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## Submission regarding amendment to the Kosciuszko National Park Wild Horse Management Plan

10<sup>th</sup> September 2023

I am writing this submission as the veterinarian and former Deputy Chair on the Scientific Advisory Panel that advised on the development of the management plan, and an independent Equine Welfare Consultant. I am a veterinarian with specific post-graduate qualifications in Animal Welfare Science, and a PhD in wild horse welfare and ecology. Further, I have substantial on-ground experience in wild horse management.

I contend two key points regarding the suggested amendments:

1. I contend that **'the ability to conduct aerial shooting is essential if the wild horse population is to be reduced to 3000 horses by 30 June 2027'**.

There have been long delays in implementing management since the *Kosciuszko National Park Wild Horse Heritage Act 2018*. Firstly, there were delays in appointing the Scientific and Community Advisory Panels, which did not begin until Nov 2019, with our final advisory report being submitted Sept 2020, and then the Kosciuszko National Park Wild Horse Heritage Management Plan being released in Nov 2021, with on-ground implementation initiated in February 2022. At this stage management comprised purely of trapping and removal, since understandably it takes some time to carefully develop Standard Operating Procedures for the additional methods in the Plan, that had not been previously utilised, namely on-ground shooting, killing in yards with different methods, and aerial mustering. On-ground shooting was only recently implemented, whilst the other methods have not yet even been implemented.

In other words, ***the current management methods available, have not been given a fair chance to assess whether they will be effective at reducing the population in the suggested time-frame.*** After such careful planning and implementation, with a lot of work from a number of highly credentialed multidisciplinary experts over the last 5 years, it is completely irrational, illogical and unscientific to now suddenly want to amend the management plan when the suite of methods in the current plan is only just beginning to be implemented with some not even trialled yet. No transparent evidence has been presented to suggest that aerial shooting is necessary to achieve these aims.

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shooting is necessary to achieve these aims

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2. I contend that ‘aerial shooting is humane with animal welfare outcomes comparable to or better than other available control methods.’

**As a recognised veterinary expert in assessing welfare outcomes of wild horse management methods, this statement is categorically WRONG.** Many people that argue that aerial shooting is humane, have no direct experience or knowledge to comment on this in an evidence-based manner and are purely stating their uninformed opinions with no evaluation of the scientific evidence available.

The definition of humane death is that the animal is ‘either killed instantly or rendered instantly insensible until death ensues, and that this occurs without pain, suffering or distress’. Aerial shooting achieves neither of these. Further there have been no comparative studies directly comparing welfare outcomes of aerial shooting to the other range of control methods, but there has been work done demonstrating good animal welfare outcomes with some of the other control methods currently being used.

Even when performed under the strictest of conditions and operational procedures, and assuming that accurate shots are placed with the first shot fired, there are still **TWO key welfare issues with aerial shooting that are always overlooked in debates:**

a) Aerial shooting almost always will involve chest shots

A humane death requires instantaneous insensibility, which occurs with an accurate shot to the head. With a chest shot, animals die as a result of haemorrhage. Time to death is variable depending on the precise location of the shot within the chest. It is possible to be rapid if the shot is to the heart (a level of precision that would be challenging from the air), but it is NEVER INSTANT as is required to state that it is a humane death.

A gun shot to the chest causes **pain**, by penetration of muscle, rib cage and nerves. In addition to pain, the result of haemorrhage causes **weakness, anxiety, breathlessness** and thirst, as a result of reducing blood volume and oxygen carrying capacity. There is a wealth of literature on the welfare impacts of death by haemorrhage, in addition to the specific welfare impacts of hypovolaemia, and breathlessness.

b) The welfare impacts of the chase

The welfare impacts of the chase are always overlooked. Even a 1-2 minute chase time is the equivalent to the time of most common Thoroughbred flat races. The welfare impacts of racing are well recognised with injuries, breathlessness, muscle fatigue, exhaustion and heat stroke being the most common concerns. However these racing horses are highly trained, closely monitored, and receive intensive management and veterinary attention, in addition to being raced in controlled environments. Wild horses are not used to galloping at maximum capacity, they may not be in optimal health and fitness, many mares will be pregnant and foals and juvenile horses, aswell as aged horses will be amongst them. Further, the terrain is very irregular, incomparable to a racecourse.

This means that they will be suffering from varying degrees of ***breathlessness, muscle fatigue, exhaustion, and heat discomfort*** prior to being shot. During an aerial cull horses are running at maximal speed at the time of shooting. They are only running this fast due to ***extreme and intense fear*** from the helicopter chase. All of this, combined with the irregular terrain also puts them at a high risk of ***injuries***.

These welfare impacts are very significant, and although short in duration, the impacts are of ***SEVERE INTENSITY***.

Proponents of aerial culling often argue that welfare impacts are less than methods that require prior trapping of horses. However, trapping is a method that has undergone welfare assessments, and although welfare impacts are longer in duration, they are very mild in intensity when performed following best practice standard operating procedures which are practically achievable and have a long history of success and low welfare impacts.

In animal welfare and veterinary science, as well as in wider society, it is generally accepted that less intense welfare impacts of longer duration, are preferable to severely intense welfare impacts of shorter duration. Therefore in other situations where animals are killed, best practice involves methods that cause instant insensibility even though there may be a longer duration of mild welfare impacts to get the animal to the point that this is achievable (for example, transport to a veterinary clinic, restraint in yards or a crush).

If a veterinarian or owner shot a horse in the chest as the method of euthanasia, let alone if they chased it to the point of exhaustion first, they would be prosecuted for cruelty. Whilst it is accepted in legislation that shooting wild animals in the chest from the air may be necessary as the only practical way to achieve killing, we know that this is not the case for horses as more humane methods of killing have been well demonstrated and are practically achievable.

There are many reasons why the Government may wish to use aerial shooting, however these reasons relate to cost, and efficiency of killing a large number of animals in a short period of time. Being a 'humane' method with comparable animal welfare outcomes to other methods, is NOT a correct or valid reason for aerial shooting to be introduced.

**Introducing aerial culling into the management plan is at odds with all animal welfare expertise provided to the Government over at least the last 8 years**

The Independent Technical Reference Group that advised on the 2016 Draft Plan of Management, comprised a wide range of experts (I was not part of this panel) with an additional range of animal welfare experts that created a Relative humaneness assessment matrix on a theoretical basis. They performed two theoretical assessments for aerial shooting, based on best case scenario (< 1 min chase and rendered immediately unconscious after the first shot) and scenario 2 (> 5 min chase and 2 shots needed to render unconscious). Only the best case scenario was considered acceptable, and led to recommendation that aerial culling be included, however they did stipulate a range of caveats for recommendation (including that only shots to the head were to be used), which we now know are unlikely to be practically achievable and that even best case scenarios are going to involve intense chases (even if chase

time is minimised) and shots to the chest (even if only a single shot is needed), neither of which is considered acceptable by animal welfare experts.

The only actual animal welfare assessments performed for aerial shooting of horses have been a single study in Central Australia (Hampton *et al.* 2017). In this study chase time ranged from 2 to 654 s (median = 42 s, mean = 73 s). Welfare impacts of this were not discussed but given that the majority were chased for around one minute, this will have caused significant impacts as outlined above.

Only 63% of horses were considered to have died instantaneously, and **37% died non-instantaneously**. Bearing in mind that this is also likely to be overestimated since death was assumed if the horse was observed to be immobile from a helicopter, yet immobility does not constitute death. ***This is a very high proportion of non-instantaneous death.*** Furthermore, at least 1% of horses were non-fatally wounded and 3% of horses were not shot in the cranium, neck or thorax. ***This is a substantially higher % of non-instantaneous death and non-fatal wounds than ANY OTHER METHOD assessed to date, and therefore can not possibly be considered humane, or to have equivalent animal welfare outcomes to other methods, based on the best available science.***

The Scientific Advisory Panel (SAP) report 2020 (that I was a panel member of), that advised on the 2021 Management Plan, recommended following the 'International Consensus Principles for Ethical Wildlife Control' (Dubois *et al.* 2017). These principles include that management methods used should cause the least harms to animal welfare to the least number of animals, in addition that control methods should be justifiable, socially acceptable and systematically planned. ***Introduction of aerial culling in the proposed way goes against all these internationally recognised consensus principles for ethical wildlife control.***

As scientific assessment of animal welfare outcomes were lacking for all management methods, the SAP did make recommendations for all for control methods to undergo further evaluation (SAP Report p16). However further evaluation has subsequently suggested that chest shots would most commonly be used, and further the SAP only recommended use of any in situ shooting methods in very specific circumstances, and only if preliminary trials demonstrated better animal welfare outcomes than achieved with other methods that require prior capture (SAP Report p17). The SAP recommended that in situ shooting methods may be considered in locations where horse density, habitat, and terrain are not favourable for mustering or trapping of horses, or removing from the park. The SAP did recommend that in situ shooting methods should be trialled under strict conditions to determine animal welfare outcomes, with the ongoing method used to be that with the least negative impacts on animal welfare. This is very different to introducing aerial shooting into the current management plan as an option to be used under any circumstance and when animal welfare outcomes have not been documented.

The SAP noted (p51) that shooting in situ had the potential for extreme negative welfare impacts, and that these methods were only recommended in the following circumstances:

- Where there is a very low likelihood of significant animal welfare impacts, based on careful assessments of the points outlined by the ITRG.
- Use of extremely experienced shooters (using head shots only)

- Where other methods are either not feasible, or more likely to be associated with higher animal welfare impacts (e.g. inaccessible locations or large numbers of horses in one area)
- Where a defined proportion/number of horses in the particular population are to be shot (i.e. indiscriminate use would not be recommended)
- Where animal welfare outcomes are monitored and results used for recommendations to further improve animal welfare outcomes, i.e. the initial recommendation would only be for a trial and targets for key welfare parameters such as chase time, instantaneous death rate, rate of non-fatal wounding etc, would be set. If targets considered to represent acceptable animal welfare outcomes could not be achieved, then continued use of the method would not be recommended.

The SAP advice on this matter was in line with previous IRTG advice, so it is not clear or transparent as to why the Government would ignore the advice of their own appointed animal welfare experts, that have provided similar advice on this matter over at least the last eight years.

Sincerely,

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