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ABA Submission 16-Feb-18

to

Parks Victoria Horse strategic action plan (2018/20 Draft)

The Australian Brumby Alliance (ABA) Inc. was formed in April 2008. Its mission is to act as a National Body for the Recognition, Management, Preservation and Welfare of Australian Wild Horses (Brumbies). ABA Member groups project a strong advocacy focus and have developed a solid understanding of the skills and complexities required to collect Brumbies trapped by park removal programs, then gentle and rehome them.

Thank you for the opportunity to provide feedback on Parks Victoria'a "Protection of the Alpine National Park - Feral Horse Strategic Action Plan 2018–2020 (Draft)".

ABA Submission Guiding Principles;

- Provide recommendations to the draft plan that are consistent with Parks Victoria's vision to acknowledge the cultural and social values of Victoria's Alpine National Park, to work with community groups and the *retention* of moderate, sustainable Wild Horse numbers in the park in their historic areas and ensure the long term survival of the Alpine Snowy Brumby, including the Bogong High Plains population.
- Encourage Wild Horse management to be informed by peer-reviewed studies that include both positive and negative aspects of Brumby interaction within its ecology.
- Recognising traditional negative, often emotive and complex, views on introduced species are increasingly being questioned by many scholars, for example Crystal Fortwangler's book "Untangling Introduced & Invasive Animals 2013" explains:
    - Introduced, and especially, invasive species invasive species "will have increasingly important roles and functions in future landscapes", and
    - some scholars across disciplines are re-examining how we understand introduced species, the language we use to discuss them (and why that matters), and how to manage them. [Crystal Fortwangler 2013

Introduction

Stakeholder "Round Table" meetings held early 2017 were a positive opportunity to air and discuss different views. Unfortunately the Consultant's record of all these discussions was totally inadequate (still referenced in the plan!). As a result the common agreement to use Wild Horses, not feral horses, throughout the review process was lost. Parks Victoria, unlike NSW who refer to Wild Horse in horse management papers, soon reverted back to feral.

The ABA uses the term Wild Horses or Brumbies in recognition of the high value we hold for these majestic, heritage icons who give their lives to establish Australia as we know it now.

This submission will focus on

1. Why Parks Victoria's strategic horse plan (the plan) will not reduce current impacts,
2. The highly flawed impact study that the plan is based upon.
3. Refusal to use fertility control to complement trapping programs, and
4. The inability to accept the Context 2015 heritage review which found that Alpine Wild Horses/Brumbies are an *attribute* to the heritage values of their environment.

As supported by Context 2015 and the Burra Charter, The ABA's position is that there must be moderate, sustainable levels of heritage Brumbies retained in Alpine area, including the isolated Alpine section of Bogong High Plains, because they represent irreplaceable, living cultural history for future generations to experience.

The ABA will not accept Parks Victoria's action to eradicate all Bogong High Plains Heritage Brumbies, nor the intention to drastically lower the remaining alpine Brumbies because the plan is based on a flawed, misleading impact report that would fail any robust scrutiny.

Key to the Complete ABA Submission to NPWS draft plan

Parks Victoria's strategic Horse draft plan 2018-20 (the plan)

Plan process frustrations

This plan has been four years in the making, with many issues repeated in the absence of minutes from the 2014 Round Table meetings and the report by the 2017 Primary Agency consultants being *totally inadequate*. The final insult was to have the plan released just prior to Christmas and with a feedback period that closed as the school holidays ended.

The plan statement (p17) "*Views in this plan developed with input from key stakeholders and institution with a keen interest in horses and the environment*", infers the ABA views support the entire draft plan as it was "developed with". This is not correct - many of our views such as Wild Horse Heritage values, how to manage BHP Wild Horses with Fertility Control along with a comprehensive environment and social wild Horse behavioural study were repeatedly rejected. In reality, selected "views" were adopted in the draft plan.

Seriously frustrating was having this plan released with only a scant *interim* horse impact report which meant that feedback for the first 3 weeks was based on an incomplete report that was later replaced by a 'FINAL' version *half way* into the community feedback period.

The ultimate grievance over the draft plan process was that the final Bogong High Plains horse Impact report contained significantly, and for the ABA, extremely damaging **new** claims and concepts **never** raised during the whole long drawn out plan review process.

1. Will not reduce impact levels

Parks Victoria's responsibilities include compliance with;

- The National Parks Act 1975 whose objectives include 4.(a) to make provision, in respect of national parks ……. And 4.(a)(ii) for the preservation and protection of indigenous flora and fauna and *of features of scenic or archaeological, ecological, geographical, historic* or other scientific interest in the park; and (iv) for *the responsible management of the land in those parks*;
- The Flora & Fauna Guarantee Act 1988 (FFG) which lists *degradation & habitat loss* caused by feral horses as a threatening process; and
- The heritage Context review commissioned by National Parks and Wildlife Services in NSW, supported by Parks Victoria's assessed Alpine Brumbies in both states against Australia's National Heritage List criteria. Context 2015 found that Wild Horses are *attribute* associated with the cultural heritage significance of the Kosciuszko National Park and the Victorian Alpine regions.

This plan, nor any other, *can ever reduce* impacts assumed to be damage in alpine regions because all management plans to date are structured on inconclusive, biased, misleading research that promotes (to the uninformed) the unsubstantiated belief that Wild Horses/ Brumbies cause damage no matter what their density.

If the damage is truly there and properly substantial, it should be able to be clearly measured and proved in the target. Evidence that habitat and associated species have been damaged, and to what extent, has not been provided in the Impact Report; only perceived impact from horse are described without solid qualification and quantification.

This project appears designed to ensure the preconceived "politically correct" result is achieved - this is not science.

Until properly structured, robust studies are conducted to provide accurate data on all real, not just perceived, threats, what makes Parks Victoria think that repeating previous ill-informed actions that have not worked before will somehow work this time?

For example, Parks Victoria plan to trap 400 Brumbies annually for 3 years from the main alpine area to reduce damage – This ii-conceived move **will not reduce impacts**;

- With 175,000 to 1 million Sambar deer reported in the Victorian Alps compared to 2,350 Brumbies, this means; for every *single* Brumby there are **320-426** Sambar deer.
- Removing 400 Wild Horses annually is just a ***mere* 2%** of Sambar numbers, *before* adding impacts from fallow deer, pigs, goats, cats rabbits…. likely in the Alps region.

The ABA supports managing moderate Brumby populations where they have lived wild for well over a century, but we totally *reject managing Wild Horses to extinction*.

ABA positions on the Plan

- No aerial or ground shooting of Brumbies for this plan period – GOOD
- Passive trapping in remote areas – horses not collected for rehoming euthanized on site - BETTER than truck to an abattoir be killed.
- Remove all BHP Brumbies because as a *pest* specie parks can – IGNORES the Context 2015 recognition (referred to in the plan) which acknowledges Brumbies *are* part of the Alpine's heritage and the need to retain *managed* populations.
- The plan says un-trappable horses will be dealt with *by other means*. WE ASKED what this was - parks replied *trap shy BHP Brumbies will be shot while free roaming*– WE *strongly rejects* the inhumane shooting of free roaming Wild Horses, as head shots are rare, mobs take off, foals are stranded, and injured Brumbies left to die slowly.
- 400 trapped annually for 3 yrs, will exceed rehoming capabilities resulting in at least three quarters of passively trapped Brumbies being *euthanized* – THE ABA notes the plan (p14) states "support partnerships to maximize rehome horses" and asks Parks Victoria to elaborate further on the details of the type of *support* being offered?
- The plan (P16) states "*removal of Cobungra Bogong High Plains Brumbies and new incursions prevented*" – THE ABA strongly rejects the decision by Parks Victoria to remove all Bogong High Plains (BHP) Brumbies based on a flawed, inaccurate and misleading impact report, and noting that the plan *acknowledges European history*.

- The plan acknowledges European history, the Context report and that people love seeing BHP Brumbies living wild. *Now* is the time for Parks Victoria formally recognise BHP Brumbies as an attribute to Alpine heritage.

Further ABA positions on the plan

- The ABA supports a trial SLOW muster program provided this is conducted in low numbers to begin with, in order to learn and refine humane techniques, either by ground transport or helicopter, as done with New Zealand's Kaiamanawa Heritage Horses (KHH). The KHH newsletter, which forms part of this submission has examples of how the KHH society work closely and effectively with the Army base where the Kaiamanawa Heritage Horses live and Department of Conservation (DOC).
- The ABA does NOT support Brumby running (roping) and we *applaud* the move by Parks Victoria to review its roping program, one that has *never had ethics committee approval*, ran unsupervised and in conflict with related codes of practice for so long.
- The ABA notes with extreme concern the plan statement (P21) "*aerial and ground shooting free roaming horses will be considered in the future if current management is not adequate."*- THE ABA is **strongly opposed** to either aerial or ground shooting free roaming horses as it is **not humane**, cannot guarantee a kill head shot, terrified horses and foals breaking legs trying to escape and injured horses left to die slowly.

2. highly flawed impact study that the plan is based upon

The full ABA reply to the Final BHP Impact study released 16-Jan-18 is in attachment 1.

The plan (p40) talks of an annual review of operations to determine the extent to which conservation objectives are being met. However, the inadequacies in measuring true damage and impact of the BHP impact study implies to the ABA that Parks Victoria will struggle to provide reliable baseline data upon which to assess the extent to which conservation objectives are being met.

As a result, the work to trap 400 horses annually and remove all BHP/Cobungra Brumbies could well just be wasting public money, as any review by Parks Victoria, based on the BHP impact report format will be unable to show quantifiable change in the Alps. Attachment-1 to the ABA submission finds the impact study flawed and misleading, with examples below;

It is imperative that Parks Victoria first establish a baseline with real, concrete, robust data on horse's impact (positive or negative) - otherwise how can change be measured?

The Final BHP impact study contained **new concepts** that were never raised during the plan preparation. In particular the statement "*There is **unlikely to be a minimum population size** for feral horses that would not lead to incremental, on-going degradation*".
Below are some examples from att-1 showing why the Bogong High Plains Impact report is flawed, incorrect and misleading.

- ***accumulative damage*** – is based on a farm paddock study and fails to differentiate between previous damage by cattle and other species and horses.
- ***dung taking five years to decompose*** – is based on a BHP cattle dung study – when horse dung takes on average just over one year to decompose,
- ***priority sites selected*** - what happened to *unbiased, random site selection*?
- **preference shown by feral horses for wet areas** – put any horses in a paddock with wet and dry areas and watch – Wild Horses walk to water to drink, but avoid soft muddy areas as they react faster to danger when on dry ground.
- **impacts obviously attributable to feral horses** - horse prints quite distinctive. ABA saw little evidence of horse prints in photos, instead we saw disturbances more consistent with cloven deer hooves - when asked how study attributed impacts to horses – the reply, because horse prints or dung were in the photo area - In other words Brumbies were guilty by association!

> *"Along the same line, why is it that native species are almost always considered preferable to non-native species? Nothing in science says one species is innately better than another that one species is inherently preferred, or that one species should be protected and another species should be eradicated."*
> Citation: Lackey, Robert T. 2016. Keep science and scientists credible: avoid stealth policy advocacy. Bulletin of the Ecological Society of Australia. 46(3): 14-15

Plan claims of Wild Horse damage – Broader perspectives:

The frequent use by national park and government organisations of words such as could, may, can lead to, has potential to, has concerns about, when listing impacts which they say are caused by Brumbies is misleading. We need facts about what actually occurs, not spread the fear of what may, perhaps, if ever, occur one day.

P9 of the plan lists several species described as threatened – however several species seem to have *been wrongly classified* in terms of threatened, endangered, critic etc.; for example;

a) **Two native species of mammal are potentially at risk from feral horse activity in the Victorian alps. Habitats of the Smoky Mouse (Pseudomys fumeus) and Broad-toothed Rat (Mastocomys fuscus) are currently suffering loss and degradation** - placing these sentences in sequence, infers that Alpine Wild Horses are causing these native species to suffer loss and degradation. However the Alpine Resort Environmental report 2013-2014 provide a different perspective:

- (there is an) Increase in weed richness around *lodges* and across both *resorts*.
- New weed species are *still being introduced* by equipment/materials, and
- The Broad toot rat for example is reported in Ski resort reports to have *bounced back* after the 2003 fires and *still increasing* in numbers

b) **The Southern Toadlet (Pseudophryne dendyi) occurs up to 1700m in elevation, breeds in shallow pools in wet heaths, bogs and fens, but is now becoming harder to locate** - this sequence infers that they are harder to locate because Wild Horses have caused the decline, when there is no research provided to show if this inference is true or not.

c) **The Alpine Tree Frog (Litoria verreauxii alpina), which occupies similar habitats, is critically endangered.** *This statement is not consistent with the Species Profile and Threats database* http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=66669 which states:

- Litoria verreauxii alpina is listed as **Vulnerable** (not critically endangered)
- There is no adopted or made Recovery Plan for this species, and that
- No Threat Abatement Plan has been identified as being relevant for this species.

d) The Alpine Water Skink (Eulamprus kosciuszko) is listed as endangered. However the link https://bie.ala.org.au/species/urn:lsid:biodiversity.org.au:afd.taxon:79ddc78d-90c2-4b9e-8dfe-eeb3853e5181 (2017) gives a conservation status of "Null", with distribution areas in several states (NNS, Victoria, QLD) and type locality of Mt. Kosciusko, elevation 5,000 ft (> 1400 m).

e) Highly restricted and threatened invertebrates such as the Alpine and Mount Stirling Stoneflies are also vulnerable to habitat impacts. However the following link explains that http://www.mdfrc.org.au/publications/factsheets/images/Thaumatoperla_FactSheet-June-2016.pdf states "*The lack of knowledge on the species and their populations has meant that developing an understanding of the specific threats to the species has been highly restricted*" and that "*The threats that have been identified for Thaumatoperla are of a more generalised nature for alpine/freshwater organisms and this restricts the ability to manage these threatened species*". Tha ABA notes that this link also states "*The limited information for both of the Thaumatoperla species means there is currently no species recovery plan* ***therefore threat and management actions cannot be established*****"**. Again we need robust, data rich research to see how, if at all, Wild Horses may be a threat.

P 13 of the plan states that Animals using these trackways can be vectors for **weeds** and plant and animal **diseases**, such as tree dieback fungus Phytophthora) and frog chytrid fungus.
The ABA points out the following important facts:

a) However, "human activities" in the 1986s and 1987s [Ref-7] unintentionally introduced the Amphibian Chytrid, then carried it to previously healthy Corroboree frogs as researchers moved from site to site in the Australian Alps [Ref-8].

b) That the Healthy Common Eastern Frogs then became a carrier of this disease [Ref-6], passing it to corroboree frogs they co-habituated with. 7. http://awpc.org.au/bleak-future-for-australian-frogs/

c) Along the east coast of Australia, nine species of frog have totally disappeared in the past two decades, and scientists are at a loss to explain why or provide solutions – except for '*human activities*' and population growth [Ref-7]

d) The **chemical constituents of horse manure are not toxic to humans**. Horse guts do not contain significant levels of two waterborne pathogens of greatest concern to human health risk, Cryptosporidium or Giardia, neither do they contain significant amounts of the bacteria E. coli 0157:H7 or Salmonella. (Adda Quinn 1998)

e) Severe fires and storms are the greatest mover of soil structures into **streams** (Redfearn, Hadwen, Negus, Blessing, Marshall)

P13 of the plan states "Feral horses impact water quality through streambed disturbance, pugging and streambank collapse" however the ABA points out that;

a) (Redfearn, Hadwen, Negus, Blessing, Marshall) found "horse trail crossings are a pulse impact on water quality and small numbers (100 passes) have little long term impact" …… "horse crossings produced an increases in both organic and inorganic sediment, E. coli, nitrogen, and phosphorus, but of these, organic and inorganic sediment, and E. coli **were also elevated by 4WD crossings**".

b) Runoff during storms and floods, especially in Parks downstream of pastures and residential areas, was potentially much greater than anything that occurred during the anthropogenic disturbances captured during the (study) events. Redfearn, Hadwen, Negus, Blessing, Marshall)

c) The 2003 Alpine fires burnt a significant amount of vegetation in the water catchment areas in Gippsland leaving a risk of soil erosion. The fires severely reduced vegetative cover – both pastures and native vegetation – *creating a high risk* for destructive soil erosion [Ref-5].

d) "Wildfire in 1914 caused little damage, whilst a severe fire in 1925 burnt peat bogs on the high plains and caused severe erosion" and "summer fires were the major cause of soil erosion and loss of timber in the (Alpine) region" and "Severe wildfires in 1978, 1983 and 1988 caused substantial soil erosion" **(**Vic Jurskis, Paul de Mar (Forests NSW) and Barry Aitchison (NSW Rural Fire Service).

e) Jeffrey Schaffer, wilderness writer, also reported that 700 backpackers contribute about a ton of human waste per week, and in particularly that "buried human excrement takes longer (than horse and cattle excrement) to break down.

Plan P14 (*Weeds*) states "Horse presence and associated impacts can provide opportunity for a variety of introduced plant species to quickly outcompete native species" - however there are many references that show other factors are the *primary spreader of seeds*; such as;

a) http://www.bcha.org/media/uploads/2015/11/13/files/Gower2008_Forest_Ecology_Eastern_US_weeds-horses_full_article.pdf explains that "Seeds are primarily dispersed by gravity, wind, surface water movement, soil erosion, birds, ants, dung beetles and rodents".

b) In the 1950s and 1960s Scotch or Spanish Broom, Lupins, willows and other exotic trees were Introduced during the building of the Snowy Scheme. While NPWS was not involved in introducing these weeds, a major restoration program treating and removing these species is in place. *[NPWS NSW reply to online chat website query 2015]*

c) The 2003 and 2006 Alps wildfires burnt over 750 000 ha in national parks and reserves, and post-fire floods caused massive erosion areas, creating vast, bare areas and flushed nutrients from the ash beds or deposited sediment *promoting rapid growth* of many weeds…
http://parkweb.vic.gov.au/__data/assets/pdf_file/0009/534096/Invasive20Species1.pdf
(Invasive Species discussion paper Greater Alpine National Parks 2010)

d) **Walking is seen as a relatively low impact activity, but our study shows that it can have a long-term, indirect impact on the environment.** BullockBullock (2011) conducted a study to identify whether bush walking hikers spread invasive plant seeds on their clothing. He found that "*Scientists know that infrastructure like roads and tracks for tourists help spread weeds around pristine areas, but few studies have looked at how tourists' clothing helps spread weeds'* seeds" [ref-8].

The study calculated that in just one hiking season "*up to **1.9 million plant seeds could be carried** on the (33,000) walkers' socks*", and that "*2.4 million seeds could attach themselves to the hikers trousers*" [ref-8].

The five plants that Bullock reviewed in Kosciuszko (Bidgee-widgee, Sheep's sorrel, Sweet vernal grass, Cocksfoot grass and Red fescue grass) are considered problem species that spread in pristine areas and push out native species.

Exclusion fencing

P28 of the plan states "Additional exclusion plots (areas fenced to exclude horses) may also be established to determine how peatlands and streams recover when they cannot be accessed by horses" - however, the ABA points out there are **significant flaws** in the results over a long period of time on "exclusion fencing" that has been used in Australian studies with the intent of showing the damage caused by Brumbies, for example:

a) This problem is best exemplified by the critique of Rogers (1991), offered by Linklater et al. (2000), demonstrating that positioning of horse exclosures can result in impact measurements unrepresentative of the broader system.

b) Past research into the effects of feral horses have typically included:

- only a small number of response variables (Beever et al. 2003),
- measuring direct effects of disturbance on a few plant characteristics,
- ignoring both direct effects on other taxa (Beever and Brussard 2004) and
- indirect effects occurring concurrently and subsequently from the formation of feedback loops (Beever and Herrick 2006).

c) The small number of feral horse studies that have paid credence to the importance of factors such as scale (see Beever and Brussard 2004), feedback loops and indirect effects (see Levin et al. 2002; Beever and Herrick 2006) have been undertaken in semiarid and marshland environments, and hence their applicability to similar disturbances in other ecological systems may be limited. Furthermore, we are not aware of any peer-reviewed research that analyses the effects of feral horses on native environments in Australia.

d) We agree with Linklater et al. (2002) that the

- peer-review process is the best mechanism for illuminating the quality of research to the public, by exposing it to criticism from *an independent and international audience*, and that
- this standard is *yet to be achieved in Australia* for both ecological and human dimensions research.

P11 of the plan claims that horses can damage culturally important (Aboriginal) sites – we ask WHERE is the research to support this position in the Victorian Alps?

Plan photos (p13/14) – Your eyes must be better than ours, we are unable to make out horse prints in these photographs. We do see a small area of bare ground surrounded by what seems to be a healthy environment.

Plan p19 says "more horses may need to be removed under adaptive management" - the ABA repeats its KEY concern that until a scientifically robust baseline data is established, it is impossible for Parks Victoria to apply adaptive management changes to in an effective way.

P4 of the plan refers to using a strategic and evidence-based approach to protect natural heritage (are Wild Horses artificial?) – WHERE is the robust baseline data to support the claim that Parks Victoria will use in this "strategic and evidence-based approach".

P4 of the plan also refers to humane and respectful horse management being delivered through effective management programs – the ABA strongly recommends the use of fertility control to minimise the number of Wild Horses needing to be trapped or put down on site. Why pay to trap when that Brumby need never have been born?

The ABA 's position is that for the plan to be truly humane, it must reject ever using aerial or ground shooting of free roaming Brumbies; and lower trap numbers so the percentage of Brumbies being euthanatized at the trap site is less, by using fertility control along with the trapping option.

Until Parks Victoria establish a robust data baseline the following plan aims are worthless:

- Meet their obligations under the Act and the FGG
- Applying adaptive management
- Determining the extent to which conservation objectives are being met
- Quantify change in the Alpine environment
- Understand the complexities in the alpine region in order to manage effectively
- Identify the right level of (balance) for the protection for our natural environment and pre-European cultural heritage.

Examples of selected information that fails to reflect the true research, such as:

- Parks Victoria presented the papers they claim prove the damage Brumbies do, and added that one of them (Dyring 1990**) is an Oldie but goodie - we've used this for many years as one of the foundation studies**. The ABA agrees that Parks Victoria do use Dyring 1990 as a foundation study, we also found that nearly all papers Parks Victoria presented as *evidence* used papers either cited Dyring 1990, or used papers that cited Dyring 1990. This is a key example of selective quoting, because'

- The list of impacts Parks Victoria use to "evidence horse damage" ignores a key conclusion of Dyring that the percentage of **ground impacted by horse tracks is less than 1% of the area studied**. That is: 99.8% of the area studied is not subjected to horse walking tracks.

Examples of Non Peer reviewed statements:

a) "We highlight gaps in the literature and suggest that **more peer-reviewed** research would be beneficial in reducing the current public controversy surrounding management of feral horses". (Nimmo & Miller 2007)

b) Nimmo & Miller (2007) state: "*Further confounding results is the fact that past research into the effects of feral horses have typically included only a* ***small number of response variables***" (Beever et al. 2003), "*usually measuring direct effects of disturbance on a few plant characteristics, ignoring both direct effects on other taxa*" (Beever and Brussard 2004),

c) "***indirect effects occurring*** *con-currently and subsequently from the formation of feedback loops*" (Beever and Herrick 2006)."

d) Furthermore, "*we* [Nimmo and Miller] *are* ***not aware of any peer-reviewed research*** *that analyses the effects of* feral horses *on native environments in* Australia."

e) A cautionary note from the above review: "*it may seem as if the ecological effects of feral horses are well established. We contend that this is not strictly the case, particularly for Australian ecosystems"* (Nimmo & Miller (2007).

Positive Impacts of grazing on the environment

- **18 discrete piles dung were counted along defined width area**. Sounds a lot, but the percentage of ground covered by dung is 2%, meaning **more than 98% of the area has no dung impac**t.

- **"Impacts continues despite active management to reduce horse numbers"** If this is so, it seems contrary to many of your own assumptions. Perhaps other causes or factors are at play?

- Impact report alternates impact with damage. Impact is not damage in itself because damage can be ***positive*** or *negative*.

Positive Impacts to environment

Antelope in arid grassy dunes that spent much time under shade trees were found to trample soil locally but **also enrich it with their faecal pellets**. (Dean and Milton 1991 in (Beever et al. 2008):

Avian (bird) **richness and diversity were higher in areas subject to moderate grazing** than areas in which horses had been excluded (Zalba and Cozzani 2004).

Species **richness and diversity are slightly greater in areas of moderate grazing** than in enclosures, as per theory intermediate disturbance (Connell, 1978).

http://iopscience.iop.org/article/10.1088/1748-9326/11/11/113003

- "Many studies just compare 'grazed' to 'ungrazed' conditions, grazing is not an all or nothing proposition – grazing intensity utmost importance".
- "plant diversity may be greater at a light or moderate level of grazing than with either grazing exclusion or heavy grazing".

Some **plant species stimulated by grazing** - maximum benefit at moderate grazing intensities (McNaughton 1983, 1985). Plus wildlife communities that depend on those plants also show greatest diversity with moderate grazing."

Grazing **increased species diversity** (Fahnestock & Detling 1999, Austrheim & Eriksson 2001, Fahnestock & Detling 2002, Ostermann-Kelm et al. 2009 & Stroh et al. 2012.) and **Lowers fuel levels thus fire severity**, (Silvers 1993 and Davies et al. 2015)

Grazing animals can have **beneficial impacts on native plants and animals** (Schultz 2011) - **protect endangered plants** (Gilfedder & Kirkpatrick 1994).

impractical to try to restore ecosystems to some 'rightful' historical state … it is time for conservationists to focus much more on the functions of species, and much less on where they originated (Davis 2011: 154).

3. Refusal to use fertility control to complement trapping

Trapping Process and end destination for the Brumby

- Last count Alps 2,350 and BHP 64-80 left.
- Of target 400 per year from Alps, at least 80% will be euthanaised.
- If trapping rate were lower, and fertility control used a higher proportion of Wild Horses could be rehomed.
- The Technical Reference group (TRG) does not support fertility control by darting: claiming that *the process and protocols* for this method is **not well-developed in Australia and there are long timeframes for population reductions**.
    - This finding by a technical reference group with no wild Horse experts, and after the professional and comprehensive presentation by Colleen O'Brien, Victorian Brumby Association (VBA) President, is tragically disappointing.
    - Fertility control has been effectively delivered by dart gun to free roaming Mustangs (American Wild Horses) for well over 35 years.
    - This progressive, humane management option has been highly scrutinised, and the results peer reviewed and published.

- The TRG formed their advice based on non-peer reviewed, non-published Australian studies. To the ABA this infers that the TRG does not have the ability to grasp logical, clearly articulated and reliable information that is put before them, neither the ability to comprehend its management potential.
- How can Australia ever progress if an option used so long overseas, is never permitted to even be trialled here.
- There are at least three locations in the Victorian Alps that are suitable for immediate trialling of fertility control, delivered by dart gun: the BHP and 2 other alpine locations which Colleen O'Brien has repeatedly pointed out to both park staff and Victorian environmental Ministers over the past 4 years.

4. Inability to accept Context 2015's heritage finding Alpine Brumbies are an attribute to the heritage values of the Alps

The full ABA response to the *Heritage aspects specific to BHP Wild Horses* in attachment 2.

The Draft Plan refers to:

- Recognising the post-**settlement values placed on feral horses (brumbies) and the continued presence of a smaller population of feral horses in the Eastern Alps. P4**
- **Horses providing a living link to Victorian pioneer and grazing history in the Victorian Alps, and that the Wild Horses form part of Australian folklore as depicted in 'Banjo' Paterson's poem 'The Man from Snowy River' (p6), and**
- **Recognizing that the history of the horse in these places (alpine areas) is important to members of the community (p11)**

The Plan then goes on to say that management of horses in national parks and reserves must strike a balance between the following three elements (Which the ABA supports):

- **right protection level of our natural environment & pre-European cultural heritage;**
- **humane treatment of feral horses; and**
- **social expectations for either a continued heritage connection to the 'brumby' or their management.**

BUT the plan also refers to:

- Using aerial/ground shooting if plan objectives are not met in the future.
- (**Fails**) to provide a minimum number or a process to identify a sustainable minimum number of Brumbies is included in this plan – WHY the ABA asks?

- **P16 of the plan states remove small horse populations** - To the ABA this infers that as numbers are rapidly lowered (400/year) in time all remaining Brumby populations will go as Parks Victoria view horses as pests and so managed under pest guidelines.

- **P18 of the plan says that the Eastern Alps are considered beyond eradicating using current control methods** – AGAIN If the plan was following earlier comments on recognising post European heritage and the values people place on seeing Brumbies living wild in areas they have lived for 150-200 years, then the key focus must not be on eradication, but on identifying moderate, sustainable Wild Horse populations to **retain**, based on robust studies yet to be created.

- The ABA reminds Parks Victoria (PV) of the Context 2015 finding (which PV were a part of) found that Alpine Wild Horses are a heritage attribute to their Alpine region.

Bogong High Plains (BHP) Brumby Heritage:

- The **Heritage Context review** was commissioned by NPWS NSW, with Parks Victoria's support, to assess NSW/Vic Alpine Brumbies against Australia's National Heritage List criteria. Context 2015 found that Wild Horses are *attribute* associated with the cultural heritage significance of Kosciuszko National Park and *Alps Victorian* regions.

- The **Burra Charter** states that "places of *cultural significance* enrich our lives and give a deep and inspirational connection to community and their landscape and to past & lived experiences", and that

- "places of cultural significance reflect diversity of our communities, tell us who we are, the past that formed us, irreplaceable, precious and **must be conserved for present and future generations** in accordance with principle of intergenerational equity.

The unique *attribute* Brumbies bring to Bogong High Plains history will be lost for ever if the plan does remove/shoot every BHP Brumby from where they have lived for over 150 years.

Parks Victoria - "*Thinking outside the Square*" – The ABA wants to help:

Observation is the first essential step in the scientific method and thinking is the second. Proposing an hypothesis is the third, and testing is the fourth. Unfortunately, modern research often begins at the fourth step by testing a pre-conceived hypothesis or, just as bad, bypasses the scientific method and uses data collection and statistical gymnastics to search for insights into perceived problems. This invariably gets people into trouble because they focus on association and neglect logical cause. *(Book-Firestick Ecology Vic Jurskis)*

We need to understand exactly how all species, native and non-native, in the park interact with each other, before we can take a more creative, strategic approach to managing what is in the park now, such as harnessing predator cascades.

Currently Parks continually spread pesticides onto parkland to kill off its top predator, the Dingo (wild dogs), then wonder why rabbit and cat populations increase, so more poison or shooting is needed, then bulldozes come to kill the species that a stable Dingo population would have carried out with no poison or machines being needed.

Until Parks Victoria start to learn about and apply, smarter ways to address conservation objectives for increased biodiversily (the Act) national parks will continue to repeat the kill and kill again, pesticide contaminate levels will continue to rise, mechanical slashing needed and one dead species will either feed another or allow its food of choice to multiply.

It would be a shame to remove all horses and find that this causes the decline or extinction of some native plant or animal.

Do we really want to replace Wild Horse grazing with mechanical, costly alternatives?

ABA Recommendations

The solution we proposed last August (See Att.2) has not been follow-up. Yet our plan offers a way to navigate the conflicting opinions that surround Wild Horse management, a chance to resolve this highly complex issue. Our offer is still open, but it cannot begin Parks Victoria and are prepared to "give it a fair go".

This is a significant step forward as it requires Parks Victoria to keep moderate Wild Horse numbers in the Alpine areas where they have historically evolved. Therefore from a Heritage Wild Horse view point it is essential to identify the number of Heritage Wild Horses able to be retained in park areas that do not directly result in degradation and habitat loss.

Responsible management of Brumbies the park requires a '*World First*' scientific study to *target degradation and habitat loss* that is proven to be solely attributable to Brumbies in parklands where they have evolved to live in for well over a century.

To effectively deal with conflict all parties need to sit round the same table to contribute. There is *no* room for the "*it won't work* people", only room for those who are prepared to work in collaboration to agree study parameters, methodology and results.

The ABA-VBA offered to apply fertility control to manage BHP Brumbies once the agreed number to retain had been identified during the combined study.

Costs overall to Parks Victoria per year would be a fraction of trapping costs as we offered to use volunteers trained to deliver fertility control by remote dart gun and the program overseen by a vet / university program. **This offer, however this offer is still open!**

Michelle Dawson recommended retaining the Brumby population to the level they were in 2001 (5,000) Brumbies. The current count of 2,350 is under half the number recommended by the researcher Michelle dawson already.

If fertility control was used as well as traps, and targeting inaccessible areas etc foaling rates would drop meaning less Brumbies euthanized at the trap yards.

Concluding comments

If a researcher goes to an area where they are told horses live, and allocates blame for stream bank damage to the Brumby if a horse print or dung is nearby, and ignores other possible causes (175,000/I million Sambar deer in Vic Alps alone. This means that for every single Brumby the ratio to Sambar deer is320/426. Then include other species such as pigs rabbits or extreme weather etc. Then 'impact' the researcher sees is due to horses.

This is not true science, at a minimum all causes need to be factored in, and compared to impacts in area where horses are not living. The the researcher needs to identify which of the horse impacts are positive and which are negative, then true planning can start.

The Solution the ABA and VBA have proposed is that we work with Parks Victoria for a five year period of robust studies that include, for example;

- Mapping/identifying each individual horse on Bogong High Plains (BHP),
- Monitoring Brumby social behaviours, family mob interactions, feeding patterns etc.,
- Identifying each Brumby mob's home range area and routine,
- Monitoring positive and negative impacts over the five year period, and
- Using Fertility Control to manage BHP Brumby numbers to a sustainable level.

Note: Parks Victoria's Technical reference Group (TRG) claims that Fertility Control is not viable – the ABA/VBA refuted the TRG claims earlier on.

The ABA urges the use of Fertility Control to significantly lower overhead costs and staff time because it is a cheap, easily applied and humane management option.

The ABA & VBA position
Bogong High Plains Heritage Brumbies must be retained as they represent irreplaceable, living cultural history (Context 2015 & Burra Charter) for future generations to experience. In the view of the ABA-VBA, to have Parks Victoria even consider the eradication of Bogong High Plains Heritage Brumbies, without due diligence – would be an in-defensible action and a tragic loss to future generations of Australians of their living BHP Brumbies Heritage.

Yours sincerely

J. Pickering

President, Australian Brumby Alliance Inc.
Friday 16-Feb-2018

References (not developed much yet – will email tidied version shortly

Positive Impacts to environment
Context 2015……..

Antelope in arid grassy dunes that spent much time under shade trees were found to trample soil locally but also enrich it with their faecal pellets. (Dean and Milton 1991 in (Beever et al. 2008):

Avian (bird) richness and diversity were **higher in areas subject to moderate** grazing than areas in which horses had been excluded (Zalba and Cozzani 2004).

Species richness and diversity are slightly **greater** in areas of **moderate grazing** than in enclosures, as per theory intermediate disturbance (Connell, 1978).

http://iopscience.iop.org/article/10.1088/1748-9326/11/11/113003
"Many studies just compare 'grazed' to 'ungrazed' conditions, grazing is not an all or nothing proposition – grazing intensity utmost importance".
"plant diversity may be greater at a light or moderate level of grazing than with either grazing exclusion or heavy grazing".

Some plant **species stimulated by grazing** - maximum benefit at **moderate** grazing intensities (McNaughton 1983, 1985). Plus wildlife communities that depend on those plants also show greatest diversity with moderate grazing."

Grazing increased species diversity (Fahnestock & Detling 1999, Austrheim & Eriksson 2001, Fahnestock & Detling 2002, Ostermann-Kelm et al. 2009 & Stroh et al. 2012.) and
Lowers fuel levels thus fire severity, (Silvers 1993 and Davies et al. 2015)

Grazing animals can have **beneficial impacts on native plants and animals** (Schultz 2011) **- protect endangered plants** (Gilfedder & Kirkpatrick 1994).

impractical to try to restore ecosystems to some 'rightful' historical state … it is time for conservationists to focus much more on the **functions of species**, and much **less on where they originated** (Davis 2011: 154).

Adda Quinn researched health concerns relating to horse manure in the USA and concluded that it neither contains significant amounts of hazardous chemicals, nor exhibits hazardous characteristics – in short horse manure is not toxic to humans.
Adda Quinn https://www.bayequest.info/static/pdf/manure.pdf (1998) researched

Seeds are primarily dispersed by gravity, wind, surface water movement, soil erosion, birds, ants, dung beetles and rodents.
http://www.bcha.org/media/uploads/2015/11/13/files/Gower2008_Forest_Ecology_Eastern_US_weeds-horses_full_article.pdf

https://engage.environment.nsw.gov.au/protectsnowies/forum_topics/what-is-more-important-toconsider-the-estimated-population-of-wild-horses-or-the-impact-of-wild-horses-on-the-national-parkor-both In the 50s and 60s Scotch/Spanish Broom, Lupins, willows and other exotic trees were introduced during the building of the Snowy Scheme. [NPWS Admin reply to queries raised in the "Protect the Snowies" Chat room process].

http://weedsnetwork.com/traction/permalink/WeedsNews1938 Hikers spread invasive plant seeds (2011)

Ecological and human dimensions of management of feral horses in Australia: a review" by Dale Graeme Nimmo and Kelly K. Miller 2007

Detecting stream health impacts of horse riding and 4WD vehicle water crossings in South East Queensland: by Sally-Anne Redfearn, Wade Hadwen (Griffith School of Environment). Peter Negus, Joanna Blessing, Jon Marshall, (Water Planning Ecology, Qld Environment and Resource dept)

Fire Management in the Alpine Region; Vic Jurskis, Paul de Mar (Forests NSW) and Barry Aitchison (NSW Rural Fire Service).

http://parkweb.vic.gov.au/__data/assets/pdf_file/0009/534096/Invasive20Species1.pdf Invasive Species discussion paper Greater Alpine National Parks 2010 Ref-4

http://www.depi.vic.gov.au/__data/assets/pdf_file/0007/192949/The-recovery-story-body.pdf Post 2003 severe fires recovery program by dpi Victoria. ASSET REPAIR and REPLACEMENT **REF-5**

Ref-6. **Prevalence of the Amphibian Chytrid Fungus** in Populations of Two Frog Species in the Australian Alps; D. Hunter, R. Pietsch, N. Clemann, M. Scroggie, G. Hollis and G. Marantelli.

Ref-7. http://awpc.org.au/bleak-future-for-australian-frogs/

Ref-8. http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=1915

Ref-9. http://www.corroboreefrog.com.au/corroboree-frog/current-status

Abreviations

ABA	Australian Brumby Alliance
VBA	Victorian Brumby Alliance
BHP	Bogong High Plains
PV	Parks Victoria

ABA submission submitted via
https://engage.vic.gov.au/application/files/1715/1372/7568/Protection_of_Alpine_NP_-_Strategic_Action_Plan_2018-20_Draft.pdf and
letter to Mathew Jackson, CEO, Parks Victoria in letter form, info@parks.vic.gov.au

See also five Attachments that are needed to complete the full ABA Submission:

- Response to "Assessing the Impacts of Feral Horses on the
- Bogong High Plains (January-2018) Att.1
- Bogong High Plains ABA/VBA offer to Parks Victoria 5 yr research
- Offer Package - Discussion starter. Att.2
- Cultural Significance of Bogong High Plains Wild Horses Att.3
- Keep Science and Scientists credible. Att.4
- Kaiamanawa Heritage Horses recent newsletter Att.5

END