Submission No 123

INQUIRY INTO PROPOSED AERIAL SHOOTING OF BRUMBIES IN KOSCIUSZKO NATIONAL PARK

Organisation: National Parks Australia Council

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National Parks Australia Council

Working together for nature conservation areas

Inquiry into the proposed aerial shooting of brumbies in Kosciuszko National Park by the Animal Welfare Committee, NSW Legislative Council

Submission from the National Parks Australia Council

Please find attached a submission from the National Parks Australia Council to the Inquiry into the proposed aerial shooting of brumbies in Kosciuszko National Park.

The National Parks Australia Council (NPAC) was formed in 1975. It is a national body that coordinates and represents the views of a range of State and Territory non-government organisations concerned with protecting the natural environment and furthering national parks.

Member groups represent over 50,000 members from the Victorian National Parks Association (VNPA), the National Parks Association of NSW (NSW NPA), the National Parks Association of Queensland (NPAQ), the Tasmanian National Parks Association (TNPA), the National Parks Association of the ACT, (NPA ACT) and the Nature Conservation Society of South Australia (NCSSA).

At the 2023 NPAC Annual General Meeting held in Adelaide on October 9th and 10th members agreed to endorse the submission from the ACT National Parks Association Inc (ACT NPA) to this Inquiry. NPAC agreed that a separate submission incorporating the ACT NPA submission be made on behalf of NPAC to this Inquiry.

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Submission from the National Parks Association of the ACT Inc.

Summary

The NPA ACT supports the use of aerial shooting of feral horses in Kosciuszko National Park (KNP). In the management of feral animals, land managers need a wide range of control measures to ensure efficient and effective control results. As outlined below, aerial shooting provides land managers with an efficient, effective and humane tool for the control of feral animal populations and is therefore an essential control measure. This is particularly relevant given the continuing increase in feral horse numbers in KNP, despite existing available control measures.

The NPA ACT response to this Inquiry should not be seen as support for the current legislated population of 3,000 feral horses in KNP, as scientific studies have shown that even small numbers of horses cause significant environmental damage.

RESPONSES TO THE TERMS OF REFERENCE

(a) the methodology used to survey and estimate the brumby population in Kosciuszko National Park

Scientists have made five estimates of the size of the feral horse population in the Australian Alps National Parks (a series of adjoining national parks and reserves in the high country of Victoria, NSW and the ACT) and four in KNP only. The first estimate was made in 1989 (Dyring 1990). The other eight estimates since 2001 all used the same method, Helicopter Line Transect Distance Sampling (HLTDS).

HLTDS is one of the most widely used methods in the world to estimate abundance of wildlife populations. Its mathematical and statistical foundation is comprehensively known and has been evaluated against known populations numerous times and found to be accurate.

HLTDS population estimation method uses observers in a helicopter moving along a large number of parallel transects across the areas where horses are to be counted. The number of horses observed and their distance from the observer are recorded. The distance from the observer allows the calculation of the number of horses to be adjusted for those that are not counted because they are obscured by vegetation or not seen because of their colour providing camouflage. The reports of each HLTDS survey are listed in Table 1.

These eight estimates in the table below are the only scientifically acceptable estimates of the number of horses in KNP from 2001 to 2022. They can be regarded as an appropriate basis for horse population management in KNP.

Date	Area surveyed	Report	Size of survey (sq km)	Horse population estimate	Horses in KNP	How KNP portion calculated
Mar 2001	AANP	Walter & Hone 2003	2,789	5,200	1,858	KNP component estimated by Walter (2003)
April 2003	AANP	Walter 2003	2,717	2,369	1,367	Same adjustment as above
June 2005	KNP	Montague-Drake	1,052	1,357	1,357	No adjustment necessary
April 2009	AANP	Dawson 2009	2,680	7,679	4,684	Adjusted by the proportion of horse groups counted in KNP, given in Dawson (2009 Table 1) i.e. 0.61
May 2014	AANP	Cairns 2019	7,443	9,187	5,604	Adjusted by the proportion of horse groups counted in KNP, given in Cairns (2019 Table 3) i.e. 0.61 excluding the Bago Maragle block and half of the Byadbo-Victoria count
May 2019	AANP	Cairns 2019	7,443	25,318	19,242	Adjusted by the proportion of horse groups counted in KNP, given in Cairns (2019 Table 3) i.e., 0.76 excluding the Bago Maragle block and half of the Byadbo-Victoria count
Oct 2020	KNP	Cairns 2020	2,673	14,380	14,380	No adjustment necessary
Oct 2022	KNP	Cairns 2022	2,675	18,814	18,814	No adjustment necessary

Table 1. Estimates of horse abundance in Australian Alpine National Parks (AANP) and Kosciuszko National Park (KNP) from 2001 to 2020

From Table 1 there has been an increase in the horse population in KNP every year since the bushfires in early 2003, except after the bushfire in early 2020. This increase has been calculated to be about 15% per year. The population in October 2023 can be expected to be about 21,000 horses, given a 15% increase since 2022 and the known removal of about 2,200 horses.

There have been reports in social media that pro-horse groups believe these estimates are inflated. Some groups have conducted their own count while riding horses through areas known to have feral horses and finding much lower densities than the helicopter-based surveys. These on-ground counts lack the scientific rigour of HLTDS surveys and cover only small areas rather than many kilometres of helicopter transect. Nor are they repeatable, nor peer reviewed. The counts can be expected to find fewer horses because (a) the observers are near ground level and do not have the same view of the terrain as helicopter-based observers, and therefore cannot see horses hidden by variations in topography or by vegetation, and (b) the observers are on horseback, and this means that the feral horses can be moving away in advance of the observers and not seen. This does not occur with counts from a helicopter moving at a much greater speed.

(b) the justification for proposed aerial shooting, giving consideration to urgency and the accuracy of the estimated brumby population in Kosciuszko National Park

The NSW *Kosciuszko Wild Horse Heritage Act* (2018) requires a horse management plan to actively manage the feral horse population to reduce its impact on the park's fragile environment. Consequently, the Minister for Energy and Environment adopted the Kosciuszko National Park Wild Horse Heritage Management Plan (the Horse Plan) on 24 November 2021. The Horse Plan is a binding legal instrument that requires the feral horse population to be reduced to 3,000 by 30 June 2027.

This end date means that the current population of about 21,000 feral horses needs to be reduced to 3,000 in the next 3 years and 8 months. For legal reasons, there must be an urgent reduction of the horse population to comply with this Act.

In the last two years, there has been passive trapping of horses, and shooting from the ground. With both methods combined, only about 2,200 horses have been removed since February 2022.

If the horses were not breeding, to reduce the population of about 21,000 to about 3,000, then at least 4,900 horses would have to be removed annually. However, with a breeding rate of 15%, there needs to be an estimated reduction of 6,800 horses each year.

The only way to achieve such a rapid reduction in feral horse numbers using humane methods is to use shooting from a helicopter.

(c) the status of, and threats to, endangered species in Kosciuszko National Park

KNP contains four endangered ecological communities threatened by wild horses, 11 threatened animal species impacted by habitat destruction by wild horses, and 23 threatened plant species likely to be impacted by wild horses (NSW Threatened Species Scientific Committee 2018;

Australian Threatened Species Scientific Committee 2023). These are the legally binding determinations by the relevant state and commonwealth ministers. In addition, '*habitat degradation and loss by feral horses'* has been declared a *Key Threatening Process* in Schedule 4 of the NSW *Biodiversity Conservation Act* (2016).

In these determinations by the NSW Threatened Species Scientific Committee and the Australian Threatened Species Scientific Committee, wild horses are a major threat to four endangered ecological communities, 11 threatened animal species, and 23 threatened plant species.

(d) the history and adequacy of New South Wales laws, policies and programs for the control of wild horse populations, including but not limited to the adequacy of the 'Aerial shooting of feral horses (HOR002) Standard Operating Procedure'.

Aerial shooting of feral horses (HOR002) Standard Operating Procedure (SOP) has been developed nationally and is the standard all government authorities are required to follow (Sharp 2001). The SOP covers the issues of safety to operators and the humane killing of feral horses. Aerial shooting has resulted in thousands of feral horses being killed, especially in Western Australia and the Northern Territory during the last 20 years. This has given time for the SOP to be refined and updated.

In NSW, the Feral Animal Aerial Shooting Team (FAAST) training program was developed more than 20 years ago by the NSW Department of Primary Industry and the National Parks and Wildlife Service (NPWS). Training has involved a growing body of NPWS staff (FAAST 2003) and resulted in the high standard of competency in helicopter shooting required for humane operations.

The panel overseeing FAAST training includes veterinarians and is approved by the RSPCA. This increases our confidence that FAAST operations are humane.

The FAAST shooting program is used by NPWS and Local Land Services (LLS) staff who work together in shooting programs across a wide area of NSW on private land and conservation reserves. This means that the pilots, shooters and observers are experienced in a variety of terrain and vegetation types.

Aerial shooting by LLS and NPWS has resulted in 239,034 animals being killed over the last 3 years (Invasive Species Council, 2023, unpublished data). This has reduced populations of several feral animal species, including several species of deer, pigs, and goats. FAAST operations in NSW have been used to kill horses in areas that are not NPWS reserves, such as when more than 200 horses were culled at the Singleton Training Area (Aust. Gov. Defence 2019).

The NPA ACT is confident that the current level of NPWS staff experience in FAAST operations is sufficient to enable a successful aerial shooting program in KNP and other NPWS reserves.

(e) the animal welfare concerns associated with aerial shooting.

The requirements for humane shooting of feral livestock are stipulated in various documents, particularly SCAAHC 1991; FAAST 2003 and Sharp 2011.

Any aerial shooting of feral horses by NSW NPWS can confidently be expected to follow these protocols.

Many members of the public who have no knowledge of these protocols or of how aerial shooting actually happens, may say, 'I can't imagine how someone in a moving helicopter can accurately hit a galloping horse'. This can be the source of the erroneous and emotive expression that aerial shooting is like using a 'helicopter gunship'.

The public rarely understands that the range at which shooters generally operate is much less in aerial shooting than with ground shooting. As well as placing the helicopter close to the target group, the pilot can approximately match its speed and direction, thereby minimising its relative movement. Thus, the shooting demands are considerably less than most people imagine. A 'red dot' sight or similar system improves shooting accuracy, and the use of semi-automatic military grade firearms ensures several quick shots can be placed in the preferred aim point (part of the body) for each animal.

Experienced shooters can reliably achieve brain shots that lead to instant death. The alternative aim point, the heart–lung area can also achieve rapid death, and the protocols require multiple shots to ensure a humane kill. The protocols require that any animal that is not rapidly killed be immediately followed (a practice that is not possible in ground shooting) to ensure that the animal receives additional shots.

The protocols also require a 'fly back' over the group of animals that have been shot to check that all are dead before more animals are located.

Evaluation of aerial shooting operations by independent veterinarians has involved using both direct observation during shooting operations and necropsy of more than 600 horse carcasses and more than 700 camel carcasses. This scientific assessment of duration of the chase time, time to death, wounding rate and instantaneous death rate has led to the conclusion that the method was satisfactory, and that aerial shooting is humane (Hampton *et al*. 2014, 2017).

The idea of shooting animals from a moving helicopter often leads people with no experience of aerial shooting programs to describe these programs as a 'slaughter'. This suggests that the number of horses killed is confounded with the idea of whether the killing has been humane. Even the number of shots used to kill each animal can suggest to some people that the shooting is not humane. It is more humane to use more than one shot to ensure that an animal dies quickly.

The current ground shooting of horses in KNP has troubled some people. The amount of blood seen suggests non-humane methods, with recent media reports of dead horses in KNP saying 'there was a lot of congealed blood [on the fresher carcasses] which meant (the death) was not instant' (*Daily Telegraph* 3 October, 2023). However, heartbeat and thus bleeding can continue after loss of consciousness: "Although absence of ECG activity takes longer to occur, brain death has already occurred." (Aleman, Monica & Williams, D. & Guedes, Alonso & Madigan, John. 2015).

Other lay observers have been troubled by the appearance of shot horses with what they described as 'mares with bubbled rear protrusions that were spontaneously aborted foals. (Edwina Mason. Grisly discovery of 67 wild horses shot in Kosciuszko National Park. *The Riotact,* 19 May 2023). This misconception was directly addressed by the veterinarian who independently reviewed the implementation of the Kosciuszko Wild Horse Management Plan: "After several days of decomposition, a foetus can be expelled due to build of gas pressure in the hindgut, giving the appearance of foaling, but this occurs post-mortem. This is seen in both hindgut fermenters like horses and in ruminants but doesn't indicate any adverse welfare outcomes." (Evaluation of the implementation of the Kosciuszko National Park Wild Horse Heritage Management Plan 2021 (NPWS 2022).

If aerial shooting of feral horses in Kosciuszko becomes a method permitted by the NSW government, it is likely that similar concerns will be raised by lay observers. But the same responses, that the 'symptoms' of suffering occurred post-mortem apply to both aerial and ground shooting.

Despite the scientific findings, some members of the general public may still be concerned about any method of shooting, especially aerial shooting. Therefore, a public education program to alleviate these concerns is essential.

(f) the human safety concerns if Kosciuszko National Park is to remain open during operations.

It is standard practice for NPWS to close sections of the park to the public where aerial shooting of feral pigs, feral goats, and deer is to occur. The NPA ACT expects that this practice will be followed for aerial shooting of horses. The nature of aerial shooting, giving the pilot and shooter great visibility of the target animals in open country, provides an additional safeguard.

Sections of KNP can remain open during aerial shooting operations because it is such a large park and horses only occur in 53% of it (NPWS 2021). The sections that have feral horses can be closed, leaving much of the park safely open to visitors. Of course, closing sections of the park puts responsibility on NPWS to advertise and signpost the closures, and on the public to respect the signage and closures.

(g) the impact of previous aerial shooting operations (such as Guy Fawkes National Park) in New South Wales

The fire in Guy Fawkes River National Park (GFRNP) in late 2000 resulted in NPWS staff becoming aware of a large horse population in the lower parts of the park, as the removal of vegetation by the fire made the horses more visible. The horses were in poor condition due lack of food in the dry conditions preceding the fire and were in danger of starving (some having already died) because the fire had removed nearly all available feed (English 2000).

An aerial shooting program was hastily planned after the fire. This resulted in a lack of consultation with the park's neighbours, who were the only people likely to have seen the results of the shooting operations in such a remote part of the park. There was no communication with the wider public about the environmental impact of these horses or their poor condition.

This operation at GFRNP was the first where a large number of horses were targeted for removal in a NSW national park. When neighbours contacted the media there was immediate concern and intense objection from certain parts of the media, especially some radio 'shock jocks' who may have had additional reasons to attack a government minister.

There may have been other reasons why neighbours had alerted the media: concern that their illegal cattle grazing in the park had been noticed during fire operations (English, 2000), the loss of wild horses that could be caught and used on farm, and that the fire in GFRNP had escaped to burn their properties.

Unfortunately, media pressure was so intense that Minister Debus, banned aerial shooting of horses, and this has since impeded feral horse management in NSW national parks.

The Minister and the RSPCA then requested separate inquiries. Of the 606 horses killed, two veterinarians inspected 106 carcasses (considered a satisfactory sample) and found 'no evidence to support a claim that the horses had not been killed humanely, or of indiscriminate targeting away from the killing zone' (English, 2000). One horse was found that had survived two bullets in the killing zone (the heart–lung area) because the projectiles had behaved 'in a quite bizarre way', and this had shown that several shots were required to ensure a kill (English, 2000).

The conclusions directly related to humane operations were that:

- the use of aerial shooting in GFRNP was an appropriate technique under the circumstances;
- the shooting was carried out in a humane way, under approved protocols designed to kill the horses as quickly as possible; and
- the culling was planned and carried out in a most professional manner on the part of all personnel involved.

Further conclusions were that other methods of horse removal that had been previously attempted, such as roping, mustering, trapping and darting, were a risk to staff and had major animal welfare problems (English, 2000).

Despite this report being available soon after the event, there was little interest from the media and the general public in the scientific findings. The intensity of the media objections to aerial shooting has been confounded with the actual operation, creating a myth of mass wounding of horses, such as this expression 23 years after the event (accessed 25 September 2023)

> *World disgrace and cruelty accompanied national condemnation of the Guy Falkes (sic) murder and inhumane executions of our national heritage Brumby in October 2000 by the NSW National Parks. Keep in mind that only by a stop on gunship shooting by Debus, from massive public damnation, can be lifted at any time and that is very much on the cards.*

It can be concluded that the media ‘frenzy’ around the aerial shooting operation at GFRNP served to create a myth in some small parts of the community that aerial shooting inherently has major welfare problems.

However, education can overcome this concern. During the preparation of the 2016 draft Wild Horse Management Plan, public meetings showed that, once presented with all the facts, the public accepted helicopter shooting as an appropriate method of control. The requirement for a public education program about the realities of helicopter shooting has been pointed out to the NSW Government for years but is now even more urgent.

(h) the availability of alternatives to aerial shooting

As explained in the submission to terms of reference part (b), the feral horse population in KNP has to be reduced to 3,000 by 30 June 2027. This means that more than 6,000 horses must be removed annually by that date. This is not only a legal requirement but also an ecological imperative to reduce the serious impact on threatened communities and habitats.

Fertility control has been suggested as a possible method, but this method can only work in small, contained populations (Harvey et al. 2018). In KNP and other parks in NSW and Victoria, horse removal has been attempted by roping (brumby running), trapping, mustering and ground shooting. Roping has been deemed to be inhumane (except by some people who treat this as a sport). There are doubts about passive trapping and rehoming of captured horses because of the welfare aspects of transporting wild horses in trucks (ITRG 2016) and because it removes only a few horses. Mustering is limited by the lack of a method to contain wild horses. Ground shooting has been the major method of culling horses in KNP, but only 2,200 horses have been killed since February 2022, and this is well below the rate of natural population increase.

This means that there are no effective alternatives to aerial shooting.

(i) any other related matters

This inquiry into the proposed aerial shooting of brumbies in KNP is obviously concerned with the welfare of the feral horses. However, the animal welfare impacts of feral horses on several other species must also be considered. The large feral horse population, with an average weight of several hundred kilograms for each adult horse and eating large amounts of native vegetation have direct impacts on small animals.

An extreme example is that of the threatened broad-toothed rat (*Mastacomys fuscus*) whose population is seriously impacted by feral horses grazing and trampling their habitat to the point that some small populations have become extinct (Schulz *et al*. 2019; Eldridge *et al*. 2019).

Another example is that of heavy horses trampling the soft soil of bogs causing pugging, which destroys the habitat of Reik’s crayfish *(Euastacus reiki*) and leaves them exposed to predation, another negative animal welfare result.

An aspect of animal welfare that is rarely considered is the number of animals affected by a control operation. It is more humane to shoot a small number of horses that a larger number, but the legal imperative of the Horse Plan to reduce the feral horse population to 3,000 by 30 June 2027 requires an estimated 18,000 horses to be culled.

To minimize animal welfare impacts, 18,000 horses should be culled in the first year, minimizing the number left to breed. Operational and other constraints are likely to make this impossible. However, for example, if only 6,000 horses are culled in the first year, that will leave 15,000 feral horses, and with a breeding rate of 15%, that will mean an additional 2,250 horses to be killed. And for every year that culling occurs, breeding by the residual horses will mean more horses to be killed in subsequent years, increasing the animal welfare impacts.

Conclusion

There is a legal requirement to reduce the feral horse population in KNP to 3,000 horses by 30 June 2027. While many methods are available, only aerial shooting will achieve this result. Scientific investigation of other feral horse culls using SOPs recognised across Australia and the FAAST protocols in NSW have shown that aerial shooting from helicopters is humane and effective.

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