirgens
799 Claire Luxford
800 Ms Veronica White and Laureen Blyton
801 Ms Claire Galea

Additional Information

1 Correction to evidence provided by Mr Matthew Jackson at the public hearing, Canberra, 23 August 2023 (received 1 September 2023)
2 Letter from Dr David Berman clarifying answers given at a public hearing, Canberra 7 September 2023 (received 25 September 2023)
3 Correspondence from the Committee to the Minister for the Environment and Water, The Hon Tanya Plibersek MP (8 September 2023 and 4 October 2023) and Minister Plibersek's responses (28 September 2023 and 10 October 2023) regarding legal advice on the Commonwealth's regulatory powers with regard to National Heritage listed places

Answer to Question on Notice

1 Department of Climate Change, Energy, the Environment and Water, answers to written questions on notice from Senator Sarah Hanson-Young, 3 August 2023 (received 17 August 2023)
2 ACT Government, answers to questions on notice, public hearing, Canberra, 23 August 2023 (received 1 September 2023)

3 Department of Climate Change, Energy, the Environment and Water, answers to questions on notice, public hearing, Canberra, 23 August 2023 (received 5 September 2023)

4 Australian Conservation Foundation, answers to questions on notice, public hearing, Canberra, 23 August 2023 (received 6 September 2023)

5 Department of Climate Change, Energy, the Environment and Water, answers to questions on notice, public hearing, Canberra, 23 August 2023 (received 6 September 2023)

6 ACT Government, answers to questions on notice, public hearing, Canberra 7 September 2023 (received 15 September 2023)

7 Deakin University, answers to questions on notice, public hearing, Canberra 7 September 2023 (received 18 September 2023)

8 Fenner School of Environment and Society, ANU, answers to questions on notice public hearing, Canberra 7 September 2023 (received 14 September 2023)

9 Parks Victoria, answers to questions on notice, public hearing, Canberra 7 September (received 15 September 2023)

10 Commonwealth Public Service Union, answers to questions on notice, public hearing, Canberra 7 September (received 22 September 2023)

11 Australian Academy of Science, answers to questions on notice, public hearing, Canberra 7 September

12 NSW Government, answers to questions on notice, public hearing, Canberra 7 September (received 22 September 2023)

13 NSW Government, answers to questions on notice, public hearing, Canberra 7 September (received 22 September 2023)

14 NSW Government, answers to questions on notice, public hearing, Canberra 7 September (received 22 September 2023)

15 Invasive Species council, answers to questions on notice, public hearing, Canberra 23 August (received 28 September 2023)

16 Department of Climate Change, Energy, the Environment and Water, answers to questions on notice, public hearing, Canberra, 23 August 2023 (received 29 September 2023)

17 Department of Climate Change, Energy, the Environment and Water, answers to questions on notice, public hearing, Canberra, 23 August 2023 (received 29 September 2023)

Tabled Documents

1 Document tabled at a public hearing by Associate Professor Swain on 23 August 2023

2 Document tabled at a public hearing by Associate Professor Swain on 23 August 2023

3 Document tabled at a public hearing by Save the Brumbies, the Australian Brumby Alliance and Heritage Horses and Environment Protection Alliance on 23 August 2023

Appendix 2
Public hearings and witnesses

Wednesday, 23 August 2023
Committee Room 2S1
Parliament House
Canberra

Invasive Species Council
- Jack Gough, Advocacy Manager
- Richard Swain, Indigenous Ambassador

Australian Conservation Foundation
- Brendan Sydes, National Biodiversity Policy Adviser

Nature Conservation Council of NSW
- Clancy Barnard, Communications and Fundraising Manager

Victorian National Parks Association
- Jordan Crook, Parks and Nature Advocate

RSPCA Australia (via videoconference
- Dianne Evans, Senior Scientific Officer, RSCPA Australia
- Mhairi Roberts, Policy & Advocacy Manager, RSPCA Victoria

Australian Veterinary Association
- Dr Michael Banyard, Conservation Biology special interest group representative

Save the Brumbies Inc
- Jan Carter, President and Founder

Australian Brumby Alliance Inc
- Jill Pickering, President
- Nikki Alberts, Committee Member

Heritage Horse and Environment Protection Alliance (via videoconference)
- Dr Jill Brown, Convenor

Brumby Action Group Inc
- Marilyn Nuske, Secretary
- Dean Marsland, Member

Mr James Blackwell, Private capacity

ACT Government

- Rebecca Vassarotti, Minister for the Environment
- Geoffrey Rutledge, Deputy Director-General Environment, Water and Emissions Reduction
- Dr Chloe Sato, Director Strategic Environment Policy

NSW Government

- Atticus Fleming, Acting Environment and Heritage Coordinator-General, NSW Department of Planning and Environment
- Mick Pettitt, Director, Park Operations Projects

Parks Victoria

- Matthew Jackson, Chief Executive Officer
- Mark Norman, Chief Scientist Conservation and Climate Action
- Daniel Mclaughlin, Executive Director Conservation and Planning
- Phil Pegler, Manager Conservation Planning

Department of Climate Change, Energy, the Environment and Water

- Rachel Parry, Acting Deputy Secretary
- Michelle Dumazel, Division Head, Heritage Division
- James Barker, Branch Head, World and National Heritage Branch
- Cassandra Kennedy, Division Head, Biodiversity Division
- Dr Fiona Fraser, Threatened Species Commissioner

Thursday, 7 September 2023

Committee Room 2S1
Parliament House
Canberra

Threatened Species Scientific Committee

- Professor Chris Johnson

Fenner School of Environment and Society

- Ms Renee Hartley

Deakin University

- Professor Don Driscoll

Australian Academy of Science

- Professor Michael Archer

CPSU

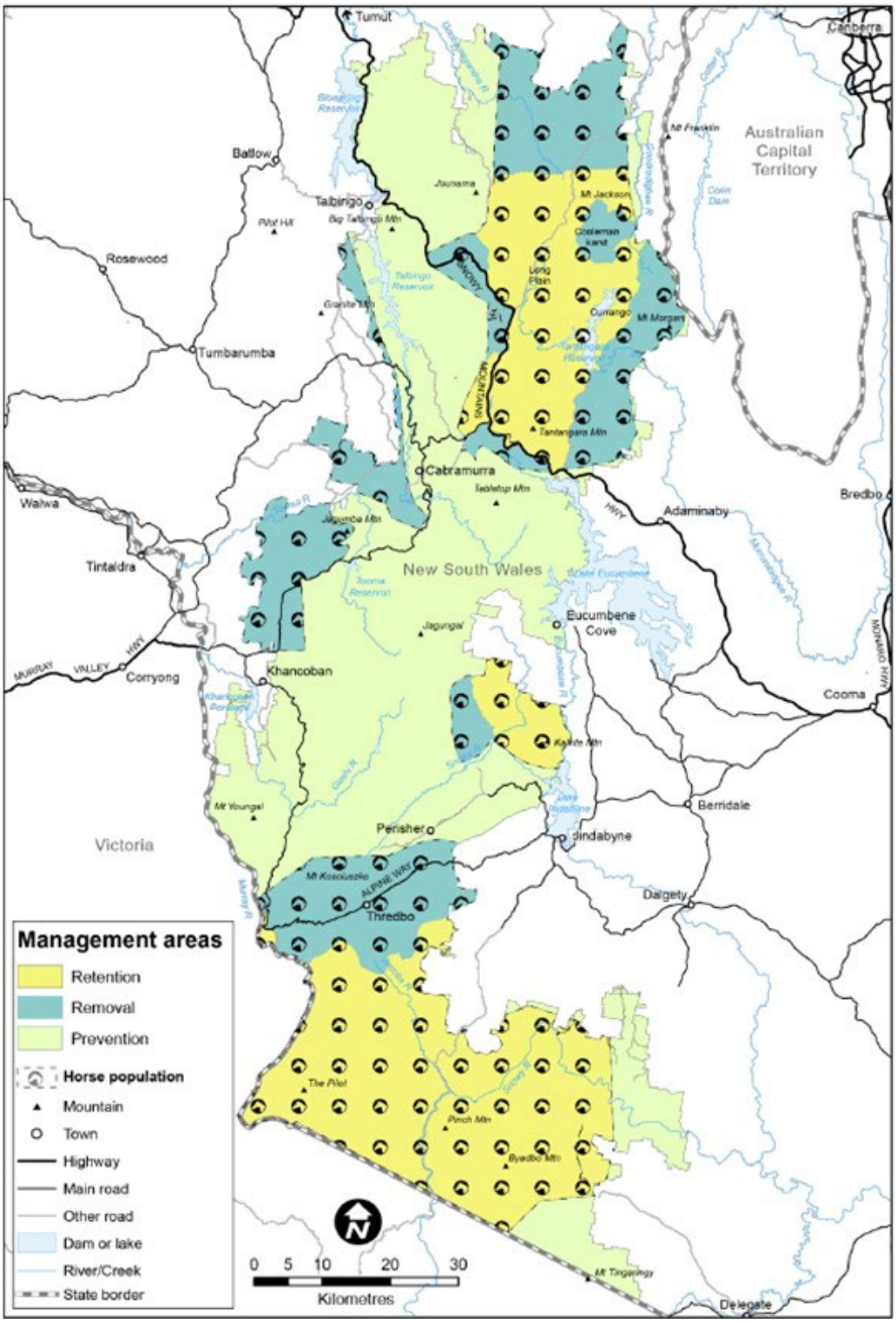
- Mr Shay Deguara

Public Service Association of New South Wales

- Mr Kim de Govrik

Dr David Berman, Private capacity

Appendix 3
Kosciuszko management plan areas



Source: NPWS, Kosciuszko National Park Wild Horse Heritage Management Plan, 2021, p. 12.

Current scientific research literature related to welfare outcomes of wild horse control methods

- **Assessing the humaneness of wild horse management methods (Kosciuszko National Park Wild Horse Independent Technical Reference Group 2016) (PDF 5.2MB)**
- **Australian Veterinary Association submission to senate inquiry into impacts and management of feral horses in Australian Alps**
- **RSPCA Australia submission to senate inquiry into impacts and management of feral horses in Australian Alps**
- **Review of animal welfare – Evaluation of the implementation of the Kosciuszko National Park Wild Horse Heritage Plan 2021**