FEDERAL COURT OF AUSTRALIA

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

File number(s):	VID 1569 of 2018
Judge(s):	**O'BRYAN J**
Date of judgment:	8 May 2020
Catchwords:	**ADMINISTRATIVE LAW** - *Environment Protection and Biodiversity Conservation Act* 1999 (Cth) Act s 15B(5) – action to prevent removal of brumbies from the Bogong High Plains and Eastern Victorian Alps within the Australian Alps National Parks and Reserves - whether removal will have or is likely to have a significant impact on the National Heritage values of the Australian Alps National Parks and Reserves - whether prohibiting the removal is reasonably appropriate and adapted to give effect to Australia's obligations under Article 8 of the Biodiversity Convention – whether brumbies are part of the National heritage values of the Australian Alps National Parks and Reserves – whether the Biodiversity Convention protects cultural and social values - proper construction of s 15B(5) and (6)
Legislation:	*Competition and Consumer Act 2010* (Cth) *Environment Protection and Biodiversity Conservation Act* 1999 (Cth) *Evidence Act 1995* (Cth) *Flora and Fauna Guarantee Act 1988* (Vic) *National Parks Act 1975* (Vic) *Parks Victoria Act 2018* (Vic) *Trade Practices Act 1974* (Cth)
Cases cited:	*Applicant A v Minister for Immigration and Ethnic Affairs* (1997) 190 CLR 225 *Australian Competition and Consumer Commission v Pacific National Pty Limited* [2020] FCAFC 77 *Booth v Bosworth* (2001) 114 FCR 39 *Commonwealth v Tasmania* (1983) 158 CLR 1 *Director of Public Prosecutions (Cth) v Poniatowska* (2011) 244 CLR 408 *Minister for the Environment & Heritage v Greentree (No 2)* (2004) 138 FCR 198 *Minister for Immigration and Multicultural and Indigenous*

Affairs v QAAH of 2004 (2006) 231 CLR 1

Monroe Topple & Assocs Pty Ltd v Institute of Chartered Accountants in Australia (2002) 122 FCR 110

Povey v Qantas Airways Limited (2005) 223 CLR 189

Secretary, Department of Primary Industries, Parks, Water and Environment v Tasmanian Aboriginal Centre Inc (2016) 244 FCR 21

Secretary, Department of Sustainability and Environment (Vic) v Minister for Sustainability, Environment, Water, Population and Communities (Cth) (2013) 209 FCR 215

Seven Network Limited v News Ltd (2009) 182 FCR 160

Taikato v The Queen (1996) 186 CLR 454

Tillmanns Butcheries Pty Ltd v Australasian Meat Industry Employees' Union (1979) 42 FLR 331

Universal Music Australia Pty Ltd v ACCC (2003) 131 FCR 529

Victoria v The Commonwealth (1996) 187 CLR 416

National Parks and Conservation Association v Babbitt (2001) 241 F (3d) 722

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Solicitor for the Respondent:	Maddocks

ORDERS

VID 1569 of 2018

BETWEEN:	**THE AUSTRALIAN BRUMBY ALLIANCE INC** Applicant
AND:	**PARKS VICTORIA INC** Respondent
JUDGE:	**O'BRYAN J**
DATE OF ORDER:	**8 MAY 2020**

THE COURT ORDERS THAT:

1. The application be dismissed.
2. The applicant pay the respondent's costs of the proceeding.
3. Orders 1 and 2 be stayed for a period of five days.

Note: Entry of orders is dealt with in Rule 39.32 of the *Federal Court Rules 2011*.

REASONS FOR JUDGMENT

O'BRYAN J:

INTRODUCTION

1 The respondent (**Parks Victoria**) proposes to trap and remove feral horses, also known as brumbies, from the Bogong High Plains and the Eastern Alps within Victoria's Alpine National Park (**Action**). The Action was set out by Parks Victoria in the Protection of the Alpine National Park – Feral Horse Strategic Action Plan 2018-2021 (**Plan**).

2 The Alpine National Park forms part of the Australian Alps National Parks and Reserves (**Australian Alps**). The Australian Alps comprises areas of Victoria (including the Alpine National Park), NSW and the ACT. It is common ground that the Australian Alps are:

(a) included in the National Heritage List (kept by the Minister under Division 1A of Part 15 of the *Environment Protection and Biodiversity Conservation Act* 1999 (Cth) (the **EPBC Act**), together with National Heritage values identified by reference to the National Heritage criteria prescribed in the *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth) (the **EPBC Regulations**), and are therefore a National Heritage place pursuant to s 324C(3) of the EPBC Act; and

(b) in an area in respect of which Australia has obligations under Article 8 of the Convention on Biological Diversity (**Biodiversity Convention**).

3 The applicant, The Australian Brumby Alliance Inc (**ABA**), seeks injunctions under s 475 of the EPBC Act to restrain Parks Victoria from taking the Action. Specifically, the ABA seeks injunctions restraining Parks Victoria from:

(a) trapping, removing, or otherwise interfering with any brumby in the Bogong High Plains in the Alpine National Park under the Plan; and/or

(b) taking any action that might cause significant depletion of any of the other populations of brumbies in the Alpine National Park under the Plan,

without an approval to do so under Pt 9 of the EPBC Act or a decision from the Commonwealth Minister for the Environment under Pt 7 of the EPBC Act that the Action is not a controlled action. Alternatively, the ABA seeks an injunction requiring Parks Victoria, in accordance with section 68 of the EPBC Act, to refer the Action as set out in the Plan to the Minister for the Minister's decision, whether or not the action is a controlled action.

4 Section 475(1) of the EPBC Act provides, among other things, that if a person proposes to engage in conduct consisting of an act or omission that constitutes a contravention of the Act, an interested person may apply to the Federal Court for an injunction. Parks Victoria accepts that the ABA is an interested person and that Parks Victoria proposes to take the Action. The question raised by the proceeding is whether the Action would constitute a contravention of the EPBC Act.

5 The ABA contends that the Action would constitute a contravention of ss 15B(5) and 15C(10) of the EPBC Act.

6 Section 15B(5) is a civil penalty provision and provides as follows:

> A person must not take an action that has, will have or is likely to have a significant impact on the National Heritage values of a National Heritage place in an area in respect of which Australia has obligations under Article 8 of the Biodiversity Convention.

7 The prohibition in s 15B(5) is subject to a qualification in s 15B(6) which provides as follows:

> Subsection (5) only applies to actions whose prohibition is appropriate and adapted to give effect to Australia's obligations under Article 8 of the Biodiversity Convention. (However, that subsection may not apply to certain actions because of subsection (8).)

8 The prohibition in s 15B(5) is also subject to a qualification in s 15B(8). Relevantly, s 15B(8) provides that subsection (5) does not apply to an action if an approval of the taking of the action is in operation under Part 9 of the Act for the purposes of s 15B or there is in force a decision of the Minister under Division 2 of Part 7 of the Act that s 15B is not a controlling provision for the action. It is common ground that there has been no approval of the Action under Part 9 of the Act, nor a decision of the Minister under Part 7, and that s 15B(8) does not apply to the Action. As is apparent from the terms of the injunction sought by the ABA, it has brought this proceeding because it considers that the Action is unlawful without such approvals.

9 Section 15C(10) is a criminal offence provision and provides as follows:

> A person commits an offence if:
>
> (a) the person takes an action; and
>
> (b) the action is likely to have a significant impact on the heritage values of a place; and
>
> (ba) the heritage values are National Heritage values of the place; and
>
> (bb) the place is a National Heritage place; and
>
> (c) the National Heritage place is in an area in respect of which Australia has

obligations under Article 8 of the Biodiversity Convention.

10 The offence in s 15C(10) is subject to a qualification in s 15C(14) which is in materially the same terms as s 15B(6) and a qualification in s 15C(16) which is in materially the same terms as s 15B(8).

11 It can be seen that the prohibition in s 15B(5) (as qualified by s 15B(6)) is in materially the same terms as the offence in s 15C(10) (as qualified by s 15C(14)). Accordingly, for the purposes of the ABA's application for an injunction under s 475(1) of the EPBC Act, it is only necessary to consider the prohibition in s 15B(5) and the qualification in s 15B(6).

12 Having regard to the terms of ss 15B(5) and (6), the proceeding gives rise to two questions:

(a) first, would the Action, if taken, be likely to have a significant impact on the National Heritage values of the Australian Alps; and

(b) second, is the prohibition of the Action appropriate and adapted to give effect to Australia's obligations under Article 8 of the Biodiversity Convention?

13 The parties agree that the National Heritage values of the Australian Alps are those specified in the Schedule to the Commonwealth of Australia Gazette No S237 dated 4 November 2008 (the **Gazette**). They are set out in detail below.

14 Article 8 of the Biodiversity Convention relevantly provides:

> *Article 8. In-situ Conservation*
>
> Each Contracting Party shall, as far as possible and as appropriate:
>
> (a) Establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity; …
>
> (c) Regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas with a view to ensuring their conservation and sustainable use;
>
> (d) Promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings; …
>
> (h) Prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species; …
>
> (i) Endeavour to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components;…

15 The parties agree that brumbies in the Australian Alps are members of the species *Equus caballus*. They also agree that the species *Equus caballus*, when occurring in the Australian Alps, is an "alien species" within the meaning of the Biodiversity Convention.

16 It is common ground that the ABA bears the burden of proof on both questions set out above. In other words, the ABA must establish on the balance of probabilities that the Action would constitute a contravention of ss 15B(5), and that requires the ABA to establish that the Action would, if taken, be likely to have a significant impact on the National Heritage values of the Australian Alps and that prohibiting the Action is appropriate and adapted to give effect to Australia's obligations under Article 8 of the Biodiversity Convention. To succeed, the ABA must establish both matters. If it fails on either, the Action is not prohibited by s 15B(5) (or 15C(10)). In closing submissions, both parties addressed the question arising under s 15B(6) first. I will do likewise in these reasons.

17 It should also be noted that the requirement in s 15B(6) is not concerned with the question whether the Action is the most appropriate and best adapted action to give effect to Australia's obligations under Article 8 of the Biodiversity Convention, or whether some other action might be more appropriate and better adapted for that purpose. The requirement is concerned with the question whether prohibiting the Action is appropriate and adapted to give effect to Australia's obligations under Article 8 of the Biodiversity Convention.

18 For the reasons that follow, I am not satisfied that the Action would constitute a contravention of ss 15B(5) (which conclusion is also applicable to s 15C(10)). Specifically, I am not satisfied that the prohibition of the Action is appropriate and adapted to give effect to Australia's obligations under Article 8 of the Biodiversity Convention. Having reached that conclusion, it is strictly unnecessary to determine whether the Action would be likely to have a significant impact on the National Heritage values of the Australian Alps. Nevertheless, I am not so satisfied. I therefore dismiss the ABA's application with costs.

19 In their evidence and submissions, the ABA tended to use the word "brumby" while Parks Victoria tended to use the expression "feral horses". The expressions are synonymous, but each carries connotations. The origins of the name "brumby" are unclear. It is an Australian term for feral horses and its use can be traced back to the 1870s. Banjo Paterson's poem "The Man from Snowy River", which is referred to in the National Heritage values of the Australian Alps, does not use the expression, referring to the feral horses in the poem as the "wild bush horses". However, his poem "Brumby's Run" was published in 1894. The ABA's preference

for using the term "brumby" is understandable as it more closely connects with the heritage values that the ABA seeks to protect and relies on in this proceeding, and therefore has heritage connotations. Conversely, Parks Victoria's preference for the expression "feral horses" is understandable because it more closely connects with the ecological issues that are at the forefront of Parks Victoria's Plan, and therefore has ecological connotations. In these reasons, I would prefer to avoid using either expression so as to avoid the connotations the expression might convey. However, as explained in Dr Norman's evidence, it is inaccurate to use the expression "wild horses" because that term is used to describe horses that have never been domesticated, such as the endangered Przewalski's horse which is native to the steppes of Central Asia. For reasons of convenience, I have chosen to use the expression "brumby" when referring to the horses that are the subject of the proceeding while expressly putting aside any connotations associated with the use of that name.

OVERVIEW OF THE EVIDENCE

20 In terms of evidence from lay witnesses, the ABA read the following affidavits:

(a) An affidavit of Jill Pickering sworn 3 March 2019. Ms Pickering is the inaugural and current President of the ABA and gave evidence about the work of the ABA and her personal experience of brumbies.

(b) Affidavits of Collen O'Brien sworn 12 December 2018 and 4 June 2019. Ms O'Brien is the President of the Victorian Brumby Association (**VBA**) and gave evidence about the work of the VBA in receiving brumbies removed from the Alpine National Park, training the brumbies and finding homes for them (referred to as "rehoming"), as well as the brumbies in the Bogong High Plains.

(c) An affidavit of Stephen Baird affirmed 8 March 2019. Mr Baird operates a homestead, stable and horse riding tour business called "Bogong Horseback Adventures" which is licensed by Parks Victoria to conduct horse riding tours in and around the Alpine National Park. He gave evidence about his business and his perception of the experience of his customers.

(d) Affidavits of Francis Beecher sworn 11 December 2018, 20 March 2019, 3 June 2019, 11 June 2019 and 3 July 2019. Ms Beecher is a lawyer for the ABA and adduced documentary evidence.

21 The ABA also adduced evidence from Dr Anne Jacobson who is a veterinarian and whose practice is predominantly equine. Dr Jacobson has experience with veterinary management of

recently captured brumbies through her work with the VBA and other wild horse rehoming organizations.

22 None of the foregoing witnesses for the ABA were cross-examined.

23 The ABA also tendered a number of documents. Some of the documents involved studies of the impact of brumbies on the environment and were relied on in the cross-examination of the ecological experts (referred to below). Exhibit A8 was two versions of the Australian $10 note which depicted Banjo Paterson, a man on horseback which suggested the main character from the poem "The Man from the Snowy River" and, on one of the notes, a herd of brumbies.

24 The principal evidence for Parks Victoria was given by Dr Mark Douglas Norman, who is the Chief Conservation Scientist and Executive Director Environment & Science for Parks Victoria. Dr Norman was cross-examined. There was no challenge to his credit or reliability and I accept his evidence.

25 Parks Victoria also tendered a number of documents. Some of the documents related to Parks Victoria's consultation process for the Plan and the public release of the Plan.

26 The parties adduced expert evidence in three areas: genetics, ecology and heritage. They also filed a document outlining the issues arising in the proceeding in each of the three areas of expertise. However, the parties did not agree on how the issues should be stated and therefore the document was of limited utility in framing the issues for decision.

27 The genetic evidence addressed the question whether there is likely to be genetic differences between the populations of brumbies in the Eastern Victorian Alps and the Bogong High Plains, and the minimum population size for a herd of brumbies to be viable. The ABA relied on the genetic evidence in support of the contention that prohibiting the Action (in so far as it related to the brumbies in the Bogong High Plains) would be appropriate and adapted to give effect to Australia's obligations under Article 8 of the Biodiversity Convention. Genetic evidence was given for the ABA by Professor Julius van der Werf, and was given for Parks Victoria by Dr Andrew Raymond Weeks. The parties tendered an agreed statement of matters agreed by the genetic experts. The genetic experts were not cross-examined.

28 The ecological evidence addressed the question whether brumbies threatened ecosystems, habitats or species in Victoria's Alpine National Park and whether the Action is an appropriate control of the threat and thereby an action that is appropriate and adapted to give effect to Australia's obligations under Article 8 of the Biodiversity Convention. Ecological evidence

was given for the ABA by Dr David McKenzie Berman, and was given for Parks Victoria by Prof Richard James Williams and Dr James Martindale Shannon. In addition to their individual reports, the experts filed a joint report and they were cross-examined concurrently.

29 The heritage evidence addressed the question whether the Action is likely to have an impact on the National Heritage values of the Australian Alps specified in the Gazette, focussed on the values in criterion (a), (e), (g) and (h), including the questions of how the Action is likely to impact, the nature and extent of the impact and whether the impact is likely to be significant? Heritage evidence was given for the ABA by Dr Susan Mclntyre-Tamwoy and for Parks Victoria by Mr Ian John Travers and Ms Deirdre Ann Slattery. For the reasons given below, I ruled Ms Slattery's evidence inadmissible. In addition to their individual reports, Dr Mclntyre-Tamwoy and Mr Travers filed a joint report and they were cross-examined concurrently.

30 During the course of the trial, various objections to evidence were resolved between the parties and I ruled on other objections which do not require separate reasons. I set out below my reasons for evidentiary rulings that were the subject of more substantive argument, concerning the admissibility of parts of the reports prepared by Dr Berman and the whole of the report of Ms Slattery.

FACTUAL BACKGROUND

31 As already indicated, much of the factual background is uncontroversial. The area of controversy primarily concerns the expert evidence, particularly the ecological evidence directed to Article 8 of the Biodiversity Convention and the heritage evidence directed to the National Heritage values. The following sets out the (largely) uncontroversial factual background.

Inclusion of the Australian Alps on the National Heritage List

32 Part 15 of the EPBC Act establishes a framework for the listing of protected areas on various lists such as the World Heritage List and the management of such listed places. Division 1A of Part 15 provides for the listing of places on the National Heritage List. Section 324C provides that a place may be included in the National Heritage List only if the Minister is satisfied that the place has one or more National Heritage values. Section 324D provides that a place has a National Heritage value if and only if the place meets one of the criteria prescribed by the relevant EPBC Regulations. Regulation 10.01A(1) specifies that the National Heritage criteria are categorised as natural heritage values, indigenous heritage values and historic

heritage values. Regulation 10.01A(2) defines each of the National Heritage criteria (comprising paragraphs (a) to (i)).

33 The usual process for the inclusion of places in the National Heritage List involves the Minister inviting people to nominate places for inclusion on the National heritage List (s 324J). The Minister then gives the nominations to the Australian Heritage Council (s 324JA). There is then a statutory process for prioritising an assessment list, and the Australian Heritage Council then undertakes an assessment of places on the list and gives each assessment to the Minister (s 324JH). After receiving an assessment, the Minister must decide whether or not to include the place on the National Heritage List (s 324JJ). A decision to include a pglace on the National Heritage List must be published in the Gazette which must include the National Heritage values of the place.

34 The Australian Alps were included on the National Heritage List on 4 November 2008. The National Heritage values of the Australian Alps are set out in the relevant Gazette by reference to specified criteria (for convenience, I will refer to the relevant Gazettal notice, in which the listing of the Australian Alps and their National Heritage values is recoded, as the "**National Heritage Listing**" or "**Listing**"). In this proceeding, the ABA places reliance on only a small part of the overall National Heritage values of the Australian Alps. It relies on certain of the values listed under criteria (a), (e), (g) and (h), which are reproduced below. It does not rely on other criteria and associated values that are listed, being criteria (b) and (d). In order to understand the issues raised by the ABA in context, it is necessary to set out the full set of National Heritage values for which the Australian Alps have been listed, even though the statement is lengthy. The values on which the ABA relies are marked by the use of italic font.

Criterion	**Values**
(a) the place has outstanding heritage values to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history. In respect of that criterion, the Listing states the following values	The Australian Alps National Parks and Reserves (AANP) are part of a unique Australian mountainous region. Human interaction with the region has been distinctive in its response to the challenges and opportunities presented by this unique environment. **Glacial and Periglacial Features** The assemblage of glacial deposits and features in the AANP includes five alpine lakes, thirteen cirques and associated moraines, ice-grooved and polished pavements and erratic boulders. Periglacial features, both fossil and modern, include block streams, permafrost and solifluction deposits. These features are the material expression of the cold-climate, high-altitude history of the AANP, unique in the low-latitude, low-altitude Australian continent. The glacial and periglacial features contribute uniquely to our understanding of the nature of landscape response to climate during the ice ages of the late Quaternary and into the present and therefore has outstanding heritage value to the nation for its importance in the pattern of Australia's natural history (Percival 1985; Galloway 1989; Yeates

2001a; ISC 2004; AALC 2006).

Fossils

The Mt Howitt fish fossil site demonstrates remarkable fossil species diversity and preserves fish fossils across a wide range of life stages from larvae to mature fish, over tens of millions of years. The site contributes an important narrative about the evolution of fish across a number of different marine and freshwater environments, and the development of features that enabled vertebrates to leave the water to exploit terrestrial environments for the first time. Fossils revealed at the site have outstanding heritage value to the nation for their place in vertebrate evolution during the so-called 'Age of Fish' (Vickers-Rich and Rich 1993; Cook ed. 2007).

Karst

The Yarrangobilly karst area contains an outstanding collection of surface karst features including gorges, arches, blind valleys, springs and pinnacle fields. It also contains several hundred caves including six show caves with many intricate cave decorations, open for public viewing (ISC 2004). Yarrangobilly has yielded valuable information on the long-term dynamics of landscape formation. The thick flowstone sequences in Jersey Cave span half a million years and provide the longest continuous fire history record from a single site in Australia (DEH 2006b). Yarrangobilly has outstanding value to the nation for its features and karst processes evident in the limestone karst landscape.

Biological Heritage

The Alps are one of eleven sites recognised in Australia by the IUCN as a major world centre of plant diversity. During the late Quaternary and into the present, the high-altitude, cold-climate environment has provided refuge for species in an increasingly arid climate. Containing most of the contiguous montane to alpine environments in Australia, the AANP supports a rich and unique assemblage of cold-climate specialist species that have evolved unique physiological characteristics, enabling them to survive in an environment subject to extreme climate variation. Outstandingly rich flora taxa in the AANP include the daisies (Asteraceae), willow-herbs (Onagraceae), starworts and cushion-plants (Caryophyllaceae), southern heaths (Epacris), bottlebrushes (Callistemon), orchids (Pterostylis, Prasophyllum and Dipodium) and pimeleas (Thymaelaeaceae). Cold-climate adapted and endemic fauna species include the mountain pygmy-possum (Burramys parvus), the alpine she-oak skink (Cyclodomorphus praealtus), Snowy Mountains rock skink (Egernia guthega), Baw Baw frog (Philoria frosti), southern corroboree frog (Pseudophryne corroboree), and the northern corroboree frog (P. pengilleyi). Species of a great many invertebrate taxa are endemic to the Alps. These include stoneflies, caddisflies, mayflies, grasshoppers, and earthworms. Many display cold-climate adaptations, such as the mountain grasshopper (Acripeza reticulata), mountain spotted grasshopper (Monistria concinna) and alpine thermocolour grasshopper (Kosciuscola tristis). The Bogong moth undertakes regular migration in Australia and an essential part of its lifecycle occurs within the AANP. The AANP is a vital refuge for alpine and sub-alpine flora and fauna species, with a high level of richness and endemism across a wide range of taxa, and therefore has outstanding value to the nation for encompassing a significant and unique component of Australia's biological heritage (Nankin 1983; Costin 1989; Strahan 1995; Good 1995; Boden and Given 1995; WWF and IUCN 1995; Cogger 1996; Crabb 2003 Good 2003; ISC 2004; DSE 2005; AALC 2005; DEC 2006; McDougall & Walsh 2007, ANHAT 2007).

Moth Feasting

The use of an adult insect – the Bogong moth – as the basis for past large-scale

annual gatherings of different Aboriginal groups for ceremonies sets the gatherings in the AANP apart from other Aboriginal ceremonial gatherings and has captured the Australian imagination, making it exceptional in Australia (White 2006). Therefore the AANP has outstanding heritage value to the nation because of the importance of Aboriginal social gatherings based on moth feasting in the course, or pattern, of Australia's cultural history.

Transhumant Grazing

The AANP has outstanding heritage value for its association with historic transhumant grazing that commenced in the 1830s. The practice of using alpine high plains to graze stock during the summer months was a significant pastoral activity of the nineteenth and twentieth centuries and was continuously practised for a period of over 150 years; making a considerable contribution to the early pastoral industry of south-east Australia. Transhumant grazing created and sustained a distinctive way of life that is valued as an important part of Australia's pioneering history and culture. Evidence of transhumant grazing includes huts, the former grazing landscapes, stock yards, and stock routes.

Scientific Research

The AANP has outstanding heritage value for the scientific research that has taken place since the 1830s, demonstrated by the density and continuity of scientific endeavour. Research sites within the AANP include those relating to botanical surveys, soil conservation exclosures, karst research, fauna research, meteorology, fire ecology plots, arboreta and glacial research sites. Space tracking undertaken in the ACT with Honeysuckle Creek Tracking Station having played a significant role in the Apollo 11 moon landing mission.

Water Harvesting

Water harvesting in the AANP has outstanding heritage value to the nation for its contribution to the social and economic development of Australia. Water harvested from headwaters in the AANP contributes to the water needs of Canberra and Melbourne. The Snowy Mountains Hydro-electric Scheme and the Kiewa Valley Hydro-electric Scheme also contributes to the electricity needs of south-eastern Australia. Both schemes were major post-war reconstruction projects, encouraging migration to Australia and employing over 60,000 displaced persons from post war Europe. Evidence of water harvesting in the AANP for power and irrigation includes the major pondages along with the numerous tunnels, aqueducts, power stations, huts, roads and former settlements, town and work camp sites.

Recreation

The AANP has outstanding heritage value for the longevity and diversity of its recreational use. Snow sports commenced in Kiandra in 1861 with the establishment of the Kiandra Snowshoe Club and expanded from an ad hoc activity by enthusiasts to a multi-million dollar snow sport and tourism industry characterised by the groomed ski slopes, ski lift infrastructure and substantial village resorts. The chalets supported by government were major features of the expanding activity and were established in scenic locations in the early twentieth century when mountain retreats were highly regarded for good health. These include the Mount Buffalo Chalet, the Yarrangobilly Caves House Precinct, the Chalet at Charlottes Pass, and the former Hotel Kosciusko and Mount Franklin Chalets.

(b) the place has outstanding heritage value to the nation

Landscape and Topography

The high altitudes of the plateaus and peaks in the AANP are prominent in a

because of the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history

continent with an average elevation of only 330 metres above sea level. The AANP includes most of continental Australia's peaks over 1,700 metres and all of those over 1,900 metres. These high peaks and plateaus contain the vast majority of alpine and sub-alpine environments in Australia. The AANP experiences extensive snow coverage on a seasonal basis, and its glacial lakes are the only wetlands on the Australian mainland covered by ice sheets in winter. The high-altitude landscape of the AANP has outstanding heritage value to the nation for its topographic heights, uncommon alpine and sub-alpine ecosystems and glacial lakes. (AALC 2005; DEC 2006; Geoscience Australia 2007).

Glacial and Periglacial Features

Continental Australia and its southern territorial islands have experienced periods of historic glaciation, with current snow and ice coverage limited to the highest peaks and altitudes. On mainland Australia, the AANP preserves a concentration of glacial and periglacial features without comparison from the ice ages of the late Quaternary Period. The Kosciuszko Plateau is unique in mainland Australia as the only place irrefutably exhibiting landforms shaped by Late Pleistocene glaciers during a series of glacier advances known as the Late Kosciuszko Glaciation. The active and fossil periglacial landforms of the AANP include blockstreams and solifluction features (solifluction is the gradual movement of waterlogged soil down a slope, especially where percolation is prevented by a frozen substrate). They are the most striking and extensive in mainland Australia and demonstrate the widespread effects of cold climate in the Quaternary, mild climate in the Holocene and the absence of intensive Pleistocene ice modification of the elevated landscape of the Victorian and ACT Alps. Therefore the AANP has outstanding heritage value to the nation for containing uncommon glacial and periglacial features (Percival 1985; Yeates 2001; Barrows et al. 2001).

Fossils

The Mt Howitt fish fossil site is globally rare because it preserves a diverse array of fossil fish in uncommon detail at all stages of their lives. It is unique nationally in providing a snapshot of a complete freshwater vertebrate community from the past, and for yielding fossils from all stages of growth of a species, from tiny fish larvae to adult fish, and therefore has outstanding heritage value to the nation because of its preservation of an uncommon aspect of Australia's natural history (Long 2002; Cook ed. 2007).

Alpine and Sub-alpine Ecosystems

The AANP has outstanding heritage significance to the nation for possessing extremely uncommon aspects of Australia's natural history. Alpine and sub-alpine ecosystems are uncommon in the generally arid and warm climate of Australia. The distribution of cold-climate species on the mainland retreated to the higher altitudes of the Alps in the Late Pleistocene as conditions began to warm up. The AANP contains most of the alpine and sub-alpine ecosystems on mainland Australia, supporting flora and fauna species that have evolved to the harsh conditions of the high altitudes. Many of these species are endemic to the Alps and are found nowhere else in Australia. The bog and fen groundwater communities are supported by organic soils and contain exceptional water retention properties. These communities play an integral role in ecosystem function by regulating the slow release of water from saturated peatbeds to the surrounding alpine humus soils, streams and other alpine communities (Good 1995; AALC 2006b).

Eucalypt Flora Community

The AANP provides an outstanding example of the adaptability of a plant genus, the genus Eucalyptus, along a steep topographical transect. The eucalypts

dominate the AANP vegetation from the lowlands to as high as the alpine region, where the snow gum (E. pauciflora) defines the treeline. Much of the highest land in Australia occurs within the AANP, which also demonstrates very large topographical variations, which in turn is reflected in the high diversity of eucalypt species replacing each other along the altitudinal and climatic gradient (Costin 1988; Kirkpatrick 1994; ISC 2004; ANHAT 2007).

(d) the place has outstanding heritage value to the nation because of the place's importance in demonstrating the principal characteristics of (i) a class of Australia's natural or cultural places; or (ii) a class of Australia's natural or cultural environments

North-East Kosciuszko Pastoral Landscape

The landscape is outstanding for demonstrating the use of mountain resources, namely the summer grasses and herbfields. As a relict landscape of past grazing leases it conveys the principal characteristics of transhumance and permanent pastoralism in a remote environment, these being large areas of open grassy landscapes between timbered ridges and hills, stockman's huts, homestead complexes, stockyards and stock routes. The grasslands with swathes of pioneer shrubs include the Kiandra landscape, Boggy Plain, Nungar Plain, Gulf Plain, Wild Horse Plain, Tantangara Plain, Dairymans Plain, Currango Plain, Long Plain, Cooleman Plain, Kellys Plain, Blanket Plain, Peppercorn and Pockets Saddle (KHA 2008). Homestead buildings include Cooinbil and Old Currango and the modest homestead complexes of Currango and Coolamine with additional features including exotic plantings, sheds, barns, and workers' accommodation. Former stock routes, now fire trails, include the Port Philip Fire and Murrays Gap Fire Trails. Located in the former grazing leases are stockman's huts, Bill Jones Hut, Circuits Hut, Gavels Hut, Hains Hut, Hainsworth Hut, Millers Hut, Oldfields Hut, Pedens Hut, Pockets Hut, Townsends Lodge, Gavels Hut, Long Plain Hut, Gooandra Hut, Schofields Hut, and Witzes Hut (KHA 2008), which in their use and re-use of available materials typify a lifestyle and vernacular bush building technology using hand tools. The array of characteristics relate to over a century of alpine grazing.

(e) the place has outstanding heritage value to the nation because of the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group

The AANP is a powerful, spectacular and distinctive landscape highly valued by the Australian community. The mountain vistas, including distinctive range-upon-range panoramas, snow covered crests, slopes and valleys, alpine streams and rivers, natural and artificial lakes, the snow-clad eucalypts and the high plain grasslands, summer alpine wildflowers, forests and natural sounds evoke strong aesthetic responses. Much of the terrain of the AANP is highly valued for its remoteness, and naturalness, including views to and from the region that capture snow clad ranges and mountain silhouettes against clear skies as well as expansive views of natural landscapes from the high points of the Alps.

The upper Snowy River and Snowy Gorge, Mount Buffalo, the Kosciuszko Main Range, Lake Tali Karng, Dandongadale Falls the peaks and ridges between and including Mt Cobbler, Mt Howitt and the Bluff, and other high peaks, ridgelines, granite outcrops and escarpments are examples of dramatic awe-inspiring landscapes. Recreational pursuits in these landscapes are enhanced by aesthetic appreciation of their wild and natural quality.

Snow-covered eucalypts, huts in mountain settings and mountain landscapes are distinctive Australian images captured by numerous artists and photographers. The mountain landscapes have inspired poets, painters, writers, musicians and film makers.

(g) the place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for

The Australian Alps have a special association with the Australian community because of their unique landscapes, the possibility of experiencing remoteness and as the only opportunity for broad-scale snow recreation in Australia. The AANP is widely recognised by Australians as the 'high country' and many community groups have a special association with the AANP for social and cultural reasons.

Mount Kosciuszko is an iconic feature for all Australians and visited by over 100,000 people each year. It was named by the explorer Paul Edmund Strzelecki

social, cultural or spiritual reasons	after the Polish freedom fighter, General Tadeusz Kosciuszko, in appreciation of freedom and a free people, an association that is highly valued by Australia's Polish community. *The pioneering history of the high country is valued as an important part of the construction of the Australian identity featuring in myths, legends and literature. The ballad of The Man from Snowy River epitomises horsemanship undertaken historically in the rugged landscape. The stories, legends and myths of the mountains and mountain lifestyles have been romanticised in books, films, songs, and television series and many such as the Elyne Mitchell's Silver Brumby novels are part of Australia's national identity.* The mountain huts of the AANP constructed for grazing, mining and recreation are valued by communities as a physical expression of the cultural history of the region. They have special associations with many groups, such as mountain cattlemen, skiers and bushwalkers but particularly with huts associations that have been maintaining mountain huts and associated vernacular building skills for over 30 years.
(h) the place has outstanding heritage value to the nation because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history	Baron Ferdinand von Mueller is highly recognised nationally and internationally for his contribution to Australian botany, particularly his extensive and thorough botanical collections of the Australian Alps undertaken in several botanical collecting trips on horseback, each of several weeks' or months' duration (Costin et al. 1979). Eugen von Guerard was a significant nineteenth century artist producing a prolific record of Australian landscapes. His 1863 painting the North-east view from the northern top of Mount Kosciusko is regarded as one of his finest artistically and is in Australia's national collection. *Through his ballad The Man from Snowy River, Andrew Barton 'Banjo' Paterson captured the imagination of the Australian people, stimulating a passion for the High Country and the way of life associated with the mountains. His iconic ballad has had a lasting influence on Australians.* *The writer Elyne Mitchell and poet David Campbell lived near the mountains and their strong association with the place is expressed in much of their nationally important literary works.*

Parks Victoria

35 Parks Victoria is a body corporate, created by the *Parks Victoria Act 2018* (Vic). Its objects include to protect, conserve and enhance the land it manages, including natural and cultural values of such land, for the benefit of the environment and current and future generations. Its functions include to control and manage Parks Victoria "managed land", in a manner that protects, conserves and enhances the land and in a manner which provides for the land to be appropriately used, enjoyed and appreciated. Parks Victoria "managed land" is any land in the Parks Victoria land record and any land managed under the *National Parks Act 1975* (Vic) (**National Parks Act**). Dr Norman gave evidence that Parks Victoria is responsible for managing an expanding and diverse estate covering more than 4 million hectares, or about 18

per cent, of Victoria. It also manages parks in the context of their surrounding landscape and in partnership with Traditional Owners.

36 Section 4(a) of the National Parks Act provides that the objects of the Act include to make provision, in respect of national and State parks:

(i) for the preservation and protection of the natural environment including wilderness areas and remote and natural areas in those parks;

(ii) for the protection and preservation of indigenous flora and fauna and of features of scenic or archaeological, ecological, geological, historic or other scientific interest in those parks;

(iii) for the study of ecology, geology, botany, zoology and other sciences relating to the conservation of the natural environment in those parks; and

(iv) for the responsible management of the land in those parks.

37 Section 17(2) of the National Parks Act provides that Parks Victoria has the control and management of each national and State park and must:

(a) ensure that each national park and State park is controlled and managed, in accordance with the objects of the National Parks Act, in a manner that will -

(i) preserve and protect the park in its natural condition for the use, enjoyment and education of the public;

(ii) preserve and protect indigenous flora and fauna in the park;

(iii) exterminate or control exotic fauna in the park;

(iv) eradicate or control exotic flora in the park; and

(v) preserve and protect wilderness areas in the park and features in the park of scenic, archaeological, ecological, geological, historic or other scientific interest;

(b) …

(c) promote and encourage the use and enjoyment of national parks and State parks by the public and the understanding and recognition of the purpose and significance of national parks and State parks;…

Dr Norman

38 Dr Norman has been employed by Parks Victoria since 2016, holding the positions of Chief Conservation Scientist and Executive Director Environment & Science. From 2009 to 2016, he was Head of Sciences at Museums Victoria and, before that, he was a Senior Curator in Natural Sciences at Museums Victoria. He holds a Ph.D. and a B.Sc. (Honours) in Zoology from the University of Melbourne. He is a senior research scientist with deep knowledge across Victoria's biota, habitats and natural environments, in terrestrial, freshwater and marine systems. Over the past 30 years, he has led and participated in hundreds of research projects. His current and past professional roles also include:

(a) Flora and Fauna Guarantee Scientific Advisory Committee, Victorian State Government, 2016 - Present;

(b) Biodiversity Strategy and Flora and Fauna Guarantee Act Review Panel, Victorian State Government, 2015 - 2016;

(c) Vice-Chair, Council of Heads of Australian Faunal Collections, 2015 - 2016;

(d) Chair, Council of Heads of Australian Faunal Collections, 2012 - 2015;

(e) Victorian Environmental Advisory Council, Scientific Advisory Committee, 2012 - Present;

(f) Research Associate, Biosciences, University of Melbourne, 2005 - Present;

(g) Scientific Advisory Panel, Victorian Coastal Council, 1997 - 2017;

(h) Editorial Advisory Committee, Invertebrate Systematics, 1999 - 2005; and

(i) Chair, Conservation Committee, Fisheries Co-management Council, Fisheries Victoria, 1997 - 1998.

39 Dr Norman has knowledge of Victoria's national parks, through 40 years of biological research in parks around the State, but more recently through his Chief Conservation Scientist role at Parks Victoria and in his previous role leading Museum Victoria teams on 14 Bioscan surveys across Victoria. This includes knowledge of threatened species biology and ecosystem science, regional conservation issues and threats, and community issues and perspectives across terrestrial, freshwater and marine ecosystems.

40 Dr Norman gave evidence that Australia is a signatory to the Biodiversity Convention which was signed on 5 June 1992 and effective from 29 December 1993. Article 8(a) of the Biodiversity Convention requires Australia, as far as possible and as appropriate, to establish a

system of protected areas or areas where special measures need to be taken to conserve biological diversity. Australia meets that obligation through its National Reserve System. The protected areas making up the National Reserve System are listed in the Collaborative Australian Protected Area Database, which is maintained by the Commonwealth Department of the Environment and Energy (now the Department of Agriculture, Water and the Environment). Protected areas in Victoria include the Alpine National Park. In terms of Victorian legislation giving effect to the Biodiversity Convention, s 10(1) of the *Flora and Fauna Guarantee Act 1988* (Vic) (**FFG Act**) provides for the listing of any taxon or community of flora and fauna which is threatened and s 10(2) provides for the listing of potentially threatening processes. The relevant Minister may recommend a potentially threatening process be listed after considering a recommendation from the Scientific Advisory Committee established under section 8 of the FFG Act.

41 Dr Norman deposed that modern horses, in the subspecies *caballus*, are generally domesticated, although some populations live in the wild as feral horses. Such feral horses are not truly "wild horses", as that term is properly used. That term is used to describe horses that have never been domesticated. A feral animal is literally (from the Latin "fera") a "wild" animal; however, the word "feral", when used in writing about environmental conservation and biological diversity, usually refers to animals or populations that have escaped domestication or are descended from domesticated animals. Australia has an estimated 400,000 feral horses, mainly found in central and northern Australia, with scattered populations also found in alpine and subalpine areas of New South Wales and Victoria. In 2014, an aerial survey was conducted across 5,430 square kilometres of the Australian Alps for the Australian Alps National Parks Co-operative Management Program (Stuart Cairns and Geoff Robertson, *A report on the 2014 survey of feral horses (Equus ferus caballus) in the Australian Alps* (2015) (**2014 Survey**)). By reference to the 2014 Survey, the population of feral horses in the Australian Alps in 2014 was estimated to be 9,450.

42 Dr Norman deposed that horses have been feral in the Australian Alps for more than 150 years. Members of the region's current feral horse population are considered to be descended from released and escaped domestic stock. Much of the region was initially grazed without fences, so it was common for domestic horses to escape pastoral properties or be released. In 1843, it was reported that 70 mares and two stallions were deliberately released into the Black Mountain region in Victoria's eastern highlands, forming the first feral horse population in what is now the Victorian part of the Australian Alps. As machines and vehicles gradually replaced

horses in a range of tasks, many horses were released to join already-established herds. Historically, feral horse numbers have been managed in what is now the Victorian part of the Australian Alps by pastoralists and "brumby runners". Brumby running is an activity that began in eastern Victoria soon after the arrival of horses in the region. It involves skilled horse riders chasing targeted feral horses on horseback and capturing them using a rope or halter.

43 Dr Norman deposed that the adverse environmental impact of feral horses on the Australian Alps has been studied and well-documented. In 2012, feral horses were listed as a threatening process under s 10(2) of the FFG Act and, in 2013, under s 183 of the EPBC Act.

44 Dr Norman gave evidence that the Bogong High Plains is a section of plains located in the Alpine National Park bounded by the Ovens, Kiewa, and Mitta Mitta watersheds. An aerial double-count survey undertaken by Parks Victoria in May 2018 counted 109 feral horses as being present in the Bogong High Plains. The Bogong High Plains contains a large proportion, 28%, of the "high altitude wetlands" ecological vegetation division occurring across the Victorian Alps. This comprises some of Victoria's most endangered ecological vegetation classes, as well as comprising the Alpine Bog Community and Fen (Bog Pool) Community which are listed as threatened under the FFG Act and the Alpine Sphagnum Bogs and Associated Fens which are listed as threatened under the EPBC Act.

45 Dr Norman deposed that Mount Nelse is a high point on the northern side of the Bogong High Plains and has a population of approximately 15-20 horses. There are several threatened species present on Mount Nelse, to which feral horses are a threat.

46 Parks Victoria released the Plan on 1 June 2018. Dr Norman deposed that the Plan is intended to protect threatened ecosystems, habitats and species, including those listed under the EPBC Act and the FFG Act and is intended to give effect to Parks Victoria's obligations under section 17(2) of the National Parks Act and expresses Victorian Government policy on feral horse management in the Alpine National Park. Dr Norman observed that the Plan contains an estimate of the number of feral horses present in the Alpine National Park, being 80-100 feral horses in the Bogong High Plains and 2,350 feral horses in the Eastern Victorian Alps (estimated in 2014). Population modelling work was undertaken in 2014, which indicated that removing 400 animals per annum over a three-year period (including consideration of potential population growth) would reduce the Eastern Alps population by up to one-third of its estimated 2014 size over the life of the Plan. Achieving the Plan's target would require the scaling-up of existing programs for feral horse removal.

47 In cross-examination, Dr Norman gave evidence that, in implementing the Plan, Parks Victoria would seek to maximise the rehoming of captured brumbies but, despite that, he expected that the vast majority of brumbies would not be rehomed but would be culled.

Protection of the Alpine National Park – Feral Horse Strategic Action Plan 2018-2021

48 In its Executive Summary, the Plan states:

> Horses are not a natural part of the Australian environment. Their hard hooves can cause serious damage to alpine, subalpine, montane and floodplain environments. This includes the destruction of habitat critical to many threatened plant and animal species, damage to waterways, degradation of fragile vegetation, and soil disturbance that results in erosion or compaction. A reduction in the abundance of feral horses in Victoria's national parks is necessary to protect natural and cultural values and meet obligations under the *National Parks Act 1975* (Vic.), *Flora and Fauna Guarantee Act 1988* (Vic.), *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth), and the international Ramsar Wetlands Convention.
>
> This plan describes where and how feral horses will be managed in the Alpine National Park, and adjacent state forests between 2018 and 2021. Over recent years, low numbers of horses have been removed from the Victorian Alps, in cooperation with relevant stakeholders. However, this process has not been sufficient to mitigate the severe impacts of horses on vulnerable areas, particularly to riverine wetlands, alpine peatlands and streambanks. As a result, some areas of the Alpine National Park, are in poor condition and are not showing resilience to the impacts of horses. To ensure the persistence of healthy ecosystems and their function in the Alps, an increased rate of removal of feral horses is needed.

49 In chapter 3 headed "Background", the Plan states:

> An aerial survey conducted across the Australian Alps in 2014 has estimated the population in the Eastern Victorian Alps to be around 2350 horses (Cairns & Robertson 2014). The Bogong High Plains has a smaller, more isolated population of around 80–100 animals.
>
> …
>
> Between 150 and 200 horses have been removed annually from the Alpine National Park since 2008. This has not reduced the population. The impacts of feral horses in the Alpine National Park and other contiguous areas have now reached critical levels, and without intervention horses will continue to cause long-term and severe degradation of wetlands and waterways and prevent the recovery of these areas. The Alpine National Park contains outstanding natural and cultural values. In recognition of this, it is reserved under Schedule 2 of the *National Parks Act 1975* (Vic.).
>
> For some members of the public and community groups, horses provide a living link to Victorian pioneer and grazing history in the Barmah region and the Alps, and form part of Australian folklore as depicted in 'Banjo' Paterson's poem 'The Man from Snowy River'. Management of horses in national parks and public lands must balance three elements: the right level of protection for our natural environment and pre-European cultural heritage; the humane treatment of feral horses; and social expectations for either a continued heritage connection to the 'brumby' or their management. This plan aims to strike that balance between these elements.

50 In Chapter 4, headed "Environmental values", the plan states:

> Australia's ecosystems have evolved without the grazing pressures of heavy, hard-hoofed animals. Such animals can have significant impacts on soils, vegetation communities, stream and river banks, and wetland zones (Dawson & Axford 2011, Dyring 1990, Robertson et al. 2015, Clemann 2009, Walter 2003). Impacts on sensitive alpine and floodplain ecosystems include selective grazing, trampling, pugging, degradation of waterways and water quality, removal of vegetation and exposure of bare ground, soil compaction, streambank slumping, opening tracks through vegetation, and distribution of weeds.
>
> Australian ecosystems and their native inhabitants are not adapted to these relatively recently arrived pressures (240 years versus hundreds of thousands of years of evolution without hard-hoofed animals). A combination of climate change effects, recreation activities, and other invasive species puts significant additional pressures on these natural but now changing landscapes (Scientific Advisory Committee [SAC] 2011).
>
> Vegetation communities in the alps are diverse and complex (Figures 3-5). They include grasslands, snow-gum woodlands, heathlands, and peatland communities, all of which are impacted by feral horses. The alpine and subalpine communities are very rare in Australia and support many species that are rare and endemic to the parks, including state and nationally threatened vegetation communities such as alpine sphagnum moss peatlands, snowpatch communities, and associated wetland bogs. Feral horses are a known threat to these vegetation communities and individual species. An assessment of peatlands through the East Alps showed evidence of horse impacts occurring at 85 of the 98 sites surveyed (Tolsma 2008).
>
> Feral horses pose a threat to a variety of native fauna (Tolsma 2008, Hope et al. 2009). They compete for resources with native herbivores. Alpine habitats are critical for some of these native species, often only occurring in highly localised patches. Habitats are either destroyed or significantly simplified with fewer foraging, nesting and roosting opportunities for native animals, including water birds, small mammals, reptiles, frogs and invertebrates. Native species that utilise shallow aquatic, stream and river bank habitats, especially frogs and reptiles, struggle to exist in habitats where the loss of vegetation and soil structure leads to a subsequent loss of feeding, shelter and thermoregulation opportunities (Clemann 2009).

51 In chapter 5, headed "Heritage values", the plan refers to the Aboriginal cultural heritage values in the Greater Alpine Parks and the post-settlement heritage values of horses. In respect of the latter, the Plan states:

> Post-settlement cultural values including mining sites, stockyards and mountain huts are remnant evidence of the history of early European use of the Alps. Feral horses and perceptions of them in the natural environment can be linked to pioneer and grazing history.
>
> The heritage values connected to post-European settlement industries (mining, farming and grazing) on lands that are now national parks are considered important to some sections of the community. The heritage values of 'brumbies' were nominated as a primary interest by 10% of participants in their response to the Engage Victoria public review of the draft plan. There are divergent views around the historical values of horse presence in these parks versus the impact of horses on the natural environment and wildlife.

> Historical evidence of the presence of horses in the Australian alps is widely referenced (Context 2015, pp. 36- 38). High country grazing played a key part in horses being turned free for agistment and then recaptured by stockmen. It is important that the values of the brumby and associated places, such as alpine cattlemen's huts, is known and shared through experience and information. It is acknowledged that the 'brumby' is part of Australian folklore.
>
> This plan recognises that the history of the horse in these places is important to some members of the community as a living link to the pioneer and grazing history in the Alps and adjacent agricultural lands, and it is also recognised that some people do not support their removal, either in part or whole.

52 Chapter 6, headed "Known and potential impacts of feral horses", describes various negative impacts of feral horses on the environment, including damage to vegetation, the compaction of soil that accelerates drying-out and erosion, waterway degradation and loss of plant cover and soil structure, amongst others. Under a subheading "Visitor experience", the Plan states:

> For some visitors, horses provide a positive experience. The sight of horses provides a visual reminder of the bygone days of pioneering life. This experience is promoted to visitors taking part in licensed private and commercial horse activities in parks. Parks Victoria supports recreational horse-riding, trail-riding, access for horseback camping, and licensed horseback tour operators within specified areas across Victoria's parks estate.
>
> While some visitors seek or enjoy seeing horses in the Alpine National Park, the presence of feral horse can conflict with other visitors' expectations of a natural environment and the key attributes of national parks. Horses can impact water quality through faecal contamination and sedimentation. This is particularly the case at popular camping areas and affects access to potable water. Other issues around horse presence on roadways and campsites have also been raised by park visitors. Some horses (e.g. a stallion protecting its mob from a perceived threat), have been known to intimidate visitors.

53 In chapter 7 headed "Conservation and welfare – objectives and outcomes", the Plan describes short-term (outcome measurable in 1-2 years), medium term (outcome measurable in 3 years) and long term objectives. One of the short term objectives is "Phase up the removal of horses from the Eastern Alps (with consideration of both rehoming capacities and animal welfare issues), up to an aspirational target of 400 horses per year". The medium term objectives include "Removal of Bogong High Plains (BHP) horses; commence management of potential reinvasions to the BHP by populations outside the national park" and "Significant reduction in the Eastern Alps population through removal of up to 1200 horses from the Eastern Alps over the duration of three-year plan. Population contained and prevented from spreading".

54 In chapter 8 headed "Management approach", the Plan includes the following actions:

> An initial target of up to 1200 horses to be captured over three years has been established as an aspirational goal to both contain population growth and reduce abundance of feral horses. Population modelling identifies that a target of 400 animals

> removed from the Eastern Alps is needed to start reducing the population. A target of 200 animals per annum would keep the current population stable, including births and natural deaths. Based on current trapping rates for the Victorian alps this will mean a significant trapping increase, up to 10 times the average for the period 2007-2017.
>
> …
>
> In accordance with the Greater Alpine National Parks Management Plan (Parks Victoria 2016), isolated populations of horses will be removed where feasible. The Bogong High Plains population of around 100 horses presents this option. Reduction of this population to zero horses is a medium-term management objective.

55 Chapter 8 also sets out the proposed methods for removal of horses. The Plan states that trapping is the principal activity to be used in the period 2018-2021 in the Alpine National Park and will be used as the preferred primary control method. Trapping involves establishing trap yards and using lures such as salt, molasses and/or lucerne to encourage feral horses to go into the trap yards. Once inside the trap yard, a tripwire triggers the closure of the entry gate. Mustering will be trialled as a secondary control method. Mustering involves using horse riders, ground vehicles or helicopters, or a combination of these, to gather and move groups of feral horses into a yard. Of other control methods, fertility control and shooting will not be used and roping and fencing will be further evaluated. With respect to captured horses, the Plan states that Parks Victoria has and will continue to work with the horse rehoming groups to provide rehoming or ownership opportunities for captured horses, but that it is not proposed that Parks Victoria will manage holding properties for captured horses, therefore rehoming interest and capacity in the community is critical to a successful rehoming program. The Plan also acknowledges that:

> Under prescribed circumstances, horses will need to be humanely put down within or close to trap yards by shooting under strict protocols. These circumstances are:
>
> - Where the horses are injured, ill, of very poor body condition and/or too aged for successful rehoming
> - Where remote trap locations are established and transporting horses from these areas is likely to be inhumane
> - Where rehoming opportunities have not been secured

The Australian Brumby Alliance

56 The ABA was registered as an incorporated association on 7 January 2009. It has been registered as an animal advocacy charity with the Australian Charities and Not-for-profits Commission since 3 December 2012.

57 The ABA currently has six member organisations: Coffin Bay Brumby Preservation Society Inc, Victorian Brumby Association Inc, Save the Brumbies Inc, The Australian Brumby Horse

Register Inc, South East Queensland Brumby Association Inc and Kaimanawa Heritage Horses Inc (NZ). The objectives of the ABA, set out in its Rules of Association, are to:

(a) further the welfare and wellbeing of Australian brumbies;

(b) promote brumby heritage values to governments, their agents and the community;

(c) advocate for non-lethal humane methods of controlling excess brumby numbers wherever there are reasonable alternatives to pursue;

(d) lobby governments for secure long-term land allocations for brumbies to continue living and evolving in their wild state;

(e) facilitate information exchange, networking and support for member group activities;

(f) raise funds on a national scale to support Australian brumby welfare and heritage; and

(g) seek legislative changes to protect Australian brumbies.

Ms Pickering's evidence

58 Ms Pickering is the inaugural and current President of the ABA. Ms Pickering gave evidence about the range of activities undertaken by the ABA related to the protection and conservation of Australia's brumby populations. That included participation in round table meetings with Parks Victoria in relation to the formulation of the Plan.

59 Ms Pickering also gave evidence about her personal passion for, and commitment to, brumbies, which grew from her love of horses. Ms Pickering deposed that she contracted polio at the age of 9 and, around that time, her parents encouraged her to take horse-riding lessons. She continued riding throughout her life. Ms Pickering first saw brumbies about 15 years ago when she was on a horse trek in the Bogong High Plains. She described the experience of being able to see the brumbies with their families in the wild as incredible.

Ms O'Brien's evidence

60 Ms O'Brien is the President of the VBA, which is a member of the ABA. For the past 11 years, she has worked on a full-time volunteer basis for the VBA and has been responsible for managing and operating its training and rehoming programs, as well as working with and lobbying for better management of wild populations of brumbies across South-Eastern Australia. Ms O'Brien manages the Bogong High Plains brumby rehoming program, which includes liaising with Parks Victoria, collecting brumbies that have been captured, and bringing them to the VBA Brumby Junction Sanctuary so that they can be cared for and trained. Ms

O'Brien deposed that the VBA was formed in 2007 after several years of informal brumby rescue. One of the VBA's main objectives is to rescue, train and rehome brumbies that have been trapped and removed from public lands. In fulfilling this aim, over the past decade the VBA has taken in more than 500 brumbies from the Alpine National Park in Victoria and the Kosciuszko National Park and Bago State Forest in New South Wales.

61 During the hearing, I received the following evidence of Ms O'Brien on a provisional basis, subject to relevance. Ms O'Brien deposed that the VBA is the only organisation in Victoria that rehomes brumbies. She estimated the current capacity of the VBA to rehome brumbies to be approximately 50 per year. The VBA is capable of increasing that capacity, if the numbers of brumbies removed by Parks Victoria from the Alpine National Park (including the Bogong High Plains area) were to increase. However, Ms O'Brien considered that it would not be possible to find spaces in programs or homes for the number of brumbies proposed to be removed from the Alpine National Park under the Plan and that it is more likely that the horses would be slaughtered. In my view, the fate of the brumbies once they have been removed from the Bogong High Plains and the Eastern Alps is not relevant to the issues arising in the proceeding. The issue under s 15B(5) of the Act is whether the Action (the removal of the brumbies) is likely to have a significant impact on the National Heritage values of the Australian Alps; the issue does not concern the impact on the brumbies themselves. Accordingly, I consider that that aspect of Ms O'Brien's evidence is not relevant.

62 Ms O'Brien expressed the opinion that the brumbies in the Bogong High Plains, in comparison to those in the Eastern Alps or the Kosciusko National Park, have a high percentage of Clydesdale horses in them. Ms O'Brien said that their unique physical characteristics are quite noticeable, having more feather (long hair on the lower legs), white markings (that are consistent with Clydesdale heritage), larger than a lot of brumbies from different areas, and almost all are either black or very dark brown. Ms O'Brien also expressed the opinion that the unique characteristics of the 'Bogong' brumbies are not only physical, but also psychological, stating that they have a very quiet and introspective learning style. I made an evidentiary ruling under s 136 of the *Evidence Act 1995* (Cth) that this evidence would be received on the limited basis that the evidence relates only to horses that Ms O'Brien has personally observed and that no formal study has been conducted by Ms O'Brien. The potential for genetic differences in the brumbies in the Victorian Alpine National Park is the subject of expert evidence, considered below.

Mr Baird's evidence

63 For more than 30 years, Mr Baird has spent his summers in the High Country running horseback tours in the Bogong High Plains. His current business is called Bogong Horseback Adventures. It runs packhorse-based tours through the Bogong High Plains (a pack horse is a horse that is used for transporting supplies). There are approximately 10 expeditions a year with 10 people at a time. The business receives customers from other States of Australia and around the world who are interested in horses. Mr Baird gave evidence that brumbies are an attraction to his tour visitors.

64 Mr Baird expressed the opinion that, if the brumbies were not in the Bogong High Plains, it would remove the regional difference that the area has and would result in a loss of local identity. Mr Baird deposed that he remembered when the cattle were removed from the high country. He expressed the opinion that, over time, it changed the community because the cattlemen were no longer there, and that this disappointed some but pleased others. Mr Baird deposed that now the cattle are removed, the high country has become more 'theme park' tourism-based rather than visitors really experiencing it. While Parks Victoria has kept the old cattlemen's huts for people to look at, Mr Baird expressed the opinion that it is not the same and the experience has been lost. Mr Baird said that if the brumbies were removed too, then it would be another "nail in the coffin" of the area.

65 Mr Baird expressed opinions, based on his personal observations, that the brumbies of the Bogong High Plains are isolated by geography from other brumbies and Mr Baird can see differences in the physical characteristics of the brumbies in the Bogong High Plains. I made a ruling under s 136 of the Evidence Act that this evidence would be received on the limited basis that the evidence relates only to horses that Mr Baird has personally observed and that no formal study has been conducted by Mr Baird. As noted already, the potential for genetic differences in the brumbies in the Victorian Alpine National Park is the subject of expert evidence, considered below.

66 Mr Baird deposed that, every year in Corryong, Victoria, "The Man From Snowy River Bush Festival" is held over a long weekend. The festival has been running since 1995 and celebrates and showcases the region's heritage, history, the skills of horsemanship, cattle dogs, the animals, and music and poetry. "The Man from Snowy River Challenge" is the main event of the festival and has a number of different events to test all-round horsemanship. This includes stock handling, a packhorse competition, whip cracking, riding bareback, horse shoeing, cross

country horse riding, young horse handling skills and buckjumping. One of the final events in this challenge is the brumby catch where finalists attempt to halter a horse in an arena within 3 minutes, in order to display young horse handling skills and horsemanship.

Dr Jacobson's evidence

67 Dr Jacobson holds the degrees of Bachelor of Science (Vet Biol) and Bachelor of Veterinary Medicine and Surgery, Murdoch University, WA. Between 1982 and 1997, Dr Jacobson was engaged in veterinary practice in Tasmania with a predominantly equine case load. In 1997, Dr Jacobson moved to Victoria and continued her equine focussed veterinary practice first in Echuca (1997-1999), then in western Victoria (2001-2006) and then in Clarkes Hill, north-east of Ballarat (2006-2016). Dr Jacobson has experience with veterinary management of recently captured brumbies through her work with the VBA and other wild horse rehoming organisations and, in the course of this work, has treated, identified, assessed and otherwise observed several hundred brumbies. Since 2007, Dr Jacobson has done regular veterinary work for the VBA, which largely involved the castration of male horses recently brought in from the wild. Dr Jacobson deposed that this work exposed her to brumby behaviour, and also to the response and reaction of the animals to the restraints of captivity and human interaction.

68 Dr Jacobson expressed the opinion that brumbies from the Bogong High Plains are of a distinct physical type and also have typical temperament traits across the population. She also expressed the opinion that brumbies from the Bogong High Plains generally have the following characteristics: dark brown or black coat colour; many will have striking white markings - socks on the lower legs and stripes, stars and snips on the face; solid build and medium stature; extensive "feathering" - that is, long hairs on lower legs even with summer coat, and in ears, under chin and flanks with winter coat; kind and sensible temperament; and relatively fearless attitude compared to other wild or unhandled horses. I made a ruling under s 136 that this evidence would be received on the limited basis that the evidence relates only to horses that Dr Jacobson has personally observed and that no formal study has been conducted by Dr Jacobson.

GENETIC EXPERT EVIDENCE

69 Genetic expert evidence was given for the ABA by Prof van der Werf and was given for Parks Victoria by Dr Weeks. Prof van der Werf prepared two reports dated 14 March 2019 and 31 May 2019. Dr Week prepared one report dated 18 April 2019.

70 Prof van der Werf is Professor in Animal Breeding and Genetics in the School of Environmental and Rural Science at the University of New England, Armidale, NSW. He holds the degrees of B.Sc. Animal Science (1981), M.Sc. Animal Breeding & Agric. Economics (1984) and Ph.D. Animal Breeding & Genetics (1990) all from Wageningen Agricultural University in the Netherlands. In addition to his teaching and other responsibilities at the University of New England, Professor van der Werf has co-edited four books and written numerous book chapters and papers published in refereed journals. He holds a number of positions on scientific committees:

(a) Editor in Chief of Genetics, Selection and Evolution (INRA, France & Bio Med Central), since 2015;

(b) Subject Editor Journal of Animal Breeding and Genetics (Blackwell) since 2003;

(c) Program Manager (Genetics) Australian Sheep CRC, since 2006;

(d) Technical Committee Sheep Genetics (MLA/AWI), since 2008;

(e) Southern Australian Livestock Research Council, since 2015;

(f) Management Committee Livestock Productivity Partnership (2017-2018);

(g) National Livestock Genetics Consortium TaskForce (Meat & Livestock Australia), since 2017; and

(h) Member of the College of Experts, Australian Research Council (2019).

71 Dr Weeks is a Senior Research Fellow in the School of BioSciences at the University of Melbourne, Victoria. He holds the degrees of B.Sc. (Honours) and Ph.D. Evolutionary Genetics both from La Trobe University, Bundoora, Victoria. Dr Weeks' expertise is in ecological and evolutionary genetics and he has specialised in the conservation genetics field over the last 10 years. His work has centred around understanding population structure and genetic uniqueness of threatened species and developing genetic strategies to improve conservation outcomes. Central to this research has been determining and understanding the impacts of small population size and inbreeding on adaptation, fitness, population genetic structure and genetic uniqueness. He has undertaken genetic research and/or developed genetic conservation strategies for a large number of Australian native and invasive fauna including marsupials, fish, birds, mammals and invertebrates. His research on these topics has been published in leading international journals in science. He is a member of three State threatened species recovery teams in the capacity as each team's 'conservation geneticist', advising on genetic issues in relation to recovery efforts for these species.

72 The ABA asked Prof van der Werf to answer the following questions:

> 1. What will be or is likely to be the impact of the BHP [Bogong High Plains] Proposed Action in the Alpine National Park in Victoria?
>
> Please explain your answer. If you consider it appropriate and relevant, please address the following topics and any other topics you regard as relevant to the question above:
>
> a. whether the BHP brumbies are or are likely to be genetically different or unique compared to other brumby mobs and commercially available horses;
>
> b. any significance or importance of any genetic difference;
>
> c. the effect or likely effect of the BHP Proposed Action on matters referred to in Article 8 of the Biodiversity Convention (having regard only to those matters within your expertise);
>
> d. any impact of the BHP Proposed Action on the future viability of BHP brumbies;
>
> e. any research or work required to answer the question above or answer the question more definitively.

73 The questions were directed to the brumbies in the Bogong High Plain. The ABA sought to rely on the genetic evidence in support of the contention that prohibiting the Action, in so far as it related to the brumbies in the Bogong High Plains, would be appropriate and adapted to give effect to Australia's obligations under Article 8 of the Biodiversity Convention (satisfying s 15B(6) of the EPBC Act).

74 In response to Prof van der Werf's report, Parks Victoria asked Dr Weeks to answer the following question:

> Assume that the assumptions and opinions set out in Prof van der Werf's expert report were correct. What is the likelihood that any genetic differences between the feral horses in the Bogong High Plains and feral horses in other parts of the AANPR or other domestic horses would represent beneficial genetic adaptations in response to the ecosystems, habitats or species in the Bogong High Plains?

75 The parties tendered the statements of each of the genetic experts as well as a statement of matters agreed by them. The matters agreed were as follows:

(a) feral horses in the Australian Alps are members of the species *Equus caballus*;

(b) the difference in environment between the Bogong High Plains and the Eastern Victorian Alps is not large enough to expect adaptive differentiation between the populations of feral horses in each area;

(c) however, if the assumptions made by Professor van der Werf are correct:

(i) there may be genetic differences between the populations of feral horses of the Eastern Victorian Alps and the Bogong High Plains, and this could be established by DNA testing;

(ii) any genetic differences that exist may be the result of genetic drift and/or different founding populations;

(iii) based on a rule of thumb that an inbreeding rate of 1% is tolerable for a viable population of animals, the Bogong High Plains brumbies would need to have an effective population size of approximately 50 to be viable, which is possible on the current evidence about the census size of the Bogong High Plains brumbies; and

(d) as to feral horse populations in the Australian Alps since the late 19th Century, the experts have no specialised knowledge about the average proportion of offspring born over time from parents from outside of the Australian Alps population.

76 Given the extent of agreement reached between the experts, the parties chose not to cross-examine them.

77 By way of further elaboration of the agreed opinions, both experts assumed that there have been brumbies in the Bogong High Plains since approximately 1860 to 1870, being a period of approximately 150 years, which equates to about 15-20 generations. As to the isolation of the population, the experts were asked to assume that it is possible that domestic horses may occasionally have been added to the population of brumbies in the Bogong High Plains over that time. In the agreed matters, the experts expressly noted the limitation that they have no specialised knowledge about the proportion of offspring born from parents from outside the Australian Alps.

78 In his second report, Prof van der Werf explained that genetic differences between populations of a species can be due to (i) effects of particular founders of the population (i.e., the population was founded by horses of particular breeds), (ii) random genetic drift, and (iii) selection (i.e. genetic differences caused by adaption to the environment). Prof van der Werf expressed the opinion that all of those factors can contribute to observed genetic differences in a population after a 20 generation period of isolation; however:

(a) the effect of selection is only likely to be relevant if there were different selection forces at play - for example, two populations have to adapt to quite different environments;

(b) observable and relevant differences due to drift have a low chance to occur over a 20 generation period; and

(c) differences between subpopulations can be simply due to founder effects and this is more likely if populations have not been apart for very long (20 generations or less), such as in this case.

79 In his second report, Prof van der Werf was instructed to assume that lay evidence in the proceeding will be to the effect that there are recognisable physical differences in appearance and recognisable differences in temperament between brumbies in the Bogong High Plains and other brumby mobs in the Alpine National Park. That evidence reflects the personal observations of Ms O'Brien, Mr Baird and Dr Shannon, referred to earlier. Making that assumption, Prof van der Werf expressed the opinion that the Bogong High Plains horse population could be genetically somewhat different to other brumby populations, because there are observed phenotypic differences between these populations, but that this is most likely due to founder effects.

80 Dr Weeks expressed the opinion that the likelihood that the Bogong High Plains population of horses showing unique beneficial adaptations that are different to other horses in other parts of the Australian Alps would be very low. The reasons for that opinion are, in summary:

(a) Firstly, the environment on the Bogong High Plains is generally similar to elsewhere in the Eastern Victorian Alps, with similar altitudinal gradients, temperatures, and grass communities (on which the horses feed). Evolution or adaptation can occur relatively quickly, but generally this will be because of strong ecological differentiation in environments. While there are likely to be subtle differences in the environments, they are broadly similar and, therefore, Dr Weeks would not expect any strong ecological selection that would result in adaptive differentiation between the populations over such a short period of time (15-20 generations).

(b) Secondly, populations that are small for extended periods of time are more likely to be maladapted to their environment due to processes such as random genetic drift and inbreeding. Random genetic drift operates more efficiently in small populations. If populations are small enough, drift can override selection, resulting in maladaptation. Therefore, when a population is small for generations, genetic differentiation can arise relatively quickly, but this is very unlikely to be due to adaptive (beneficial) differentiation.

81 Overall, I consider that the genetic evidence involves conjecture. It does not rise higher than the propositions that: there may be genetic differences between the populations of feral horses of the Eastern Victorian Alps and the Bogong High Plains; that possibility is supported by the evidence of observable differences in the appearance and temperament of the horses; and the most likely explanation of any differences, if there be any, is founder effects. Any such differences could be proved scientifically by DNA testing, but that has not been carried out. The genetic experts were asked to assume that it is possible that domestic horses may occasionally have been added to the population of brumbies in the Bogong High Plains over time, and the experts expressly acknowledged that they have no specialised knowledge about the proportion of offspring born from parents from outside the Australian Alps.

82 In my view, the ABA has not established, on the balance of probabilities, that there are unique genetic features in the populations of brumbies in the Bogong High Plains. It has only established that there is a possibility, with the most likely cause of any possible differences being founder effects. For that reason, I place no weight on the opinion expressed by Prof van der Werf in his first report that the proposed removal of brumbies from the Bogong High Plains will have a negative effect on the matters referred to in Article 8 of the Biodiversity Convention because it would remove a population that is likely to carry some unique genetic features.

ECOLOGICAL EXPERT EVIDENCE

83 Ecological expert evidence was given for the ABA by Dr David McKenzie Berman, and was given for Parks Victoria by Prof Richard James Williams and Dr James Martindale Shannon. In addition to their individual affidavits and reports, the experts filed a joint report and they were cross-examined concurrently. Neither the joint report nor the concurrent cross-examination resulted in any material agreement in the opinions of Dr Berman on the one hand and Prof Williams and Dr Shannon on the other. For that reason, it is convenient first to consider each expert's evidence separately, and then to consider the joint report and the cross-examination.

Dr Berman

84 Dr Berman holds the degrees of Ph.D., B.Sc. (hons) and Dip.Ed. at the University of New England. His Ph.D. concerned the study of the ecology of wild horses in central Australia. Since 2016, Dr Berman has been a Research Fellow in Wildlife Ecology at the University Of Southern Queensland. Relevantly, Dr Berman has authored 25 publications on various aspects of wild horse management including two books "Managing Vertebrate Pests: Feral Horses"

and "Control of Brumbies in Central Australia", a book chapter in "Managing Free Roaming Horses", four journal articles, four technical reports and 14 conference papers. He has also advised in wild horse management involving:

(a) conducting consultancies to help manage the negative impact of wild horses in various locations in Australia;

(b) providing ecological understanding for reduction in the wild horse population in central Australia;

(c) acting as project leader in preparing national guidelines for managing Australian wild horses which resulted in the publication of the book, Dobbie, Berman and Braysher (1993) "Managing Vertebrate Pests: Feral Horses"; and

(d) acting as reviewer of the United States National Research Council book on science to improve management of USA wild equids - "Using Science to Improve the BLM Wild Horse and Burro Program".

85 The ABA asked Dr Berman to answer the following question in respect of each of the Bogong High Plains and the Eastern Alps:

> What will be or is likely to be the impact of the BHP/Eastern Alps Proposed Action on the Bogong High Plains/Eastern Alps and BHP/Eastern Alps brumbies in the Alpine National Park in Victoria? Please explain your answer. If you consider it appropriate and relevant, please address the following topics and any other topics you regard as relevant to the question above:
>
> a. the effect or likely effect of the BHP/Eastern Alps Proposed Action on matters referred to in Article 8 of the Biodiversity Convention (having regard only to those matters within your expertise);
>
> b. any impacts (positive, negative or otherwise) of the presence of the BHP/Eastern Alps brumbies in the Alpine National Park in Victoria;
>
> c. any impacts (positive, negative or otherwise) of the BHP/Eastern Alps Proposed Action in the Alpine National Park in Victoria;
>
> d. any impact of the BHP/Eastern Alps Proposed Action on the future viability of BHP/Eastern Alps brumbies;
>
> e. any research or work required to answer the question above or answer the question more definitively.

86 In response to those questions, Dr Berman prepared his principal report dated 14 March 2019. Dr Berman also prepared a reply report dated 5 June 2019 commenting on Prof Williams' report.

87 In his principal report, Dr Berman expressed the following summary opinions:

(a) Brumby impacts have not been adequately or unbiasedly measured in the Victorian Alps. There is also a lack of recent information on brumby population size, rate of increase, home range size, movement patterns and habitat use. Research to date has not adequately differentiated between the influence of other introduced agents (deer, pigs, rabbits, hares, foxes, cats, bush walkers or domesticated trail riding horses) and that of brumbies.

(b) Brumbies in the Victorian Alps are likely to have both negative and positive impact on the ecosystem, habitats and species and the relative amount of positive or negative impact may vary depending on the density of brumbies. Moderate brumby density is likely to provide maximum positive impact. Native species that still inhabit the Victorian Alps survived over 150 years of heavy grazing pressure exerted by sheep, cattle and horses. It is likely therefore that these native species can tolerate the impact of grazing by introduced hard-hoofed animals. Some native species may actually benefit from moderate grazing by introduced stock.

(c) Properly controlled manipulative experiments are required to measure the negative and positive impact of brumbies in the Victorian Alps and determine the relationship between impact and brumby density. Improved knowledge of brumby ecology can also be acquired if the management operations are designed experimentally.

88 In relation to the brumbies in the Bogong High Plains, Dr Berman expressed the summary opinions that:

(a) At low density, negative impact at the Bogong High Plains appears small and isolated and may not be significant. The benefit of the removal of this negative impact may be negligible. Positive impact may be significant, providing diversity of habitat that is beneficial to some native species. If this positive impact exists it will be lost when all or most of the brumbies are removed. The magnitude of this loss is unknown due to lack of rigorous, unbiased scientific experimentation.

(b) Removal of all brumbies from the Bogong High Plains and prevention of re-invasion or reintroduction of horses will prevent further impact caused by brumbies, both positive and negative.

(c) Complete removal of brumbies could reduce habitat diversity and adversely influence some native species. This could be detected and prevented before it happens if good experimental monitoring is incorporated into the management plan.

(d) Without more rigorous, controlled, scientific experimentation the impact of removal of the negative and positive impact of brumbies is unknown on the Bogong High Plains.

89 In relation to the brumbies in the Eastern Alps, Dr Berman expressed the summary opinions that:

(a) Based on population estimates from 2014, the Eastern Victorian Alps brumby density is at least five times higher than the Bogong High Plains brumby density. The negative impact will therefore be more significant and perhaps outweigh any benefits from positive impact. Targeted control to protect key assets could temporarily reduce negative impact, but the number of horses that need to be removed to achieve long-term suppression is unknown.

(b) Removing 400 brumbies per year for three years from the Eastern Alps will not decrease the population size significantly - it may only restrict population growth. This is because the starting population may be larger than expected due to increases since 2014 and also as horses are removed the reproductive rate may increase.

(c) A concerted brumby control effort in randomly selected smaller management areas, reducing density to various levels (very low, low, medium or high) combined with impact monitoring, as part of a large controlled experiment, would provide essential information to inform and justify future actions.

90 A number of further opinions expressed by Dr Berman were objected to by Parks Victoria on the grounds of relevance and I upheld those objections. The reasons for those rulings were as follows.

91 First, Dr Berman expressed the opinion that Parks Victoria's proposed Action was unlikely to succeed in removing all brumbies from Bogong High Plains and significantly reducing the population in the Eastern Alps. In respect of the Eastern Alps, Dr Berman recommended further research to determine the rate of removal to achieve the desired population size. Parks Victoria submitted that this evidence was irrelevant because the statutory question was whether the Action is likely to have a significant impact on the National Heritage values and whether prohibiting the Action is appropriate and adapted to give effect to Australia's obligations under Article 8 of the Biodiversity Convention. The Action is the removal of brumbies in accordance with the Plan. Thus, the ABA's challenge to the Action necessarily assumes that the Action will be successful. I accepted that submission and ruled those aspects of Dr Berman's report inadmissible.

92 Second, Dr Berman expressed the opinion that an assessment should be undertaken of the stress caused to brumbies as a result of the proposed Action so that this can be weighed against the benefits in order to ascertain whether those benefits justify the proposed Action. Parks Victoria submitted that that opinion related to animal welfare which is not within the scope of either the National Heritage values or Article 8 of the Biodiversity Convention. I accepted that submission and ruled those aspects of Dr Berman's report inadmissible.

93 Third, Dr Berman expressed the opinion that proceeding with the proposed Action without proper community engagement could incite further opposition to brumby management and control procedures proposed to be undertaken elsewhere in Australia. Parks Victoria submitted that opinion related to community consultation and support which are not within the scope of either the National Heritage values or Article 8 of the Biodiversity Convention. I accepted that submission and ruled those aspects of Dr Berman's report inadmissible.

94 A central theme in Dr Berman's reports is that further research is required to understand both the negative and positive impacts of brumbies on the alpine environment. In that regard, Dr Berman expressed the opinions that:

(a) The native plants and animals still inhabiting the Bogong High Plains can most likely tolerate the current impact of brumbies or may benefit from the impact of moderate densities of brumbies, but this needs verification by detailed experimental research.

(b) A general ecological principle is that moderate levels of grazing or disturbance promote biodiversity, but there is not a general pattern of impact that applies to all situations and research is required to better understand the relationships between native plants and animals and brumbies on the Bogong High Plains.

(c) In order to efficiently fulfil Article 8(h) of the Biodiversity Convention and prevent brumbies threatening ecosystems, habitat or species, it is necessary to determine whether brumbies are in fact threatening ecosystems, habitat or species. There is no good scientific evidence demonstrating that brumbies at the current density threaten anything on the Bogong High Plains.

(d) In relation to the Eastern Alps, as for Bogong High Plains, there has not been enough good research and there are too many unknowns.

(e) It is very likely that the Eastern Alps brumby population needs to be restricted to fulfil Article 8(d) of the Biodiversity Convention but what brumby density is required to promote the protection of ecosystems and natural habitats and maintain viable

populations of species in their natural surroundings is unknown. The target size for the brumby population needs to be determined experimentally.

95 In his reply report, Dr Berman reiterated his opinion that the research to date to measure the impact of feral horses in the Victorian Alps is not strong enough to enable adequate management of their impact.

Prof Williams

96 Prof Williams holds the degree of Ph.D. in alpine plant ecology from the University of Melbourne. Until 2013 (when he retired), Prof Williams was the Senior Principal Research Scientist at CSIRO Land and Water. He is currently the Editor in Chief of the Australian Journal of Botany and holds the following honorary positions: Adjunct Professorial Fellow at Charles Darwin University, Darwin; Honorary Senior Principal Research Fellow at CSIRO Land and Water; and Visitor, School of Biosciences at the University of Melbourne. Relevantly, Prof Williams has 40 years of research experience in alpine ecosystems, with a focus on the Bogong High Plains, including specialist expertise in the effects of grazing by livestock, particularly cattle, on the dynamics of plant communities on the Bogong High Plains. He has 33 years of experience advising State and Federal Government agencies on science and its application in land management (Victorian Alpine Advisory Committee; Parks Victoria Environment and Scientific Advisory Group; NT Bushfires Council; NSW Office of Environment and Heritage) and has 25 years of experience on high level scientific advisory boards/committees (Australian Research Council (**ARC**) Biosciences College of Experts, National Climate Change Adaptation Research Facility; ARC Australian-New Zealand Vegetation Function Network). Prof Williams is the author/co-author of 159 peer-reviewed scientific publications on Australian plant community ecology, with a focus on the alpine ecosystems of south-eastern Australia, and the tropical savannahs of northern Australia. He is the author/co-author of 49 peer-reviewed scientific publications on vegetation ecology of the Bogong High Plains and/or other Australian alpine ecosystems.

97 Parks Victoria asked Prof Williams the following questions in respect of the Bogong High Plains and the Eastern Alps respectively:

1. To what species do feral horses in the Bogong High Plains/Eastern Alps belong?
2. Is that species an 'alien species' - that is, 'a species, subspecies or lower taxon introduced outside its natural past or present distribution' - as it occurs in the Bogong High Plains/Eastern Alps?

3. If the answer to 2 is 'yes', does the species to which those feral horses belong threaten any ecosystem, habitat or species that occurs naturally in the Bogong High Plains/Eastern Alps?

4. If the answer to 3 is 'yes', then:

   (a) please name each such ecosystem, habitat or species that is threatened by the species to which those feral horses belong;

   (b) for each such threatened ecosystem, habitat or species:

      (i) please identify the nature, significance and extent of the threat; and

      (ii) is it likely that that ecosystem, habitat or species has been, or will be, adversely affected by those feral horses?

5. If the answer to 4(b)(ii) is 'yes', would the actions proposed in the Plan mitigate those adverse effects, in a manner consistent with Part D of the Guiding Principles?

98 In response to those questions, Prof Williams prepared a report dated 23 April 2019. In that report, Prof Williams expressed the following summary opinions:

1. Australia's high mountain ecosystems, including those of the Bogong High Plains and Eastern Victorian Alps, are of exceptional significance for nature conservation and the provision of high-value ecosystem services such as high-quality clean, plentiful water.

2. The Australian Alps National Parks and Reserves, including the Bogong High Plains, are listed as a Heritage Place under the Commonwealth Environmental Protection and Biodiversity Conservation (EPBC) Act (1999). Numerous individual alpine plant species, animal species and vegetation communities on the Bogong High Plains are listed under the EPBC Act (1999) and/or the Victorian Flora and Fauna Guarantee (FFG) Act (1988).

3. One of the primary objects of the Victorian National Parks Act (1975) is to 'make provision ... for the protection and preservation of indigenous flora and fauna ... "

4. Alpine ecosystems have not evolved in conjunction with ungulates (hard-hooved animals). Ungulate livestock such as sheep, cattle and horses have been known, since the 1930s and 1940s, to predispose alpine ecosystems to soil erosion via selective grazing and trampling.

5. It is clear from many decades of peer-reviewed ecological science and field observations that high levels of vegetation cover are needed to minimise soil erosion in alpine ecosystems. Livestock substantially reduce vegetation cover and increase bare ground. These impacts are incompatible with soil conservation and catchment protection in Australia's high mountain water catchments.

6. Since the 1940s, substantial measures have been taken to reduce numbers, or remove livestock (including horses) from the high mountains of south-eastern Australia.

7. The deleterious impacts of feral horses across a range of ecosystems in the Australian Alps, including impacts on the Bogong High Plains and the Eastern Victorian Alps, have been well-documented and published in the peer-reviewed scientific literature. To understand, predict and evaluate the impacts of the current

population of feral horses on the ecosystems of the Bogong High Plains, we can apply this extensive and predictive understanding of the ecology of alpine ecosystems, and the known impacts of livestock thereon.

8. Feral horses are free ranging. They graze where they like when they like. They begin grazing soon after snow-melt, when plants and soils are highly vulnerable to damage by grazing and trampling. They graze and trample moist areas which may contain rare and endangered species.

9. Four major ecosystems of the Bogong High Plains show unequivocal evidence of horse occupancy and damage: alpine grasslands, alpine wetland complexes, alpine snowpatch herbfields, and Alpine Marsh marigold (*Caltha introloba*) herblands. Within the latter three ecosystems, three vegetation communities are FFG-listed: the 'Alpine Bog Community', the 'Alpine Snowpatch Community' and the *'Caltha introloba* Herbland Community'. The 'Alpine *Sphagnum* bogs and associated fens' community is EPBC-listed.

10. In grasslands, major impacts of horses include: selective grazing of herbaceous plants that are known to be palatable to cattle, such as Soft Snow Grass (*Poa* species), Snow Daisies (*Celmisia* species) and Billy Buttons (*Craspedia* species); creation of relatively small bare ground gaps in the grass sward (ca 20 cm x 20 cm) as a consequence of grazing and trampling and, importantly, the creation of roll pits - large bare ground gaps - which may be 4-5m in diameter and 0.5 m deep. A recent incursion of 10-20 horses into the Mount Nelse region in 2017 (where feral horses had not been present for at least 50 years) showed that such deleterious impacts can occur from low horse numbers in a relatively short period of time. In the case of the roll pits, soil loss can be substantial (e.g. of the order of 1.5 tonnes of soil from a single pit) and these impacts will persist in the landscape for years to come.

11. In wetlands, which horses enter to drink and graze, impacts are substantial because the soils are peaty and soft. They include grazing of plants such as Pineapple Grass (*Astelia alpina*) and Fen Sedge (*Carex gaudichaudiana*); trampling the dominant mound- and peat-forming species such as Sphagnum moss (*Sphagnum cristatum*); trampling of the edges of pools within the wetland; trampling of stream banks; and damage to the habitat of rare fauna species.

12. A recent survey of the wetlands on the Bogong High Plains (Tolsma and Shannon 2018) showed that horse impacts were substantial in many wetlands. I have confidence in the findings of this report. Impacts were documented in 39% of wetlands surveyed; in horse-impacted sites, 89% were in a worse condition than when previously surveyed in 2006-08 or 2012. A companion survey of wetlands across the Australian Alps (Robertson et al. 2019) found that the condition of alpine wetlands was significantly worse in horse-occupied areas than in horse-free areas. The 'Alpine Bog Community', 'Fen (Bog pool community)' and some associated plant and animal species are FFG-listed; the 'Alpine *Sphagnum* bogs and associated fens' community is EPBC-listed. The documented impacts of horses on alpine wetlands may lead to stream entrenchment, exacerbating the potential for wetlands to dry out.

13. Alpine snowpatch herbfields occur on steep slopes, where snow accumulates during winter, and where the potential for soil loss following grazing and trampling by ungulates is high. These herbfields were known to be grazed by cattle; horses have been documented utilising snowpatch herbfields in the Mt Nelse area, and in the Mt Jim area of the Bogong High Plains. The FFG-listed '*Caltha introloba* herbfield community' occurs within the complex of herbfields that occur within

snowpatch herbfield vegetation. *Caltha introloba* (Alpine Marsh Marigold) is a dwarf plant known to be grazed by cattle, and there is field evidence to show that it is also grazed by horses. The '*Caltha introloba* herbfield community' is home to a suite of other dwarf plants. Trampling by horses anywhere in the vicinity of snow patch herbfields and the '*Caltha introloba* herbfield community' is a direct threat to several extremely rare and highly significant plant communities, and a number of significant, rare, and in one case, endangered, plant species that live in these communities.

14. In the Eastern Victorian Alps, the findings from Robertson et al. (2019) and Cherubin et al. (2019) corroborate the findings from the Bogong High Plains regarding deleterious impacts of horses on alpine wetlands. The degraded state of wetlands in the Eastern Victorian Alps provides compelling evidence for the need for rapid and substantial reductions in horse numbers in this area of Victoria.

15. In the surveys described above, both on the Bogong High Plains, and in the Eastern Victorian Alps, the indicators of horse sign were clear and unambiguous; horse effects were not confounded with potential effects of other large vertebrate herbivores, particularly feral deer. Thus the documented, deleterious impacts can be attributed to horses with a high degree of confidence.

16. Studies undertaken recently by ecologists and park managers in the Australian Alps, including the Bogong High Plains, are robust, provide park managers and researchers with strong evidence concerning the impacts of feral horses on alpine ecosystems, and compelling rationales upon which to devise management strategies to reduce horse numbers quickly and substantially.

17. So strong is the scientific evidence that feral horses damage alpine ecosystems that 'Degradation and loss of habitats caused by feral horses (*Equus caballus*)' has been specifically listed as a 'Potentially Threatening Process' under the Victorian Flora and Fauna Guarantee Act 1988.

18. Claims that published research to date on horse impacts on alpine ecosystems and species has not adequately differentiated between impacts of horses and other agents of disturbance, particularly deer, and that the impacts of deer have been wrongly assigned to horses, are not credible.

19. Designed, manipulative experiments are not required to further determine the nature of impacts of feral horses on the ecosystems of the Bogong High Plains. Grazing by ungulates results in no positive benefits to the alpine environment. There is no need to undertake designed, manipulative experiments to determine if there are any so-called 'positive benefits' of feral horses on the ecosystems of the Bogong High Plains or Victorian Eastern Alps.

20. The continued presence of feral horses on the Bogong High Plains is incompatible with the State and National conservation objectives for the Victorian Alpine National Park, be they objectives for soil conservation, catchment protection, or nature conservation.

21. Complete removal of feral horses from Bogong High Plains is required to protect the unique alpine ecosystems of the area. Rapid and substantial reductions in numbers is required in the Eastern Victorian Alps, to protect ecosystems there, particularly wetlands.

22. Such actions are consistent with Parks Victoria's 'Feral Horse Strategic Action Plan 2018-2021', the Commonwealth Department of the Environment (2015) 'National recovery plan for the Alpine Sphagnum Bogs and Associated Fens ecological

community', and Part D of the 'Guiding Principles for the implementation of Article 8(h)' of the United Nations Convention on Biological Diversity.

99 In his report, Prof Williams gave evidence that the ecosystems of the Bogong High Plains have been well-studied, with research into the ecology of the Bogong High Plains and the effects of grazing on its vegetation and soils commencing in the 1940s. Prof Williams stated that the existing portfolio of long-term vegetation monitoring sites, vegetation mapping, manipulative experiments and examination of diet and behaviour of livestock has provided a robust body of data and knowledge on the distribution of the vegetation of the Bogong High Plains in relation to environmental factors, diet and behaviour of livestock, as well as a functional understanding the trajectories of vegetation change as affected by climate, livestock grazing and fire. In Prof Williams opinion, this scientific research has shown unequivocally that cattle grazing results in:

(a) selective grazing of preferred sensitive alpine ecosystems such as wetlands, herbfields and grasslands;

(b) reduced cover of alpine vegetation and dead plant litter;

(c) increased cover of bare ground;

(d) reduced cover of several species of tall herbs, e.g. Snow Daisies (*Celmisia costiniana, C. pugioniformis*) and various species of Billy Buttons (*Craspedia* species) and short shrubs e.g. Alpine Star Bush (*Asterolasia trymalioides*), all of which are highly palatable to cattle;

(e) changes to the floristic composition of plant communities; and

(f) degradation of wetlands communities (bogs, fens and associated streams), because cattle enter these ecosystems to graze and drink.

100 Prof Williams expressed the opinion that, from this body of knowledge, there are four strong lines of scientific evidence that show that horses have had and, unless they are removed, will continue to have, deleterious effects on various ecosystems and species of the Bogong High Plains:

(a) Feral horses are ungulates and will behave as such. It is possible to predict what the likely impacts will be on the Bogong High Plains, based on 70 years of detailed peer-reviewed research into the effects of grazing by cattle and other ungulate livestock on the ecosystems of the Australian Alps (Williams et al. 2014), as well as on general

knowledge of habitat preferences, diet and behaviour of feral horses, both in Australia and globally (eg Berman 2008; Budiansky 1997).

(b) The deleterious impacts of feral horses across a range of ecosystems in the Australian Alps have been well-documented. These impacts have been published in recent peer-reviewed publications devoted specifically to documenting and publicising the scientific evidence concerning deleterious impacts of feral horses in the Australian Alps. These include the Kosciuszko Conference in November 2018 (Warboys et al. 2018) and the Special Edition of the Ecological Society of Australia's journal, Ecological Management and Restoration (Driscoll et al. 2019). The evidence presented in these publications shows feral horses are a threat to a wide array of ecosystems, species and conservation values in the Australian Alps, including ecosystems and species that are listed under State and Federal legislation. The evidence is compelling, and consistent with what is known about the behaviour of ungulates in alpine systems.

(c) Deleterious impacts of horses on ecosystems, principally wetlands, on the Bogong High Plains has been documented recently by Tolsma and Shannon (2018). This analysis makes use of an extensive network of wetland sites that were first surveyed in either 2006-08 or 2012, and resurveyed in 2017. The study provided quantitative data on the extent of horse presence, horse damage and any change in the geographic extent and/or severity of damage. It showed that the extent of impacts of horses has increased over the past decade, and that horse impacts are cumulative over time.

(d) Field evidence shows that the arrival of a dozen or so horses on the Mt Nelse area of the northern Bogong High Plains in February 2017 (where horses had not been seen for over half a century) has already caused obvious and indisputable damage, as determined for a number of wetlands by Tolsma and Shannon (2018), by the Research Centre for Applied Alpine Ecology at La Trobe University and as observed by Prof Williams on a field trip in March 2018 to the Mt Nelse region.

101 In relation to the Eastern Alps, Prof Williams stated that he had not personally published on the ecosystems of the Eastern Alps nor researched interactions between ungulates and native ecosystems in this region. However, he is aware of the findings of other researchers, particularly in regard to alpine wetlands. He expressed the opinion that Alpine wetlands occur in the Eastern Alps and his discussion regarding the threats posed by feral horses to the wetlands of the Bogong High Plains applies to the wetlands of the Eastern Alps.

102 In his report, Prof Williams disagreed with a number of the opinions expressed by Dr Berman. In particular:

(a) Prof Williams disagreed with Dr Berman's opinion that most evidence of environmental impact of brumbies in the Victorian Alps is correlative and therefore can be easily misinterpreted, and expressed the view that horse impacts in the Australian Alps have been determined with a high degree of confidence using multiple lines of evidence.

(b) Prof Williams disagreed with Dr Berman's opinion that research to date has not differentiated between the influence of other agents and brumbies and that deer impact is often wrongly assigned to brumbies, and expressed the view that these claims are not credible given the expertise of the scientists undertaking the research.

(c) Prof Williams disagreed with Dr Berman's opinion that brumbies in the Victorian Alps are likely to have both negative and positive impacts on the ecosystem, habitats and species, and expressed the view that Prof Williams knew of no compelling evidence in the published literature that horses, or indeed any ungulates, are likely to have net positive impacts on ecosystems, habitats or their associated species in the Australian Alps.

(d) Prof Williams disagreed with Dr Berman's opinion that properly controlled manipulative experiments are required to measure the negative and positive impacts of brumbies in the Victorian Alps and determine the relationship between impact and brumby density, and expressed the view that further manipulative experiments are not needed to answer scientific questions or to answer particular management questions.

103 In his report, Prof Williams also responded to the opinion of Prof van der Werf that the proposed removal of brumbies from the Bogong High Plains will have a negative effect on the matters referred to in Article 8 of the Biodiversity Convention as it would remove a population that is likely to carry some unique genetic features. As stated earlier, I placed no weight on that opinion because the opinions of Prof van der Werf did not rise above conjecture. Prof Williams expressed his disagreement with Prof van der Werf's opinion as follows:

> I disagree that removal of the population of horses on the Bogong High Plains would have 'a negative effect'. Whatever the genetic uniqueness (or otherwise) of the horses on the Bogong High Plains, they are an alien species. Moreover, as the evidence presented above demonstrates, they are ungulates, and the ecosystems of the Bogong High Plains have evolved in the absence of such an animal. As such, Australia's alpine ecosystems are not adapted to the disturbances associated with such an animal, and

> show clear evidence of damage as a consequence of the presence of such an animal. This point – that ungulates are an evolutionary oddity in the Australian Alps - has been made extensively in the scientific literature on Australia's alpine ecosystems. I do not accept, then, that the removal of feral horses from the Bogong High plains, even if there is some degree of genetic uniqueness, would be against Australia's obligations under the Convention of Biological Diversity.

Dr Shannon

104 Dr Shannon holds the degree of Ph.D. in plant ecology from Latrobe University. For the purposes of his Ph.D., Dr Shannon surveyed approximately 90 upland wetland sites (mossbeds, peatlands, wet heath lands and bogs), including sites in the Bogong High Plains, for general condition, fire damage and introduced animal impacts. Dr Shannon is engaged on a casual basis by Latrobe University to conduct research, teach, prepare reports and papers with a focus on alpine ecology, and also teaches undergraduate alpine ecology at Monash University. He also consults as an ecologist on a contractual basis with various organisations including the Department of Environment, Land, Water and Planning and Parks Victoria.

105 Dr Shannon affirmed an affidavit dated 15 April 2019, which adduced in evidence various surveys that have been conducted in respect of the impacts of, amongst other animals, brumbies on vegetation in the Victorian Alps. Those surveys were:

(a) a survey conducted in 2006 and 2008 by Dr Arn Tolsma and others, visiting wetland and mossbed vegetation sites to assess the condition of wetland plant communities and the extent of introduced animal activity, including the activity of feral horses, deer and pigs (the **2006-2008 Survey**).

(b) a survey conducted by Dr Shannon, on the engagement of Parks Victoria, between February and June 2012 to survey 92 sites for the purpose of a study assessing feral horse impacts on treeless drainage lines in the Victorian Alps (the **2012 Survey**), the data from which was written up in a report published in 2015 by Geoff Robertson, John Wright, Daniel Brown, Kally Yuen and David Tongway, titled 'An Assessment of Feral Horse Impacts on Treeless Drainage Lines in the Australian Alps' (the **2015 Report**); and

(c) a survey conducted by Dr Shannon, on the engagement of Parks Victoria, between 27 November and 20 December 2017 to survey sites solely on the Bogong High Plains (the **2017 Survey**), which involved: revisiting sites in the Bogong High Plains that had been previously assessed in the 2006-2008 Survey; revisiting 14 of 22 potentially relevant sites in the Bogong High Plains that had previously been surveyed during the 2012

Survey; and resurveying those sites and random observations of feral horse activity and identifying the geographical extent of currently active populations of feral horses, and which formed the basis of a report co-authored by Dr Shannon and Dr Talsma in 2018, titled 'Assessing the Impacts of Feral Horses on the Bogong High Plains, Victoria' (the **2018 Report**).

The joint report and concurrent evidence

106 As stated above, the ecology experts conferred and prepared a joint report. Save in one respect, the joint report reflected the differing opinions stated by Dr Berman and Prof Williams in their respective reports, with Dr Shannon agreeing with the opinions of Prof Williams, and there was no agreement between Dr Berman on the one hand, and Prof Williams and Dr Shannon on the other, on the issues that arise for decision in this proceeding. That position remained unchanged during oral testimony, when the experts expanded on their statements in the joint report and were cross-examined.

107 The one respect is which there was a measure of agreement between the experts is on the desirability of further research. The joint report contained the following statements:

> We agree on the need for on-going monitoring of Broad-toothed Rat numbers where horse numbers have been reduced in the Eastern Alps. Where numbers of Broad-toothed Rat are currently at low numbers because of degradation of habitat due to horses, removal of horses should lead to an increase in numbers of the Broad-toothed Rat. This prediction can be tested via a suitably-designed monitoring programme.
>
> We agree that there is a need to do further research to determine patterns of movement of horses to assist with determining the most cost effective way(s) of managing numbers.
>
> We agree that we need to know more about the effects of removal of horses on population dynamics of the horses, especially the effect of removal of horses on reproductive rate. Reproductive rate may increase in response to off take of horses.

108 I do not consider that those agreed opinions are relevant to the issues that arise for determination in the proceeding.

109 In relation to the cross-examination, while certain points were clarified to some extent, I did not consider that the cross-examination resulted in any material change to the opinions expressed by the experts, or revealed any new information or opinions. I consider that each of the experts made concessions where it was appropriate to do so, and I consider that each of the experts expressed opinions held by them and were not advocates for the party calling them.

110 Dr Shannon was cross-examined in relation to the 2018 Report, and was asked questions about the data relating to site inspections that underpinned the Report. Dr Shannon accepted that the data showed that some sites, that had been inspected in an earlier study, had not deteriorated and may have improved, and some sites did not show evidence of horse presence. In my view, Dr Shannon's answers did not undermine the conclusions expressed in the 2018 Report. Focussing on whether a site had improved or deteriorated marginally over time obscures the more relevant question of the existence and extent of underlying damage to vegetation which is the subject of the report. A site may have improved marginally since a previous inspection (for example, because horses had not been present at the site for some time) but still be materially damaged. While Dr Shannon accepted in cross-examination that the conclusions expressed in the 2018 Report could be stated with greater confidence if more site inspections had been carried out over a longer period of time, he rejected the suggestion that the Report did not show damage caused by horses. In my view, the conclusions stated in the 2018 Report were not materially undermined by the cross-examination.

Overall assessment of the ecological evidence

111 I consider that the evidence presented by Prof Williams and Dr Shannon was supported by scientific studies and their expertise and was persuasive. I am satisfied, based on their evidence, that the brumbies in the Bogong High Plains and Eastern Alps threaten various ecosystems, habitats and species in those alpine areas. I am also satisfied, based on their evidence, that retaining the current population of brumbies in the Bogong High Plains and Eastern Alps would not be an appropriate control of the threat they present to ecosystems, habitats and species in those alpine areas.

112 Conversely, I consider that the evidence presented by Dr Berman was not supported by scientific studies and was not persuasive. I consider that Dr Berman's opinions, expressed in both his written and oral evidence, and in so far as they concerned the impacts of brumbies in the Bogong High Plains and Eastern Alps, were idiosyncratic and relied on conjecture. Dr Berman accepted in cross-examination that alpine ecology had never been the subject of focussed study or publication by him. It was Dr Berman's personal opinion that insufficient scientific research had been done in relation to the impacts of brumbies on the Victorian alpine areas, and he considered that the existing research had deficiencies. In contrast, Prof Williams and Dr Shannon considered that the research provided sound scientific evidence for action to

be taken. I am persuaded by their opinions. Dr Berman's conjectured opinions included the following:

(a) The native plants and animals inhabiting the Bogong High Plains can most likely tolerate the current impact of brumbies because the plants evolved with trampling from heavy animals, particularly the megafauna of Australia that lived up to 18,000 years ago and, in more recent times, kangaroos. Dr Berman acknowledged in his oral testimony that this theory involved some speculation. Prof Williams gave evidence in response that he is not aware of any evidence that megafauna were present in the Victorian alpine region and, on mainland Australia, none of Australia's current larger native animals graze the alpine vegetation. I consider that Dr Berman's view is wholly conjecture.

(b) Based on a general ecological principle that moderate levels of disturbance promote biodiversity, it is possible that brumby grazing in the Victorian alpine region is promoting biodiversity. As acknowledged by Dr Berman in his written evidence, and stated by Prof Williams in his oral evidence, the principle is no more than a hypothesis that may apply in some environments but not in others. In cross-examination, Dr Berman agreed that he believed that it is possible that brumby grazing in the Victorian alpine region is promoting biodiversity because, in his opinion, the possibility had not been conclusively disproven. Prof Williams gave evidence that there is existing evidence that the theory is not applicable to the Victorian alpine areas because the impacts of varying degrees of burning (from bushfires) and grazing have been studied and they do not indicate that moderate degrees of disturbance have any beneficial effects. Again, I consider that Dr Berman's view is wholly conjecture.

113 Having regard to the evidence presented by Prof Williams and Dr Shannon, I am not persuaded that there is a lack of scientific evidence concerning the impacts of the brumbies on ecosystems, habitats and species in those alpine areas; and nor am I persuaded that there is evidence supporting a conclusion that brumbies are likely to have positive impacts on the environment that outweigh the negative impacts.

EXPERT HERITAGE EVIDENCE

114 Heritage expert evidence was given for the ABA by Dr Mclntyre-Tamwoy and for Parks Victoria by Mr Travers and Ms Slattery. For the reasons given below, I ruled Ms Slattery's evidence inadmissible.

115 The ABA originally filed a report concerning heritage values from Ms Karen Wykes. Parks Victoria asked Mr Travers to provide a report in response, which Mr Travers did on 26 April 2019. Due to personal circumstances, Ms Wykes became unavailable to give evidence for the ABA at the hearing and her report was not adduced in evidence at the trial. The Court gave the ABA leave to file another report concerning heritage values from Dr Mclntyre-Tamwoy which was dated 11 June 2019. In her report, Dr Mclntyre-Tamwoy expressed her opinions and also responded to Mr Travers' report. Parks Victoria then requested Mr Travers to prepare a response to Dr Mclntyre-Tamwoy's report, which he did on 4 July 2019. In the circumstances, it was necessary to receive both reports from Mr Travers.

116 Dr Mclntyre-Tamwoy holds the degrees B.A. (Hons), majoring in Anthropology (Prehistory), from the University of Sydney (1982) and Ph.D. in archaeology from the James Cook University (2002). Since 2018, Dr Mclntyre-Tamwoy has been an Adjunct Professor at the James Cook University and has been an Associate Director of Navin Officer Heritage Consultants Pty Ltd, a consulting firm. Dr Mclntyre-Tamwoy has some 30 years' experience in Australia and overseas as a cultural heritage research specialist and practitioner. Her experience includes a broad range of indigenous and non-indigenous archaeological projects, heritage planning, historic site conservation, asset management and cultural heritage research. Dr Mclntyre-Tamwoy is a former president of Australia ICOMOS (International Council of Monuments and Sites) and of the Australian Association of Consulting Archaeologists and acts as an expert advisor through ICOMOS to the World Heritage Centre of UNESCO. She is the author of numerous books and book chapters and peer reviewed journal articles.

117 The ABA asked Dr Mclntyre-Tamwoy to provide an opinion on the following question: whether the proposed Action will or is likely to have a significant impact on the National Heritage values of the Australian Alps (or parts of it such as the Alpine National Park in Victoria or the Bogong High Plains or Eastern Alps in it)? In response, Dr Mclntyre-Tamwoy prepared her report dated 11 June 2019.

118 Mr Travers holds the degrees of B.Sc. in Archaeology from the University of Liverpool (1999) and M.A. in Archaeological Heritage Management from the University of York (2001) and is a member of the Chartered Institute for Archaeologists. Since 2015, Mr Travers has been the Associate Director of Extent Heritage Pty Ltd, a consulting firm. Mr Travers has worked as a field archaeologist, consultant and project director in Australia, the UK, Europe and the USA. With an archaeologist background, Mr Travers now specialises in the management of complex

heritage places. Since 2016, Mr Travers has been the president of Australia ICOMOS and is also a Full International Member of ICOMOS and member of its Executive Committee. Since 2017, he has been a Committee Member of the Victorian National Trust Heritage Advocacy Committee.

119 Parks Victoria originally asked Mr Travers to provide an opinion on the following questions:

(a) Do you agree with the opinion expressed by Ms Karen Wykes? If not, in what respects and why do you disagree?

(b) What (if any) adverse consequences would the trapping and removal of horses from the Bogong High Plains over the next few years have for the National Heritage values stated in respect of criterion (g) for the Australian Alps?

(c) If your answer to question (b) was to identify one or more adverse consequences, for each such consequence, would that consequence be a 'significant impact', assessed in accordance with pages 19-22 of the Significant impact guidelines 1.1 prepared by the Commonwealth Department of the Environment (Guidelines)?

(i) If so, why? As part of your answer, please specifically address the relevant significant impact criterion or criteria at page 19 of the Guidelines.

(ii) If not, why not?

120 Mr Travers' first report dated 26 April 2019 responded to those questions. After the ABA filed the report from Dr Mclntyre-Tamwoy, Parks Victoria asked Mr Travers to answer the following questions:

(a) Do you agree with Dr Mclntyre-Tamwoy's opinion that the action proposed by Parks Victoria is likely to have a significant impact on the National Heritage values of the AANP? If not, in what respects and why do you disagree?

(b) Do you agree with Dr Mclntyre-Tamwoy's comments on your 26 April report in part 3.4 of her report? If not, with which comments do you disagree and why do you disagree?

(c) Having considered Dr Mclntyre-Tamwoy's report, is there anything in your 26 April report that you wish to change and, if so, why?

121 Dr Mclntyre-Tamwoy and Mr Travers conferred and filed a joint report and they were cross-examined concurrently. The joint report helpfully summarised areas of agreement and disagreement between the experts.

122 Both Dr Mclntyre-Tamwoy and Mr Travers expressed their opinion on one of the ultimate issues in the proceeding: whether the proposed Action will, or is likely to, have a significant impact on the National Heritage values of the Australian Alps (being the issue raised by s 15B(5) of the EPBC Act). While such opinions are admissible (see s 80 of the *Evidence Act* 1995 (Cth)), it is necessary to scrutinise such evidence carefully to understand the assumptions that are made about the applicable legal standard. In answering that question, both experts made reference to a guideline prepared by the Commonwealth Department of the Environment titled *Matters of National Environmental Significance - Significant Impact Guidelines (2013)* (**Significant Impact Guidelines**). The introduction to those guidelines states (emphasis in original):

> The purpose of these guidelines is to assist any person who proposes to take an action to decide whether or not they should submit a referral to the Australian Government Department of the Environment (the Department) for a decision by the Australian Government Environment Minister (the minister) on whether assessment and approval is required under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
>
> **Under the EPBC Act an action will require approval from the minister if the action has, will have, or is likely to have, a significant impact on a matter of national environmental significance.**
>
> These guidelines outline a 'self-assessment' process, including detailed criteria, to assist persons in deciding whether or not referral may be required. Important terms and phrases are explained in the shaded boxes. The appendix to the guidelines provides further assistance for specific industry sectors.
>
> These guidelines may also assist members of the public or interest groups who wish to comment on actions which have been referred under the EPBC Act.

123 As is apparent from the foregoing, the Significant Impact Guidelines have no legal authority. They represent the Department's interpretation of the "significant impact" question. Nevertheless, certain of the tests propounded in the Significant Impact Guidelines are drawn from the decision of Branson J in *Booth v Bosworth* (2001) 114 FCR 39 (***Booth***), specifically the statements that:

(a) a "significant impact" is an impact which is important, notable, or of consequence, having regard to its context or intensity (Significant Impact Guideline at p 6, cf. *Booth* at [99]-[105]); and

(b) to be "likely", it is not necessary for a significant impact to have a greater than 50% chance of happening; it is sufficient if a significant impact on the environment is a real or not remote chance or possibility (Significant Impact Guideline at p 7, cf. the *obiter* statements in *Booth* at [97]-[98]).

124 It will be necessary to return to the meaning of s 15B(5) below, including the statements in *Booth*.

Evidence of Dr Mclntyre-Tamwoy

125 In her written report, Dr Mclntyre-Tamwoy expressed the opinion that heritage values (ascribed to a place under Division 1A of Part 15 of the EPBC Act and stated in the National Heritage Listing) are articulated by summarising them in short statements that may highlight specific attributes or features that are evidence of, or demonstrate, the value. However, the attributes or features of the value are usually not exhaustively listed in the National Heritage Listing. Dr Mclntyre-Tamwoy was of the view that brumbies are not a heritage value, but are best described as attributes that either embody a particular value or contribute to it. Other examples of cultural heritage attributes that embody or contribute to the National Heritage values of the Australian Alps include the huts, relict pastures, tracks, fences and other physical evidence of pastoralism.

126 In forming her opinions, Dr Mclntyre-Tamwoy had regard to various materials beyond the National Heritage Listing, the most significant of which were:

(a) The Australian Heritage Database for the Australian Alps, which is maintained by the Commonwealth Department of Environment. The Database publishes the National Heritage Listing of places in accordance with s 324P of the EPBC Act, together with additional information about the place.

(b) The National Heritage Assessment Report for the Australian Alps. This report was prepared by the Australian Heritage Council and provided to the Minister in accordance with s 324JH of the EPBC Act for the purposes of determining whether to include the Australian Alps on the National Heritage List.

(c) A report to the Commonwealth Department of Environment and Heritage prepared in 2006 by Truscott, Grinbergs, Buckley and Pearson titled "Assessment of the Cultural Heritage Values of the Australian Alps National Parks" (**Truscott Report**). The Truscott Report was commissioned by the Department as part of its wider assessment of the National Heritage values of the Australian Alps prior to the National Heritage Listing.

(d) A report for the preparation of the Kosciuszko National Park Plan of Management in 2004 by Sullivan and Lennon titled "Cultural Values" (**Sullivan Report**). The Sullivan Report was published as chapter 13 of "An Assessment of the Values of Kosciuszko

National Park by Independent Scientific Committee", NSW National Parks and Wildlife Service.

(e) A report prepared in 2015 by the consulting firm Context Pty Ltd titled "National Cultural Heritage Values Assessment and Conflicting Values Report: The Wild Horse Population, Kosciuszko National Park" (**Context Report**). The Context Report was commissioned by the NSW National Parks and Wildlife Service to better understand the cultural heritage values associated with the Kosciuszko National Park brumby population.

127 In relation to the values listed under criterion (a) (the place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history), Dr Mclntyre-Tamwoy observed that one area of significance under this criterion is the history and evidence of transhumant grazing. Dr Mclntyre-Tamwoy considered that brumbies are surviving evidence related to the transhumant grazing and the management of stock, and are an attribute of the value even though they are not expressly referred to in the National Heritage Listing. Relying on the Truscott and Context Reports, Dr Mclntyre-Tamwoy said that the relationship between brumbies and the particular form of grazing and pastoralism practised in the Australian Alps has long been recognised. Other such evidence specifically mentioned in the Gazettal notice includes the physical fabric of huts, stock routes, tracks, fences and stock yards. In oral testimony, Dr Mclntyre-Tamwoy explained that, based on her wider reading, she considered that brumbies were an attribute of the value because transhumant grazing required the use of horses and, at the time that transhumant grazing was practised, the horses were often left to roam free (and rounded up when required).

128 In relation to the values listed under criterion (e) (the place has outstanding heritage value to the nation because of the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group), Dr Mclntyre-Tamwoy acknowledged that brumbies are not expressly referred to in the statement of values. Nevertheless, Dr Mclntyre-Tamwoy considered that the aesthetic value of the Australian Alps is seen in the totality of the features contributing to its striking and often dramatic beauty, including historic elements that have been integrated into the landscape. Relying on the Truscott and Context Reports, Dr Mclntyre-Tamwoy said that there is evidence that the presence of brumbies adds to the aesthetic value, for example the range of photography that is commercially available of brumbies in the high country and also the historic photos and posters. Dr Mclntyre-Tamwoy accepted, though, that

the contribution of brumbies to the National Heritage values is more fully enunciated in the values described under criterion (a), (g) and (h).

129 In relation to the values listed under criterion (g) (the place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons), Dr Mclntyre-Tamwoy explained in oral testimony that this criterion is about association of people and place. The values listed under this criterion refer to a range of communities of people who have an association with the Australian Alps, including the descendants of the pastoralists who grazed cattle in the Alps. Dr Mclntyre-Tamwoy expressed the view that brumbies are recognised explicitly in the statement of values. She rejected the notion that the relevant value merely involves the 'memory of brumbies' or an idealised construction of horsemanship that is independent of the physical presence of the brumbies in the environment. In her opinion, the physical presence of brumbies in the Australian Alps contributes to the National Heritage values both tangibly through their continued presence and intangibly through the social connection of communities, oral histories, films and literature.

130 In relation to the values listed under criterion (h) (the place has outstanding heritage value to the nation because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history), Dr Mclntyre-Tamwoy expressed the opinion that this value is about association of people to place, in this case Banjo Paterson and Elyne Mitchell. The value exists due to the enduring legacy of their literary works, and the reworking of these into films and performances. Dr Mclntyre-Tamwoy gave evidence that if all traces of the world that their works evoke are removed from the landscape, so as to create a new landscape of an imagined natural past, then the connection reflected in the National Heritage value would be diminished in the physical cultural landscape. However, in oral testimony, Dr Mclntyre-Tamwoy said that she agreed with Mr Travers that the removal of the brumbies from the Australian Alps would not break the connection between, relevantly, Banjo Paterson and Elyne Mitchell and the Australian Alps.

131 As stated above, in relation to the question whether the proposed Action will have, or is likely to have, a significant impact on the National Heritage values of the Australian Alps, Dr Mclntyre-Tamwoy made reference to the Significant Impact Guidelines and the definition of "significant impact" being an impact which is important, notable, or of consequence, having regard to its context or intensity. Dr Mclntyre-Tamwoy also referred to another part of the

Significant Impact Guidelines (p 19) which stated that an action is likely to have a significant impact on the National Heritage values of a National Heritage place if there is a real chance or possibility that it will cause:

(a) one or more of the National Heritage values to be lost;

(b) one or more of the National Heritage values to be degraded or damaged; or

(c) one or more of the National Heritage values to be notably altered, modified, obscured or diminished.

132 Applying those tests, Dr Mclntyre-Tamwoy said that it is difficult to say with certainty that the proposed Action *will* have a significant impact; however, she considered that it *is likely to* have such an impact given the scale of the proposed Action. In part, that conclusion is based on Dr Mclntyre-Tamwoy's view that the Plan failed to assess the impact of the proposed Action on heritage values. Dr Mclntyre-Tamwoy considered that, amongst others, the following questions had not been addressed in the Plan:

(a) is the retention of inanimate physical fabric such as huts and fences adequate to maintain and conserve the historic cultural values under criteria (a), (g) and (h);

(b) is the retention of some brumbies enough to maintain the social connection that some descendant groups and communities have with the landscape and, if so, how many is enough;

(c) given that cattle and sheep have been removed from the Bogong High Plains and Eastern Alps for many years, if brumbies are also removed from the high country, how will the relict landscapes of past grazing areas or areas of open grassland be conserved;

(d) what public access is there to the areas where brumbies will still reside; and

(e) if the proposal to leave some brumbies in the Eastern Alps is about maintaining a manageable 'relict' population of brumbies in recognition of their heritage value, how has the size and distribution of that population been decided on?

Evidence of Mr Travers

133 Mr Travers explained that, in making an assessment of the significance of any potential adverse impacts to the heritage values of the Australian Alps, he places considerable emphasis on the statement of heritage values contained in the National Heritage Listing. This is because the National Heritage Listing is central to the heritage management process established by the EPBC Act. Mr Travers considers it significant that the National Heritage Listing for the

Australian Alps makes only tangential reference to brumbies as an attribute expressing some of the values for which the place is listed. Mr Travers observes that brumbies are never referred to in the listed National Heritage values as an attribute of the values, and the word is used only once in the title to Elyne Mitchell's book series, The Silver Brumby. Even in the National Heritage Assessment Report, brumbies are only referred to in a tangential way.

134 In relation to criterion (a) (the place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history), Mr Travers noted that the criterion relates to historical significance. While the Australian Alps are listed for, among other things, the importance to Australia's history of transhumant grazing, which was an historical activity in the high country that involved horses and horsemanship, the Listing does not specifically reference brumbies or horses as an aspect of this historical practice. The Listing specifically refers to some of the physical evidence of transhumant grazing that survives in the listed area (huts, former grazing landscapes, stock yards, and stock routes) but does not include the descendants of the horses that were ridden by the pastoralists in the past (i.e. today's brumbies). Mr Travers takes the omission of brumbies from the Listing as significant. He considers that it is an indication that the assessment process did not identify contemporary feral horses in the Australian Alps as being necessary to an appreciation and celebration of the Alps' historical heritage values. In oral testimony, Mr Travers made the further observation that the horse population of the Australian Alps has changed over time in size and geographic extent, and in that sense they are not sufficiently significant to be considered an attribute of the National Heritage value. The process of interaction between people and the brumbies has changed because the horses are no longer being rounded up and ridden.

135 The ABA did not rely on the National Heritage values stated in respect of criterion (d). Nevertheless, Mr Travers expressed the opinion that the stated values are informative. Criterion (d) is that the place has outstanding heritage value to the nation because of the place's importance in demonstrating the principal characteristics of (i) a class of Australia's natural or cultural places or (ii) a class of Australia's natural or cultural environments. The National Heritage value of the Australian Alps listed against criterion (d) relates to the North-East Kosciuszko pastoral landscape, which is described as outstanding for demonstrating the use of mountain resources, namely the summer grasses and herbfields. The statement of values says that, as a relict landscape of past grazing leases, it conveys the principal characteristics of transhumance and permanent pastoralism in a remote environment, these being large areas of

open grassy landscapes between timbered ridges and hills, stockman's huts, homestead complexes, stockyards and stock routes. Mr Travers expressed the opinion that the omission of any reference to brumbies is significant. Although horses and horsemanship were a part of the pastoral way of life, the assessment process did not identify brumbies in the Australian Alps as making an important contribution to the ability of people to appreciate the heritage values, but rather referred to other physical manifestations of the pastoral life being open grassy landscapes, stockman's huts, homestead complexes and former stock routes.

136 In relation to the values listed under criterion (e) (the place has outstanding heritage value to the nation because of the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group), Mr Travers observed that the Australian Alps are included on the National Heritage List for their aesthetic values including their "powerful, spectacular and distinctive landscape". Importantly, the aesthetic values identified by the National Heritage Listing focus on the natural landscapes evident within the listed area using phrases such as "mountain vistas", "remoteness", "naturalness", and "wild and natural". Although "huts in mountain settings" are noted, the naturally occurring features of the Australian Alps ("snow-clad eucalypts", "wildflowers", "forests", "high peaks" and "natural sounds") are critical to the aesthetic values included in the Listing and predominate. In oral testimony, Mr Travers agreed with Dr Mclntyre-Tamwoy that, in heritage matters, there is no divide between nature and culture and cultural features are equally important (for example, the artificial lakes and huts that are mentioned in the National Heritage Listing). However, Mr Travers considers that the omission of any reference to brumbies indicates that brumbies do not speak to the values identified.

137 In relation to the values listed under criterion (g) (the place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons), Mr Travers noted that the National Heritage Listing refers to a number of communities for whom the Australian Alps has a special association, including nature lovers who value its remoteness; people who enjoy snow recreation; Australians who enjoy the pioneering history; and Australians who value the mining and recreation history of the area. Mr Travers observed that the Listing makes only passing reference to brumbies. He accepted, though, that the Listing describes the Australian Alps' relevance to the "pioneering history of the high country" and to "horsemanship" and the poem called "The Man from Snowy River" and, therefore, that the brumby is a part of the "high country" story of relevance to criterion (g).

138 In relation to the values listed under criterion (h) (the place has outstanding heritage value to the nation because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history), Mr Travers noted that the National Heritage Listing identifies five individuals with associations with the listed area:

(a) Baron Ferdinand von Mueller, a botanist who had no association with the brumbies;

(b) Eugene von Guerard, a painter who represented the Australian Alps' landscape, but brumbies are not depicted in his art;

(c) David Campbell, a farmer, poet and writer who has no close association with brumbies;

(d) Banjo Paterson, a poet who wrote the Man from Snowy River and other poems which reference the brumbies; and

(e) Elyne Mitchell, a writer whose work includes the Silver Brumby.

139 Mr Travers expressed the opinion that an undue focus on the work of Banjo Paterson has the potential to cause adverse impacts on the multiple and overlapping heritage values embodied by the Australian Alps. Mr Travers was also of the view that, if the proposed Action were undertaken, the associations of Banjo Paterson and Elyne Mitchell would still be capable of being read in the landscape and understood more generally through the surviving stockman's huts, historical documents and photographs, film and literature, and folk memory.

140 Applying the concept of "intensity" of impact drawn from the Significant Impact Guidelines, Mr Travers expressed the view that the proposed Action would impact only a small proportion of the brumby population of the Australian Alps and be confined to only one part of a much larger area of the Australian Alps (the Bogong High Plains and the Eastern Alps). In that respect, Mr Travers noted that, in 2016, the Australian Alps National Parks put the horse population in the Park at 9,455. Assuming similar numbers at present, the proposed removal would therefore leave over 86% of the total horse population. Mr Travers also assumed that the reduction in the number of horses in the Eastern Alps, to about 1,150 horses, would leave a viable horse population in the Eastern Alps. Mr Travers concluded that any impact of the proposed Action would be of relatively low "intensity" and would be confined to part of a larger area of considerable geographic extent.

141 In relation to the concept of "context" drawn from the Significant Impact Guidelines, Mr Travers considered it relevant that:

(a) The brumby is only one of many attributes of the Australian Alps' cultural heritage. It is of secondary importance to most of the other attributes included in the National Heritage Listing. This is reflected in the infrequency with which the brumby is actually referenced in the Listing.

(b) The proposed Action would have no impact on a person's ability to understand the historic values of the Australian Alps (criterion (a)), which can be appreciated through other attributes and sources. The brumby is only part of that story, as reflected in the National Heritage Listing. Further, brumbies will continue to inhabit the Australian Alps outside of the Bogong High Plains.

(c) The ability of people to see and engage with brumbies within the alpine environment of the Australian Alps, outside of the Bogong High Plains area, would be unaffected (criteria (a), (d) and (e)). In other words, the geographic extent of the impacted area would be relatively small and confined to a discrete area.

(d) The ability to understand and appreciate the 'associations' (criteria (g) and (h)) of the Australian Alps would remain unaffected by the proposed Action. These associations would still be readable within the Bogong High Plains landscape through the surviving stockman's huts, stockades, homestead complexes and former stock routes. It could also be achieved by appropriate heritage interpretation measures (e.g. engaging signage, 'heritage trails', web-based delivery of information, research), many of which are already in place as part of Parks Victoria's visitor management strategies.

(e) Failure to manage the brumby population in the Bogong High Plains would result in adverse impacts (some of them irreversible) on a range of other heritage values (both cultural and natural) for which the Australian Alps are included on the National Heritage List.

142 Overall, Mr Travers expressed the opinion that the proposed Action will not be likely to have a significant impact on the National Heritage values of the Australian Alps under the EPBC Act.

The joint report and concurrent evidence

143 As stated above, the heritage experts conferred and prepared a joint report. The joint report largely reflected their differing opinions, although it helpfully encapsulated the key areas of agreement and disagreement. In oral testimony, the experts expanded on their statements in the joint report and were cross-examined.

144 The joint report and the concurrent evidence made clear that the difference in the opinions of Dr Mclntyre-Tamwoy and Mr Travers stemmed from their differing interpretation of the values stated in the National Heritage Listing. Dr Mclntyre-Tamwoy interpreted the statement of values in the National Heritage Listing as a summary and the absence of express references to brumbies did not detract from them as significant attributes of the National Heritage values. Dr Mclntyre-Tamwoy considered that the brumbies are to be read into the statement of values in the National Heritage Listing, having regard to the Assessment Report and other heritage reports such as the Truscott, Sullivan and Context Reports. Conversely, Mr Travers interpreted the statement of values in the National Heritage Listing as a conclusive statement of the values which made deliberate reference to attributes of the values. While Mr Travers agreed that brumbies in the Australian Alps have cultural heritage significance, the omission of express reference to brumbies in the Listing indicated that they are not significant attributes of the listed National Heritage values.

145 The joint report also recorded that Dr Mclntyre-Tamwoy and Mr Travers agreed that the Action would not have a significant impact on the values in the National Heritage Listing stated in respect of criterion (h). However, in re-examination, Dr Mclntyre-Tamwoy reverted to the opinion stated in her report that the Action would be likely to have a significant impact on that value.

146 In general, I did not consider that the cross-examination of the heritage experts resulted in any material change to the opinions expressed by the experts. I consider that each of the experts made concessions where it was appropriate to do so, and I consider that each of the experts expressed opinions held by them and were not advocates for the party calling them.

147 An aspect of the cross-examination of Dr Mclntyre-Tamwoy illustrated her approach to the interpretation of the values stated in the National Heritage Listing. In relation to criterion (g), the National Heritage Assessment Report concluded with the statement that "The AANP has outstanding value to the nation under criterion (g) for its association with the broad Australian community because of its landscape, the myth of 'The Man from Snowy River' and the legends of horsemanship undertaken in the rugged landscape". Dr Mclntyre-Tamwoy expressed the opinion that, while the Report did not refer to the presence of brumbies, it did not exclude the brumbies. Dr Mclntyre-Tamwoy interpreted the statement as including a cultural association between the pastoral community, and the broader Australian community, with brumbies. Similarly, in relation to criterion (h), the Assessment Report said that "The ballad [The Man

from Snowy River] created a mythical character with extraordinary horse-riding prowess that has become a distinctive part of Australia's cultural heritage…" and "Albert Barton Paterson, Banjo, captured the Australian people's imagination and stimulated a passion for the mountain country and the way of life associated with the mountains through his work". Dr Mclntyre-Tamwoy expressed the opinion that, while brumbies are not mentioned in the Assessment Report, the National Heritage values are concerned with connections and, in her opinion, it is not possible to separate the literary work from the brumby.

148 It should be noted that, in cross-examination, Mr Travers corrected two aspect of his reports. First, in his report, Mr Travers stated his understanding that Parks Victoria includes heritage interpretation in its management responsibilities, which is commonly done through signage, booklets and web-based information. Mr Travers explained that this provided opportunities to include reference to the pastoral way of life, including the brumby, which was relevant to the mitigation of potential adverse heritage impacts. In cross-examination, Mr Travers accepted that mitigation actions of that kind were not expressly referred to in the Plan and that his evidence should be understood as a statement of steps that could be taken by Parks Victoria by way of mitigation. Second, in his report, Mr Travers expressed the opinion that the Action would have a "low to moderate adverse impact on the AANP's heritage values". In cross-examination, he said that the reference to "heritage values" was not to the listed National Heritage values but to heritage values in a broader sense.

Overall assessment of the heritage evidence

149 As already noted, the difference in the opinions of Dr Mclntyre-Tamwoy and Mr Travers stemmed from their differing approach to the interpretation of the National Heritage values of the Australian Alps. Dr Mclntyre-Tamwoy considered that National Heritage values are articulated in the Listing by summarising them in short statements that may highlight specific attributes or features that are evidence of, or demonstrate, the value, but which are not an exhaustive statement or list of the attributes or features of the value. In her opinion, the brumbies are an attribute of a number of the National Heritage values, even though they were not expressly referred to, because they are implicit or inherent in the pastoral stories and lifestyle that are referred to in the values. Conversely, Mr Travers interpreted the statement of values in the National Heritage Listing as a conclusive statement of the values which made deliberate reference to particular attributes of the values. The validity of the differing approaches of the heritage experts depends on the proper construction of s 15B(5) and the

identification of the National Heritage values of the Australian Alps, which is considered further below.

Ruling on the evidence of Ms Slattery

150 The ABA objected to the entirety of Ms Slattery's report on two grounds: that her evidence was irrelevant under s 56 of the *Evidence Act 1995* (Cth) and that her opinions expressed in the report were not wholly or substantially based on any specialised knowledge based on her training, study or experience, with the result that the exception to the opinion rule in s 79 of the Evidence Act was not engaged. I ruled that the entirety of Ms Slattery's report was inadmissible on the basis that her evidence was irrelevant under s 56 of the Evidence Act. It was not necessary for me to rule separately on the ABA's objections to Ms Slattery's report based on her knowledge and experience.

151 Ms Slattery is an Adjunct Senior Lecturer in the School of Outdoor and Environmental Education at La Trobe University at the Bendigo campus. She holds the degrees of B.A. from the University of Melbourne (1966), Dip.Ed. from the University of Melbourne (1967) and M.Sc. of Environmental Studies from the University of Melbourne (1985). Ms Slattery has written a number of reports on the environmental history of the Australian Alps, the impacts of feral horses in the Australian Alps and cultural attitudes to alpine areas.

152 Ms Slattery was asked to prepare a report responding to questions focussed on the following three topics:

(a) The first topic concerned the values referred to in the National Heritage Listing. The questions stated that the "Relevant Values" were defined by reference to literary works by Banjo Paterson and Elyne Mitchell and asked:

> What was the literary genre or context within which those works were produced?
>
> What was the cultural and historical context in which those works were produced?
>
> What cultural values are reflected in those works?
>
> What is the geographical area where each of those works is primarily set, or with which it is primarily connected?

Is the literary, cultural and/or historical context within which those works were produced the same or different from the current literary, cultural and/or historical context?

If your answer to the preceding question is that some aspect of the current literary, cultural and/or historical context is different, then which aspects are different; how and why have they changed; and how (if at all) do those changes affect the way in which the Relevant Values have meaning for Australians today?

(b) The second question asked what impacts the trapping and removal of horses from the Bogong High Plains over the next few years would have for the Relevant Values, as defined in question (a).

(c) The third question asked what impacts the trapping and removal of 400 horses per year over the next 2 remaining years of the Plan from the Alpine National Park would have for the Relevant Values, as defined in question (a).

153 In my view, the questions asked of Ms Slattery were misconceived. They were based on the premise that the National Heritage values of the Australian Alps are defined by the literary works of Banjo Paterson and Elyne Mitchell. The premise is wrong. While the National Heritage Listing makes reference to certain of the literary works of Banjo Paterson and Elyne Mitchell, it is not the case that the values for which the Australia Alps have been listed are to be discerned by a literary analysis of those works. The National Heritage Listing states the applicable values expressly. In respect of Banjo Paterson, the Listing states that "*Through his ballad The Man from Snowy River, Andrew Barton 'Banjo' Paterson captured the imagination of the Australian people, stimulating a passion for the High Country and the way of life associated with the mountains"* and "*The ballad of The Man from Snowy River epitomises horsemanship undertaken historically in the rugged landscape".* It is clear that the relevant value reflected in those statements is the way of life associated with the alpine area and horsemanship undertaken in the rugged landscape. In respect of Elyne Mitchell, the Listing states "*The stories, legends and myths of the mountains and mountain lifestyles have been romanticised in books, films, songs, and television series and many such as the Elyne Mitchell's Silver Brumby novels are part of Australia's national identity"* and *"The writer Elyne Mitchell and poet David Campbell lived near the mountains and their strong association with the place is expressed in much of their nationally important literary works".* Again, the relevant values reflected in those statements are, first, the stories and myths of the mountains and mountain

lifestyle and, second, the association of the alpine areas with those writers. It may be accepted that a baseline knowledge of the literary works of Banjo Paterson and Elyne Mitchell informs an understanding of those values; however, it is wrong to suggest that the listed values are intended to incorporate all of the values reflected in those literary works.

154 Ms Slattery's response to the first question involved a detailed socio-political commentary on the values depicted in the works of Banjo Paterson and Elyne Mitchell. That is not a criticism of Ms Slattery's report; she answered the questions asked of her. However, the response is entirely irrelevant to the issues in the proceeding. To illustrate, in answering the question of what cultural values are reflected in Banjo Paterson's works, Ms Slattery expressed the opinion that:

> Paterson's verse, influential as it was, can be seen as at the romantic extreme of the Bulletin's vision of Australian life and values, and it was ridiculed in a humorous poetic slanging match between Lawson and Paterson from 1892-97. Other contributors also argued that Paterson's verse was not an accurate or honest portrayal of bush life at the time and that his highly popular but strongly romanticised view of brumby hunting and many other aspects of rural life showed that he was 'blinded to the real'. For a year or so, debate over the real nature of Australian life featured in many issues of the Bulletin. It is now generally accepted that the Australia depicted by Lawson is a more truthful and enduring picture than the roistering, mainly cheerful tales of Paterson, although less well known.
>
> Paterson does not deal with nature for its own sake, but always as a context for the struggles or triumphs of his bush characters. He is not interested in wilderness or wildlife, or in controversy around the place of feral animals in Australian settings.

155 In answering the question whether the literary, cultural and/or historical context within which Banjo Paterson's works were produced is the same or different from the current literary, cultural and/or historical context, Ms Slattery expressed the opinion that:

> The laissez-faire social and ecological context of the pastoral era has gone. Horses were contradictorily able to roam free of ownership or responsibility on public land, but be used as a personal economic asset when required, be hunted from private land for causing damage, but impact without control on public land. Such a situation is no longer possible, or accepted, leaving a set of unresolved problems. These problems include the lack of traditional controls on population numbers, provoked by their loss of commercial value; the spread of horses to areas where they were either non-existent or had become extinct; a social reversal in sensitivity about welfare and control methods for feral horses; a rejection of the aesthetic of pastoralism by many National Park users and bush lovers who dislike seeing feral animals, piles of dung and polluted water courses; and a gradual acceptance by many people that concerns about the presence and impacts of hard hooved grazing animals for at least 150 years have been validated and their presence regulated as a consequence. For the last 40-50 years in Victoria, the alternative cultural, social and economic value of protected alpine areas for catchment, free of exotic pests have emerged as dominant. This is now heritage.

156 In my view, those opinions are irrelevant to the interpretation of the values stated in the National Heritage Listing and, as a consequence, are irrelevant to answering the statutory question whether the proposed Action is likely to have a significant impact on the National Heritage values of the Australian Alps. I emphasise again that the rejection of Ms Slattery's evidence involves no criticism of her report or opinions. By reason of the questions asked of her, her report is irrelevant to the issues to be determined in the proceeding. The erroneous premise that underpins the first question asked of Ms Slattery necessarily infects the second and third questions. That is because Ms Slattery was asked to express her opinion on the impact of the proposed Action on the "Relevant Values", being the values identified in the first question.

THE SECTION 15B(6) ISSUE

157 Section 15B(6) of the EPBC Act provides that subsection (5) only applies to actions whose prohibition is appropriate and adapted to give effect to Australia's obligations under Article 8 of the Biodiversity Convention. That gives rise to the first question requiring determination in the proceeding: whether prohibiting the Action, involving the removal of brumbies from the Bogong High Plains and the reduction in number of brumbies in the Eastern Alps, is appropriate and adapted to give effect to Australia's obligations under Article 8 of the Biodiversity Convention.

158 The competing submissions of the parties raised a number of issues relating to the proper construction of s 15B(6) as well as the application of the s 15B(6) to the facts of the case. It is convenient to refer first to Article 8 of the Biodiversity Convention and other provisions of the Convention relied on by the parties, before addressing the issues of construction and the parties' arguments.

The Biodiversity Convention

159 The Biodiversity Convention is the Convention on Biological Diversity done at Rio de Janeiro on 5 June 1992, as amended and in force for Australia from time to time (see s 528 of the EPBC Act).

160 Article 8 of the Biodiversity Convention is titled "In-situ Conservation". Relevantly, it obliges Australia, as a contracting party, as far as possible and as appropriate, to:

> (a) Establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity;

…

(c) Regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas with a view to ensuring their conservation and sustainable use;

(d) Promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings;

…

(h) Prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species;

…

(i) Endeavour to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components;

…

161 The Convention is to be construed by reference to the principles stated in the Vienna Convention on the Law of Treaties (the **Vienna Convention**): *Minister for Immigration and Multicultural and Indigenous Affairs v QAAH of 2004* (2006) 231 CLR 1 at [34]; *Povey v Qantas Airways Limited* (2005) 223 CLR 189 at [24] per Gleeson CJ, Gummow, Hayne and Heydon JJ; and *Applicant A v Minister for Immigration and Ethnic Affairs* (1997) 190 CLR 225 at 240 per Dawson J and at 251-256 per McHugh J. Relevantly, Art 31 of the Vienna Convention provides that a treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose, where context is defined to include not only the text of the relevant provision but also the preamble and annexes to the treaty. By Art 32 of the Vienna Convention, it is also possible to look to the preparatory words of the treaty (the *travaux preparatoires*) as a supplementary means of interpretation.

162 The ABA relies on the following aspects of the Biodiversity Convention as part of the context in which to construe Article 8.

163 First, the ABA relies on the preamble to the Biodiversity Convention which commences with the statement that the contracting parties are:

> CONSCIOUS of the intrinsic value of biological diversity and of the ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic values of biological diversity and its components.

164 The ABA emphasises that the Biodiversity Convention recognises the cultural value of biological diversity.

165 Second, biological diversity is defined in Article 2 as follows:

> "Biological diversity" means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems.

166 Third, Article 7, titled "Identification and Monitoring" provides as follows:

> Each Contracting Party shall, as far as possible and as appropriate, in particular for the purposes of Articles 8 to 10:
>
> (a) Identify components of biological diversity important for its conservation and sustainable use having regard to the indicative list of categories set down in Annex I;…

167 Annex 1 identifies the following list of categories of components of biological diversity:

> 1. Ecosystems and habitats: containing high diversity, large numbers of endemic or threatened species, or wilderness; required by migratory species; of social, economic, cultural or scientific importance; or, which are representative, unique or associated with key evolutionary or other biological processes;
>
> 2. Species and communities which are: threatened; wild relatives of domesticated or cultivated species; of medicinal, agricultural or other economic value; or social, scientific or cultural importance; or importance for research into the conservation and sustainable use of biological diversity, such as indicator species; and
>
> 3. Described genomes and genes of social, scientific or economic importance.

168 Again, the ABA emphasises that components of biological diversity important for conservation and sustainable use include ecosystems and species of cultural importance. The ABA submitted that that list of categories in Annex 1 was adopted by Australia in its first national strategy for implementing the Biodiversity Convention published in 1996 and titled "National Strategy for the Conservation of Australia's Biological Diversity".

Proper construction of s 15B(6)

169 Section 15B prohibits actions that will have, or are likely to have, a significant impact on the National Heritage values of a National Heritage place taken by particular persons or in particular circumstances. It is common ground that each subsection of s 15B is expressed so as to engage a head of Commonwealth constitutional power. National Heritage values can be protected:

(a) under subsection (1) from actions taken by constitutional corporations, the Commonwealth and Commonwealth agencies (relying on s 51(xx) and (xxxix) of the Constitution);

(b) under subsection (2) from actions taken by any person for the purpose of inter-state or international trade or commerce (relying on s 51(i) and (xxxix) and s 122 of the Constitution);

(c) under subsection (3) from actions taken in Commonwealth areas or Territories (relying on s 51(xxxix) and s 122 of the Constitution); and

(d) under subsection (4) from actions impacting indigenous heritage values (relying on s 51(xxvi) of the Constitution).

170 On its own, subsection (5) would not engage a relevant head of power. An attempt by the Commonwealth to legislate to protect property that was "part of the heritage distinctive of the Australian nation", as an exercise of the "implied power derived from nationhood", was rejected in *Commonwealth v Tasmania* (1983) 158 CLR 1 (the ***Tasmanian Dams case***) at 109 per Gibbs CJ, 203-204 per Wilson J, 253 per Deane J and 323 per Dawson J. Subsection (6) qualifies the scope of subsection (5) so as to engage the external affairs power in s 51(xxxix) of the Constitution: *Secretary, Department of Sustainability and Environment (Vic) v Minister for Sustainability, Environment, Water, Population and Communities (Cth)* (2013) 209 FCR 215 (the ***Cattle Grazing case***) at [126]; see also *Secretary, Department of Primary Industries, Parks, Water and Environment v Tasmanian Aboriginal Centre Inc* (2016) 244 FCR 21 (the ***Recreational Vehicles case***) at [59].

171 The language used in subsection (6), whether prohibition of the action (by subsection (5)) is *appropriate and adapted* to give effect to Australia's obligations under Article 8 of the Biodiversity Convention, references decisions of the High Court concerning the validity of laws enacted under the external affairs power. As the High Court stated in *Victoria v The Commonwealth* (1996) 187 CLR 416 (the ***Industrial Relations case***) at 487:

> To be a law with respect to "external affairs", the law must be reasonably capable of being considered appropriate and adapted to implementing the treaty.

172 The High Court went on to explain that the test of "appropriate and adapted" is directed to the question whether the purpose or object of the law is to implement the relevant treaty in the sense of being reasonably capable of being considered as giving effect to the treaty. In the *Tasmanian Dams* case, Brennan J expressed the test as whether the law can reasonably be considered to be conducive to the objects of the treaty (at 231-2).

173 Thus, in assessing, under subsection (6), whether the prohibition of an action is *appropriate and adapted* to give effect to Australia's obligations under Article 8 of the Biodiversity

Convention, it is necessary to consider whether the prohibition of the action is reasonably capable of being considered as giving effect to Article 8 of the Biodiversity Convention.

174 The ABA advanced a broader construction of subsection (6), submitting that the relevant test is whether the prohibition of the action "has a sufficient connection with Article 8 of the Biodiversity Convention". The ABA drew that language from statements of Kenny J made in the *Cattle Grazing case* at [144], [156], [160], [170] and [176]. In my respectful view, the statements of Kenny J in those paragraphs are not propounding a broader test for the phrase "appropriate and adapted" but using a shorthand expression to refer to the necessary connection between, relevantly, the prohibition of the action and the obligations under Article 8 of the Biodiversity Convention.

175 Parks Victoria submitted that the effect of subsection (6) is that subsection (5) only prohibits actions which have a significant impact on National Heritage values the protection of which gives effect to Australia's Article 8 obligations. It developed that argument as the centrepiece of its defence of the proceeding. It argued that the National Heritage values sought to be protected by the ABA in the proceeding (by the prohibition of the Action) are social, historic or cultural heritage values. In particular, it argued that:

(a) the "transhumant grazing" value under criterion (a) is an historic heritage value;

(b) the "Australian identity" value under criterion (g) is a social or cultural heritage value; and

(c) the "great Australian writers" value under criterion (h) is an historic or cultural heritage value,

and that none of those values have anything to do with Australia's Article 8 obligations.

176 Although the "aesthetic" value under criterion (e) might be classified as a natural heritage value, it also has nothing to do with Australia's Article 8 obligations.

177 Parks Victoria argued that it followed that subsection (6) did not apply and, for that reason, the Action was not prohibited under subsection (5). Parks Victoria submitted that its argument is supported by (albeit obiter) statements of Kenny J in the *Cattle Grazing case* at [176]-[177] to the effect that the obligations in Article 8 of the Biodiversity Convention do not extend to the conservation of aesthetic and recreational values.

178 As argued by the ABA, Parks Victoria's construction of subsections (5) and (6) does not flow directly from the text of the provisions. Neither subsection (5) nor (6) applies to "impacts on

National Heritage values"; the subsections apply to "actions". The word "action" is defined in Subdivision A of Division 1 of Part 23 of the EPBC Act (see s 528). Relevantly, s 523 provides that the word "action" includes an activity or series of activities. Expressing the prohibition in subsection (5) jointly with the qualification in subsection (6), a person is prohibited from taking an *action* that will have or is likely to have a significant impact on the National Heritage values of a National Heritage place (which must be in an area in respect of which Australia has obligations under Article 8 of the Biodiversity Convention) if and only if the prohibition of the action is appropriate and adapted to give effect to Australia's obligations under Article 8 of the Biodiversity Convention. The two questions raised by the subsections are whether the *action* will cause a significant impact on National Heritage values and whether prohibition of the *action* is appropriate and adapted to give effect to Australia's Article 8 obligations. The ABA argued that the second question stands independently of the first question. In other words, subsection (6) should be applied having regard to all effects of the relevant action, not limited to the impacts on the National Heritage values identified by the application of subsection (5). If any effects of the relevant action impinge on Australia's Article 8 obligations, subsection (6) can be applied to those effects in order to determine whether prohibiting the action is appropriate and adapted to give effect to Australia's Article 8 obligations.

179 In contrast, Parks Victoria's construction of subsection (6) involves an implicit limitation or qualification which can be expressed by reformulating the subsection as follows: subsection (5) only applies to actions whose prohibition is appropriate and adapted to give effect to Australia's obligations under Article 8 of the Biodiversity Convention *by reason of their significant impact on the National Heritage values referred to in subsection (5)*. The qualification introduces a requirement, not found in the literal text of subsection (6), that consideration of whether prohibiting the action is appropriate and adapted to give effect to Australia's Article 8 obligations is confined to considering the impact of the action on the National Heritage values of the place.

180 For reasons explained below, the result in this proceeding does not turn on whether Parks Victoria's approach to the interpretation of subsection (6) is correct. Nevertheless, I consider that Parks Victoria's interpretation is to be preferred to the ABA's interpretation.

181 When construed contextually and purposively, I prefer the view that subsections (5) and (6) are intended to operate in a dependent manner, not in an independent manner. When construed in a dependent manner, in my view subsection (6) is intended to limit the application of subsection

(5), in order to bring subsection (5) within the external affairs power, such that subsection (5) will only operate to prohibit an action that will or is likely to have a significant impact on a National Heritage value in circumstances where the prohibition (that is, the prohibition under subsection (5) for the reason stated in subsection (5)) is appropriate and adapted to give effect to Australia's Article 8 obligations. The following contextual and purposive considerations are important. First, the subject matter of s 15B is concerned with National Heritage values. It prohibits actions that have a significant impact on those values. Second, the legal validity of the prohibitions in the section depend upon available heads of Commonwealth constitutional power. In respect of subsections (5) and (6), the relevant head of power is the external affairs power, giving effect to the Biodiversity Convention. Third, within that context, subsection (6) is concerned with actions whose prohibition under subsection (5) is appropriate and adapted to give effect to Australia's Article 8 obligations. The assessment of whether the prohibition of an action under subsection (5) is *appropriate and adapted* to give effect to Australia's Article 8 obligations requires an assessment of the purpose of the prohibition, in the sense of whether the prohibition of the action is reasonably capable of being considered as giving effect to those obligations (see *Industrial Relations case* at 487). The relevant purpose of the prohibition of an action under subsection (5) is to prevent a significant impact on one or more National Heritage values. It follows, in my view, that the assessment required by subsection (6) involves consideration of whether the protection or conservation of the National Heritage values, to be brought about by the prohibition of an action under subsection (5), is reasonably capable of being considered as giving effect to Australia's Article 8 obligations.

182 While the construction of subsection (6) propounded by Parks Victoria requires reading the subsection as subject to an implicit qualification which is not expressly stated, in my view the construction represents an orthodox approach to the interpretation of the subsection consistent with the principles stated in *Taylor v Owens – Strata Plan No 11564* (2014) 253 CLR 531 at [37]-[38] per French CJ, Crennan and Bell JJ, and at [65]-[66] per Gageler and Keane JJ. While Gageler and Keane JJ were in dissent as to the result, their Honours' observations in those paragraphs were consistent with those of the majority and have been referred to with approval in *HFM043 v Republic of Nauru* (2018) 359 ALR 176 at [24].

183 The construction of subsection (6) propounded by Parks Victoria was the subject of argument in the *Cattle Grazing case*; see for example at [29], [35], [119], [142]-[144]. However, Kenny J did not need to determine the question of construction because the relevant action in that case had impacts on National Heritage values of ecology and species diversity as well as recreational

and aesthetic values (see at [154]-[160]). Accordingly, in that case subsection (6) operated in respect of the action because of the impact on National Heritage values relevant to Australia's Article 8 obligations (see at [160]).

Consideration of subsection (6)

184 The ABA advanced two primary arguments for why prohibition of the Action is appropriate and adapted to give effect to Australia's Article 8 obligations:

(a) The first argument is that the cultural heritage impacts sought to be prevented by prohibiting the Action are sufficiently connection to Australia's obligations under Article 8 of the Biodiversity Convention to satisfy the requirement in subsection (6).

(b) The second argument is that prohibiting the Action is appropriate and adapted to give effect to Australia's Article 8 obligations because:

(i) relying on the evidence of Dr Berman, brumbies may have a positive impact on the ecosystem (which gives effect to Australia's obligations in Article 8(d)); and/or

(ii) relying on the evidence of Prof van der Werf, brumbies may be genetically unique (which gives effect to Australia's obligations under Article 8(c)).

185 Parks Victoria also advanced two primary arguments for why prohibition of the Action is not appropriate and adapted to give effect to Australia's Article 8 obligations:

(a) The first argument, based on Parks Victoria's construction of subsection (6) considered above, is that none of the National Heritage values sought to be protected by the ABA pursuant to subsection (5) relate to Australia's Article 8 obligations.

(b) The second argument is that, even applying the ABA's preferred construction of subsection (6), the Plan gives effect to several of Australia's Article 8 obligations, particularly those under Article 8(d) and (h) and, for that reason, prohibition of the Action cannot be appropriate and adapted to give effect to Australia's Article 8 obligations.

186 I accept both of Parks Victoria's arguments and I reject both of the ABA's arguments.

187 The first argument for each of the ABA and Parks Victoria focusses on the nature of the National Heritage values sought to be protected by prohibiting the Action. It is convenient to address those arguments collectively. The second argument for each of the ABA and Parks

Victoria focusses on the biodiversity and environmental effects of the Action and its prohibition. It is also convenient to address those arguments collectively. I will address the second argument first.

Biodiversity and environmental effects of the Action and its prohibition

188 For the following reasons, I consider that the Plan gives effect to several of Australia's Article 8 obligations, particularly those under Articles 8(d) and (h) and, for that reason, prohibition of the Action cannot be appropriate and adapted to give effect to Australia's Article 8 obligations. I reach that conclusion even if the ABA's preferred construction of subsection (6) is applied; that is, under subsection (6) it is permissible to consider the biodiversity effects of prohibiting the action independently of subsection (5) and the propounded impacts on the National Heritage values.

189 Under Article 8(d) of the Biodiversity Convention, Australia is obliged to promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings. Under Article 8(h), Australia is obliged to prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species.

190 Australia gives effect to its Article 8 obligations through legislation and administrative actions taken at the Commonwealth and State levels. The EPBC Act does not purport to exhaust Australia's obligations under Article 8 of the Biodiversity Convention, leaving performance of those obligations in respect of protected areas in Victoria partly to the Victorian Parliament: see *Tasmanian Dams case* at 231-2 per Brennan J and s 10 of the EPBC Act.

191 Victorian legislation giving effect to the Biodiversity Convention includes s 10(1) of the FFG Act which provides for the listing of any taxon or community of flora and fauna which is threatened (giving effect to Australia's obligations under Article 8(k)) and s 10(2) which provides for the listing of potentially threatening processes (giving effect to Australia's obligations under Article 8(h)). In 2012, feral horses were listed as a threatening process under s 10(2) of the FFG Act.

192 Victoria has also given effect to Australia's Article 8 obligations through the National Parks Act. Schedule 2 to the National Parks Act (which lists Victoria's National Parks, including the Alpine National Park) and Schedules 2A to 8 to that Act list a range of areas in Victoria that form part of the "system of protected areas" established in accordance with Australia's obligation under Article 8(a) of the Biodiversity Convention. Section 4 provides that the

objects of the Act include to make provision for the protection and preservation of indigenous flora and fauna in respect of national and State parks. Section 17(2)(a) provides that Parks Victoria must ensure that each national park and State park is controlled and managed, in accordance with the objects of the Act, in a manner that will, amongst other things, preserve and protect indigenous flora and fauna in the park, exterminate or control exotic fauna in the park and eradicate or control exotic flora in the park. Section 17(2)(d) requires that Parks Victoria prepare a plan of management in respect of each national and State park. Dr Norman deposed that, pursuant to that provision, Parks Victoria prepared the Management Plan for the Greater Alpine National Park which was adopted in December 2016. The Management Plan details a strategy for the implementation of humane feral horse control.

193 Australia also gives effect to its Article 8 obligations pursuant to the EPBC Act. Section 183 requires the Commonwealth Minister to establish a list of key threatening processes. Section 188(3) provides that a process is a threatening process if it threatens, or may threaten, the survival, abundance or evolutionary development of a native species or ecological community. In 2013, feral horses were listed as a threatening process under s 183 of the EPBC Act. Subdivision A of Division 5 of Part 13 of the EPBC Act provides for the making of recovery plans for listed threatened species and ecological community. Dr Norman deposed that the National Recovery Plan for the Alpine Sphaghum Bogs and Associated Fens Ecological Community (published in November 2015) was made under those provisions. In the National Recovery Plan, the threat from feral horses was rated as "Very High", the highest threat level posed by any of the invasive species. The National Recover Plan states that in "alpine, subalpine and montane areas of the Australian mainland, along with domestic stock, feral horses are the largest animals to impact on the ecological community and represent a threat that requires complex management strategies". In relation to recovery actions, the National Recovery Plan rated the task to manage, contain or control existing populations of feral horses with the highest priority rating.

194 The parties agree that brumbies in the Australian Alps are members of the species *Equus caballus* and that that species, when occurring in the Australian Alps, is an "alien species" within the meaning of the Biodiversity Convention. While the term "alien species" is not defined in the Convention, its meaning is clear from its use within the Convention. In particular, Article 8(d) requires "protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings". Article 2 specifies that a "habitat" is "the place or type of site where an organism or population naturally occurs". Guidelines

published by the Conference of the Parties (established under Article 23 of the Biodiversity Convention) for the implementation of article 8(h) defined "alien species" to mean "a species, subspecies or lower taxon, introduced outside its natural past or present distribution": *Alien species that threaten ecosystems, habitats or species* UNEP/CBD/COP/6/20, p 257.

195 In my view, for the reasons given earlier, the evidence of Dr Norman and the expert ecological evidence establishes that brumbies are a species that threatens ecosystems, habitats and species in the Victorian part of the Australian Alps. Both Dr Norman and Prof Williams gave evidence concerning the ecosystems threatened by brumbies. Dr Norman's evidence was that the Bogong High Plains contains a large proportion of the "high altitude wetlands" ecological vegetation division occurring across the Victorian Alps, which comprises some of Victoria's most endangered ecological vegetation classes, as well as comprising the Alpine Bog Community and Fen (Bog Pool) Community, which are listed as threatened under the FFG Act, and the Alpine Sphagnum Bogs and Associated Fens, which are listed as threatened under the EPBC Act. Similarly, Prof Williams' evidence was that four major ecosystems of the Bogong High Plains show unequivocal evidence of horse occupancy and damage: alpine grasslands, alpine wetland complexes, alpine snowpatch herbfields, and Alpine Marsh marigold (*Caltha introloba*) herblands. Prof Williams also said that, within the latter three ecosystems, three vegetation communities are listed as threatened under the FFG Act (the 'Alpine Bog Community', the 'Alpine Snowpatch Community' and the *'Caltha introloba* Herbland Community') and the 'Alpine *Sphagnum* bogs and associated fens' community is listed as threatened under the EPBC Act.

196 Dr Norman gave evidence that the Plan is intended to protect threatened ecosystems, habitats and species, including those listed under the EPBC Act and the FFG Act and is intended to give effect to Parks Victoria's obligations under section 17(2) of the National Parks Act. I accept that evidence. It follows, in my view, that the Plan gives effect to Australia's Article 8 obligations, particularly those under Article 8(d) and (h), and, for that reason, prohibition of the Action cannot be appropriate and adapted to give effect to Australia's Article 8 obligations.

197 The ABA's argument to the contrary relies on the evidence of Dr Berman and Prof van der Werf. For the reasons given earlier, in my view the evidence of each involves conjecture. I do not accept that there has been insufficient study of the impacts of brumbies on alpine areas to determine whether the balance of impacts is negative or positive. The evidence of Dr Norman, Prof Williams and Dr Shannon satisfies me that the fact of the negative impacts of brumbies

has been established by suitable studies. Dr Berman's opinions about the possible positive impacts of brumbies on the environment are conjecture and are not supported by studies. I do not accept that the ABA has established, on the balance of probabilities, that there are unique genetic features in the populations of brumbies in the Bogong High Plains. It has only established that there is a possibility, with the most likely cause of any possible differences being founder effects.

198 I also accept the submission of Parks Victoria that, even if the brumbies in Bogong High Plains or Eastern Alps had genetic uniqueness, that would not lead to the conclusion that prohibiting the Action would be appropriate and adapted to give effect to Australia's Article 8 obligations. Whether or not the brumbies have genetic uniqueness by reason of the founding stock of horses from which they derived and some degree of genetic drift, the evidence establishes that they are an alien species in the alpine area, causing damage to ecosystems and habitats. As such, Australia's obligation under Article 8(h) is to control or eradicate the brumbies from that area, as an alien species. In my view, Article 8(c) cannot be construed in a manner that undermines Article 8(h).

National Heritage values sought to be protected by prohibiting the Action

199 As already discussed, I accept Parks Victoria's submission that the effect of subsection (6) is that subsection (5) only prohibits actions that have a significant impact on National Heritage values the protection of which gives effect to Australia's Article 8 obligations. I also accept its submission that the National Heritage values sought to be protected by the ABA in this proceeding (by the prohibition of the Action) do not relate to Australia's Article 8 obligations.

200 The objectives of the Biodiversity Convention are stated in Article 1:

> The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.

201 As already seen, Article 8 is titled "In-situ Conservation" and its obligations are concerned with the conservation of biological diversity.

202 A large number of the National Heritage values of the Australian Alps relate to the conservation of biological diversity. For example, under criterion (a), the National Heritage values include:

> The Alps are one of eleven sites recognised in Australia by the IUCN as a major world

> centre of plant diversity. During the late Quaternary and into the present, the high-altitude, cold-climate environment has provided refuge for species in an increasingly arid climate. Containing most of the contiguous montane to alpine environments in Australia, the AANP supports a rich and unique assemblage of cold-climate specialist species that have evolved unique physiological characteristics, enabling them to survive in an environment subject to extreme climate variation. Outstandingly rich flora taxa in the AANP include the daisies (Asteraceae), willow-herbs (Onagraceae), starworts and cushion-plants (Caryophyllaceae), southern heaths (Epacris), bottlebrushes (Callistemon), orchids (Pterostylis, Prasophyllum and Dipodium) and pimeleas (Thymaelaeaceae). Cold-climate adapted and endemic fauna species include the mountain pygmy-possum (Burramys parvus), the alpine she-oak skink (Cyclodomorphus praealtus), Snowy Mountains rock skink (Egernia guthega), Baw Baw frog (Philoria frosti), southern corroboree frog (Pseudophryne corroboree), and the northern corroboree frog (P. pengilleyi). Species of a great many invertebrate taxa are endemic to the Alps. These include stoneflies, caddisflies, mayflies, grasshoppers, and earthworms. Many display cold-climate adaptations, such as the mountain grasshopper (Acripeza reticulata), mountain spotted grasshopper (Monistria concinna) and alpine thermocolour grasshopper (Kosciuscola tristis). The Bogong moth undertakes regular migration in Australia and an essential part of its lifecycle occurs within the AANP. The AANP is a vital refuge for alpine and sub-alpine flora and fauna species, with a high level of richness and endemism across a wide range of taxa, and therefore has outstanding value to the nation for encompassing a significant and unique component of Australia's biological heritage.

203 Under criterion (b), the National Heritage values include:

> The AANP has outstanding heritage significance to the nation for possessing extremely uncommon aspects of Australia's natural history. Alpine and sub-alpine ecosystems are uncommon in the generally arid and warm climate of Australia. The distribution of cold-climate species on the mainland retreated to the higher altitudes of the Alps in the Late Pleistocene as conditions began to warm up. The AANP contains most of the alpine and sub-alpine ecosystems on mainland Australia, supporting flora and fauna species that have evolved to the harsh conditions of the high altitudes. Many of these species are endemic to the Alps and are found nowhere else in Australia. The bog and fen groundwater communities are supported by organic soils and contain exceptional water retention properties. These communities play an integral role in ecosystem function by regulating the slow release of water from saturated peatbeds to the surrounding alpine humus soils, streams and other alpine communities.

204 In contrast, the National Heritage values of the Australian Alps sought to be protected by the ABA by prohibiting the Action are cultural and social values, not environmental.

205 Under criterion (a), the ABA relies on the "transhumant grazing" value, reflected in the statements that "The AANP has outstanding heritage value for its association with historic transhumant grazing that commenced in the 1830s … Transhumant grazing created and sustained a distinctive way of life that is valued as an important part of Australia's pioneering history and culture…". Criterion (a) is that the place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history. While criterion (a) contemplates values by reason of importance to Australia's

natural or cultural history, I accept Parks Victoria's submission that the "transhumant grazing" value is a historic or cultural heritage value. Australia's Article 8 obligations are not concerned with that value (I address the ABA's submissions to the contrary below).

206 Under criterion (e), the ABA relies on the "aesthetic" value, reflected in the statements that "The AANP is a powerful, spectacular and distinctive landscape highly valued by the Australian community … Snow-covered eucalypts, huts in mountain settings and mountain landscapes are distinctive Australian images captured by numerous artists and photographers". Criterion (e) is that the place has outstanding heritage value to the nation because of the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group. I accept Parks Victoria's submission that the "aesthetic" values are a cultural value and that Australia's Article 8 obligations are not concerned with that value.

207 Under criterion (g), the ABA relies on the "pioneering identity" values, reflected in the statements that "The pioneering history of the high country is valued as an important part of the construction of the Australian identity featuring in myths, legends and literature. The ballad 'The Man from Snowy River' epitomises horsemanship undertaken historically in the rugged landscape." Criterion (g) is that the place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons. I accept Parks Victoria's submission that the "pioneering identity" values are a cultural or social value and that Australia's Article 8 obligations are not concerned with that value.

208 Under criterion (h), the ABA relies on the "Australian writers" value, reflected in statements that "Through his ballad 'The Man from Snowy River', Andrew Barton 'Banjo' Paterson captured the imagination of the Australian people, stimulating a passion for the High Country and the way of life associated with the mountains" and "The writer Elyne Mitchell and poet David Campbell lived near the mountains and their strong association with the place is expressed in much of their nationally important literary works." Criterion (g) is that the place has outstanding heritage value to the nation because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history. I accept Parks Victoria's submission that the "Australian writers" value is an historic or cultural heritage value and that Australia's Article 8 obligations are not concerned with that value.

209 The ABA argues that the cultural heritage values sought to be protected by prohibiting the Action are sufficiently connection to Australia's obligations under Article 8 of the Biodiversity Convention to satisfy the requirement in subsection (6). In my view, the argument is based on a strained interpretation of the Biodiversity Convention and should be rejected. The ABA relies on the following features of the Convention.

210 First, the ABA draws attention to the preamble which states, in part, that the contracting parties are conscious "of the intrinsic value of biological diversity and of the ecological, genetic, social, economic, scientific, educational, *cultural*, recreational and *aesthetic* values of biological diversity and its components" (emphasis added highlighting the matters relied on by the ABA). That statement does not support the ABA's argument. It does not suggest that the Convention is concerned with the conservation of culture or aesthetics, or cultural or aesthetic values. It says that biological diversity has cultural and aesthetic value. It is biological diversity that is to be protected under the Convention.

211 Second, the ABA draws attention to Article 7 that requires contracting parties to identify components of biological diversity important for its conservation and sustainable use having regard to the indicative list of categories set down in Annex I. Annex 1 identifies the following list of categories of components of biological diversity (emphasis added highlighting the matters relied on by the ABA):

> 1. Ecosystems and habitats: containing high diversity, large numbers of endemic or threatened species, or wilderness; required by migratory species; of *social*, economic, *cultural* or scientific importance; or, which are representative, unique or associated with key evolutionary or other biological processes;
>
> 2. Species and communities which are: threatened; wild relatives of domesticated or cultivated species; of medicinal, agricultural or other economic value; or *social*, scientific or *cultural* importance; or importance for research into the conservation and sustainable use of biological diversity, such as indicator species;
>
> 3. Described genomes and genes of *social*, scientific or economic importance.

212 Again, those statements do not support the ABA's argument. The components of biological diversity that are to be protected are ecosystems and habitats, species and communities, and described genomes and genes that have certain characteristics, including those that are valued because of their cultural or social value. But the Convention is not concerned with the conservation of cultural or social values *per se*. Nor is it concerned with any ecosystem, species or habitat that might be valued for cultural or social reasons. The concern of the Convention is the conservation of biological diversity and its components, including ecosystems, species

and habitats. The ABA's argument is based on selective emphasis being given to words and phrases of the Convention divorced from their context.

213 Based on the foregoing argument, the ABA seeks to read into the Article 8 obligations a concern to protect ecosystems, habitats and species because of their cultural importance. I reject that approach to the interpretation of those obligations. The argument cannot be supported textually or contextually. Article 8(a), relied on by the ABA, provides that contracting parties are to establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity. Article 8(i), also relied on by the ABA, provides that contracting parties are to endeavour to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components. Article 2 of the Convention specifies that "sustainable use" means "the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations".

214 The ABA also relies on instruments that are subordinate to the Biodiversity Convention, particularly the Guidelines for the Implementation of Article 8(h) of the Convention and a document referenced in those Guidelines called the "Ecosystem Approach". In my view, neither document supports the ABA's argument.

215 The Guidelines state a number of "guiding principles" to the implementation of Article 8(h). The first is the precautionary principle which includes, in relation to alien species that have become established (such as brumbies), the principle that "Lack of scientific certainty about the various implications of an invasion should not be used as a reason for postponing or failing to take appropriate eradication, containment and control measures". The second guiding principle is a three stage hierarchical approach which states that:

> 1. Prevention is generally far more cost-effective and environmentally desirable than measures taken following introduction and establishment of an invasive alien species.
>
> 2. Priority should be given to preventing the introduction of invasive alien species, between and within States. If an invasive alien species has been introduced, early detection and rapid action are crucial to prevent its establishment. The preferred response is often to eradicate the organisms as soon as possible (principle 13). In the event that eradication is not feasible or resources are not available for its eradication, containment (principle 14) and long-term control measures (principle 15) should be implemented. Any examination of benefits and costs (environmental, economic and social) should be done on a long-term basis.

216 The third guiding principle is that "Measures to deal with invasive alien species should, as appropriate, be based on the ecosystem approach, as described in decision V/6 of the Conference of the Parties".

217 In relation to the Ecosystem Approach, the ABA cherry picks the statement that "Both cultural and biological diversity are central components of the ecosystem approach and management should take this into account". In my view, the document does not alter the meaning or effect of the Biodiversity Convention, and specifically Article 8, which is concerned with the conservation of biological diversity, not cultural values.

Conclusion on the section 15B(6) issue

218 In conclusion on the s 15B(6) issue, I am not satisfied that prohibiting the Action, involving the removal of brumbies from the Bogong High Plains and the reduction in number of brumbies in the Eastern Alps, is appropriate and adapted to give effect to Australia's obligations under Article 8 of the Biodiversity Convention. Accordingly, subsection (5) is inapplicable to the Action.

219 Although it is unnecessary to determine the issue, I will next consider the s 15B(5) issue on the assumption that I am wrong on my conclusion on the s 15B(6) issue.

THE SECTION 15B(5) ISSUE

220 Section 15B(5) provides that a person must not take an action that has, will have, or is likely to have a significant impact on the National Heritage values of a National Heritage place in an area in respect of which Australia has obligations under Article 8 of the Biodiversity Convention. It is common ground that the Australian Alps is an area in respect of which Australia has Article 8 obligations. The issue in dispute is whether the Action, involving the removal of brumbies from the Bogong High Plains and the reduction in number of brumbies in the Eastern Alps, will have or is likely to have a significant impact on the National Heritage values of the Australian Alps.

Proper construction of s 15B(5)

221 In *Booth*, Branson J considered the meaning of the word "likely" and the phrase "significant impact" in an analogous context involving the prohibition, in s 12(1) of the EPBC Act, of an action that has, or will have or is likely to have a significant impact on the world heritage values of a declared World Heritage property. Her Honour said (at [96] – [100]):

96. I tum to consider whether the killing of Spectacled Flying Foxes in the numbers identified above, has, or will have, or is likely to have a significant impact on the world heritage values of the Wet Tropics World Heritage Area within the meaning of s 12 of the Act.

97. It was contended by the respondents that "likely" in the context of par 12(1)(b) of the Act means probable in the sense of more likely than not. I have not found it necessary to reach a concluded view on the accuracy of this contention. However, I incline to the view that a lower standard is intended to be set by par 12(1)(b). As Bowen CJ pointed out in *Tilmanns Butcheries Pty Ltd v Australasian Meat Industry Employees' Union* (1979) 42 FLR 331 at 339:

> "The word 'likely' is one which has various shades of meaning. It may mean 'probable' in the sense of 'more probable than not' - 'more than a fifty per cent chance'. It may mean 'material risk' as seen by a reasonable man 'such as might happen'. It may mean 'some possibility' - more than a remote or bare chance. Or, it may mean that the conduct engaged in is inherently of such a character that it would ordinarily cause the effect specified."

In the same case Deane J observed (at 346):

> "The word 'likely' can, in some contexts, mean 'probably' in the sense in which that word is commonly used by lawyers and laymen, that is to say, more likely than not or more than a fifty per cent chance ('an odds on-chance', per Lord Hodson in *Koufos v C Czarnikow Ltd (The Heron II)* [1969] 1 AC 350 at 410) ... It can also, in an appropriate context, refer to a real or not remote chance or possibility regardless of whether it is less or more than fifty per cent. When used with the latter meaning in a phrase which is descriptive of conduct, the word is equivalent to 'prone', 'with a propensity' or 'liable'."

98. It might well be thought that it would be consistent with the objects of the Act, as identified in s 3 of the Act, for the expression "likely" in par 12(1)(b) to be understood in the sense of "prone", "with a propensity" or "liable". Such an approach would be consistent with the "precautionary principle" which informs much environmental protection and conservation work (see the discussion of Sackville J of the "precautionary principle" in *Friends of Hinchinbrook Society Inc v Minister for Environment (No 2)* (1997) 69 FCR 28 at 78-80; 142 ALR 632 at 677-679). It would consequently tend to avoid the risk to biological diversity and the environment generally which would flow from the need for scientific certainty or confidence about the potential impacts of actions concerning which there has been limited scientific study. However, as already mentioned, it is unnecessary in this proceeding for me to give this issue further consideration. Further, it is undesirable that I do so as no party addressed submissions to the Court in support of such an approach.

99. The parties were in broad agreement that in the context of s 12 of the Act a "significant impact" is, as expressed in the applicant's written submissions, an "impact that is important, notable or of consequence having regard to its context or intensity". Reliance was placed on a number of Australian authorities including *Oshlack v Richmond River Shire Council* (1993) 82 LGERA 222 per Stein J at 233; *Concord Council v Optus Networks Pty Ltd* (1996) 90 LGERA 232 per Dunford J at 264; *McVeigh v Willarra Pty Ltd* (1984) 6 FCR 587 per Toohey, Wilcox and Spender JJ at 596; *Tasmanian Conservation Trust Inc v Minister for Resources* (1995) 55 FCR 516 per Sackville J at 541; *Drummoyne Municipal Council v Roads and Traffic Authority* (NSW) (1989) 67 LGRA 155 per Stein J at 163.

100. It is not clear that the factor of "intensity" has, as such, been identified in the Australian authorities. However, I note that the United States' National Environmental

> Policy Act, 42 USCS §4321 and following requires that the issue of whether there may be a significant effect on the environment requires consideration of two broad factors: "context and intensity" (see 40 CFR §1508.27; see also *Sierra Club v United States Forest Service* (1988) 843 F (2d) 1190 at 1193 (9th Cir); *National Parks and Conservation Association v Babbitt* (2001) 241 F (3d) 722; US App Lexis 2648).

222 As can be seen, Branson J found it unnecessary to decide the meaning to be given to the word "likely". However, her Honour expressed a preference for interpreting the word to mean "prone", "with a propensity" or "liable", whether or not the propensity is greater than or less than 50%. In doing so, her Honour made reference to *Tillmanns Butcheries Pty Ltd v Australasian Meat Industry Employees' Union* (1979) 42 FLR 331 (***Tillmanns***), and particularly the reasoning of Deane J. *Tillmanns* concerned s 45D of the *Trade Practices Act 1974* (Cth) and Deane J's reasoning has been followed in many cases decided under that Act in respect of prohibitions of conduct that would have, or would be likely to have, the effect of substantially lessening competition: see particularly *Monroe Topple & Assocs Pty Ltd v Institute of Chartered Accountants in Australia* (2002) 122 FCR 110 at [111] per Heerey J, with whom Black CJ and Tamberlin J agreed; *Universal Music Australia Pty Ltd v ACCC* (2003) 131 FCR 529 at [247]; and *Seven Network Limited v News Ltd* (2009) 182 FCR 160 at [750] per Dowsett and Lander JJ. It might be questioned whether the meaning given to the word "likely" in the now renamed *Competition and Consumer Act 2010* (Cth) (**CC Act**) provides much guidance to the interpretation of the word in the EPBC Act. It can be accepted that the structure of the prohibitions in the two statutes is similar: both prohibitions adopt a dual legal standard (have or likely to have) and both prohibitions concern the impact or effect of conduct (significant impact under the EPBC Act and substantial effect under the CC Act). However, the underlying subject matter of the prohibitions is entirely different. Very recently, the Full Federal Court reconsidered the meaning given to the word "likely" in the CC Act, specifically in the context of s 50 of that Act: *Australian Competition and Consumer Commission v Pacific National Pty Limited* [2020] FCAFC 77. Middleton and O'Bryan JJ concluded (at [243]-[244]):

> Strong arguments, based on the statutory text, can be made for construing the word "likely" to mean "probable". However, the word "likely" has been construed to mean a likelihood that is less than probable for 40 years (from *Tillmanns*) and there is no evidence of widespread inconvenience in the application of the law. To the contrary, the law has been amended on numerous occasions without any suggestion that the dual legal standard should be changed.
>
> … if the meaning of the word "likely" was being considered for the first time, we would have been inclined to adopt the meaning probable, but there is insufficient reason to change course at this point in time.

223 In the present case, each party accepted the statements of Branson J in *Booth* as correct and applicable to the equivalent word used in s 15B(5). Neither party argued that the word "likely" means more probable than not. Accordingly, this case does not provide any occasion for considering whether the word has that meaning in s 15B(5) of the EPBC Act.

224 While the word "impact" is defined in s 527E of the EPBC Act, the definition is primarily concerned with the question whether an action is a cause of an impact, which is not an issue in dispute in the present case.

225 The ABA, and both of the heritage experts, also referred to and relied upon statements in the Significant Impact Guidelines as an aid to the interpretation of s 15B(5). As noted earlier, the Significant Impact Guidelines are administrative guidelines prepared by the Commonwealth Department of the Environment. The purpose of the Significant Impact Guidelines is to assist persons who propose to take an action to decide whether or not they should submit a referral to the Department for a decision by the Minister on whether assessment and approval is required under the EPBC Act. As such, the Significant Impact Guidelines have no legal authority and merely represent the Department's interpretation of s 15B(5).

226 The ABA, and its heritage expert Dr Mclntyre-Tamwoy, placed reliance on the following statements in the Significant Impact Guidelines:

> (at p 19) An action is likely to have a significant impact on the National Heritage values of a National Heritage place if there is a real chance or possibility that it will cause:
>
> - one or more of the National Heritage values to be lost
> - one or more of the National Heritage values to be degraded or damaged, or
> - one or more of the National Heritage values to be notably altered, modified, obscured or diminished.
>
> …
>
> (at p 22) To have a significant impact on National Heritage values, it is not necessary for an action to impact upon the whole of a National Heritage place, all the values of a National Heritage place, or a whole value of a National Heritage place. It is sufficient if an action is likely to have a significant impact on a part, element, or feature of a National Heritage place which embodies, manifests, shows, or contributes to the values of that place.

227 In my view, statements such as the foregoing cannot substitute for the words of the statute. Nevertheless, I accept that s 15B(5) may apply even though the impact of the proposed action is not on all of the listed values of a place or the whole of a value of a place. Beyond that, I will apply the test stated by Branson J in *Booth*: whether the impact is important, notable or of

consequence having regard to its context or intensity. With respect to the concepts of "context" and "intensity", Branson J referred to the decision of the US Court of Appeals Ninth Circuit in *National Parks and Conservation Association v Babbitt* (2001) 241 F (3d) 722 which explained that "context" simply delimits the scope of the proposed action including the interests affected and "intensity" relates to the degree to which the proposed action affects the location and interests identified in the context part of the inquiry.

228 In the *Recreational Vehicles* case, the Full Federal Court considered the meaning of the phrase "National Heritage values" in the context of s 15B(4) which provides that a person must not take an action that has, will have or is likely to have a significant impact on the National Heritage values, to the extent that they are indigenous heritage values, of a National Heritage place. The Full Court concluded (at [86]) that the National Heritage values are the values stated in the National Heritage Listing for the place, observing that it is important for there to be certainty in the identification of the value or values having regard to the civil penalty and criminal offence provisions (referring in that regard to *Taikato v The Queen* (1996) 186 CLR 454 at 466 per Brennan CJ, Toohey, McHugh and Gummow JJ and *Director of Public Prosecutions (Cth) v Poniatowska* (2011) 244 CLR 408 at [44] per French CJ, Gummow, Kiefel and Bell JJ). However, the Full Court rejected an argument that the expression of a value in the National Heritage Listing is incapable of either explanation or contextualisation by other material (at [87]). The Full Court observed (at [87]-[90]):

> 87. … The three paragraphs are not a statute. They are an expression of a value that is both sophisticated and complex. That is why it may need to be understood or explained, as we discuss below. In any event, no fair reading of the three paragraphs would require a construction that would see no damage to the value by obliteration of all shell middens because of a lack of proximity of observable hut depressions.
>
> 88. To appreciate the nature of the National Heritage value (and indigenous heritage value) of a place may require some context and background. This is given by other material in, or referred to in, the National Heritage List, being the history of the area and the full cultural and historical significance of what can still be found there. For instance, the history and significance of the Western Tasmania Aboriginal Cultural Landscape are described in the database record (see [28] above). The document makes plain that the value of the area goes beyond hut depressions and that there is value in shell middens in their own right. More generally, the database record provides a resource which assists in understanding the statement of value. To appreciate this context and the cultural history of the area is not to depart from the value in the List; it is to explain it, or at least to understand it.
>
> 89. Such an explanation or understanding can, it seems to us, be drawn legitimately from information referred to in the National Heritage List: see *Acts Interpretation Act*, ss 15AB, 46(1)(a). The primary judge went more widely and evaluated expert and lay evidence as to value. It is perhaps unwise to be dogmatic about what kind of evidence would be permissible to explain or to understand a statement of value in the National

> Heritage List; for instance, there would seem little offence in an expert explaining what a "hut depression" or "midden" was if the referenced material in the National Heritage List did not do so. However, one can envisage some evidence effectively taking value beyond that which is expressed in the National Heritage List; that would, for that purpose, be illegitimate.
>
> 90. By way of conclusion in relation to "National Heritage values", it is not permissible to identify the relevant National Heritage value (and indigenous heritage value) by evidence in a particular case — the National Heritage value (and the indigenous heritage value) is the value included in the National Heritage List. Further, to understand and explain that value, recourse may be had, at least, to material in, or referred to in, the National Heritage List.

229 The heritage expert evidence that was admitted without objection expressed opinions on the nature and attributes of the values stated in the National Heritage Listing and on the question whether the proposed Action would be likely to have a significant impact on those values. I consider that the expert evidence was admissible in so far as it was based upon and illuminated heritage practice and concepts that underpin this part of the EPBC Act. However, consistently with the foregoing statements of the Full Court, the evidence is irrelevant to the task of determining what the National Heritage values of the Australian Alps are. That is a matter for the Court to determine based upon the statement of the values in the National Heritage Listing and relevant extrinsic materials that may explain and contextualise the statement.

230 Ultimately, the question whether the proposed Action is likely to have a significant impact on the National Heritage values of the Australian Alps is a question of fact: *Minister for the Environment & Heritage v Greentree (No 2)* (2004) 138 FCR 198 at [192] per Sackville J.

Consideration of subsection (5)

231 The ABA put its case under subsection (5) on two bases: the first was that the brumbies are part of the National Heritage values of the Australian Alps relied on by the ABA; the second, put in the alternative, is that the brumbies are an attribute or physical reminder of those values. Parks Victoria disputed that the brumbies were any part of the National Heritage values. In that sense, a principal area of dispute between the parties concerned the question of the significance of the brumbies to the National Heritage values, in order to determine whether the Action would have a significant impact on the National Heritage values.

232 I reject the ABA's contention that the brumbies are part of the National Heritage values of the Australian Alps. The brumbies are not directly referred to in the National Heritage values and are only indirectly referenced through the literary works of Banjo Paterson and Elyne Mitchell and other references to the pastoral history of the Australian Alps. In my view, there was

consensus between the heritage experts that brumbies were not a part of the National Heritage values of the Australian Alps. Dr Mclntyre-Tamwoy considered that the brumbies were an attribute of the values, in the sense that they are a physical reminder of the historic pastoral and grazing practices and lifestyle in the Australian Alps and form part of the broader social and cultural connections between the descendant pastoral communities and the Australian Alps, which are reflected in the National Heritage values. In contrast, Mr Travers considered that the brumbies were an attribute of secondary importance to most of the other attributes included in the National Heritage Listing, largely because: the statement of the values in the Listing made no express reference to the brumbies in contrast to other physical reminders of the historic pastoral and grazing practices; the horse population of the Australian Alps has changed over time in size and geographic extent; and the process of interaction between people and the brumbies has changed because the horses are no longer being rounded up and ridden.

233 A conclusion that the brumbies are not part of the National Heritage values does not end the enquiry under s 15B(5). The relevant question is whether the Action, which will reduce the number of brumbies in the Australian Alps, is likely to have a significant impact on the National Heritage values. In my view, it is possible for an action to have such an impact even though the subject of the action is not a listed "value" in and of itself. However, in undertaking the enquiry required by s 15B(5), it is necessary to remain focussed on the listed values and assess the impact of the proposed action on those values. It is not permissible to expand the values or re-write the values based on reports or submissions to the Australian Heritage Council. As noted earlier, the differences in the opinions of Dr Mclntyre-Tamwoy and Mr Travers are largely explained by the priority they gave to the statement of the National Heritage Values of the Australian Alps in the National Heritage Listing. Generally, Mr Travers gave the statement a higher priority than Dr Mclntyre-Tamwoy, who saw the brumbies as an important attribute of the values by reason of a range of documents that were extraneous to the National Heritage Listing.

234 In the discussion that follows, I place primary weight on the statement of values in the National Heritage Listing. However, I also have regard to the National Heritage Assessment Report which, in my view, provides useful context in which to consider the final statement of values in the Listing. I largely disregard the Truscott, Sullivan and Context Reports. In my view, there is nothing scientific or technical in the National Heritage values that requires explanation by those reports. The difficulty in having regard to those reports is that they contain views and opinions of the authors that ultimately do not end up in the statement of values in the National

Heritage Listing. For that reason, the reports have a tendency to distract attention from the values themselves.

235 It is necessary to consider each of the values relied on by the ABA separately.

Criterion (a)

236 Under criterion (a), the National Heritage value relied on by the ABA concerns the historic pastoral practices conducted in the Australian Alps and particularly transhumant grazing. Those practices were described in the National Heritage Assessment Report as follows:

> ***Transhumant Grazing***
>
> The Alps hold a significant place in Australia's pastoral history. In response to the drought of 1837-1844, many pastoralists in south-eastern Australia began to open up routes to move their stock to the high country where food and water were abundant. This began a pattern of annual migration of stock, known as transhumance which continued for over 150 years. In the later years of the nineteenth century governments introduced controls to the practice by a system of leased blocks and annual licences. The leases for the Bogong High Plains were issued in the 1860s and alpine grazing leases in New South Wales in the 1880s. According to King (1959, 129), the highlands of Tasmanian and south-eastern New South Wales were the only places in Australia that played a role in relief grazing.
>
> The transhumance practice lead to the establishment of well defined stock routes and stock mustering points such as the town of Jindabyne (King 1959, 131). Important stock routes of transhumance in Kosciuszko were a complex of tracks and routes that provided access from all directions. They are noted and schematically plotted by King (1959, 136-7). Transhumance can be compared to other significant pastoral activities such droving and stock movement. Other epic journeys of overlanders along routes like the Marrnji Track, the Birdsville Track and the Canning Stock Route are an important part of Australia's cultural history. While transhumance in the AANP differs in terms of nature and scale of these journeys, the continuity of practice makes it a significant pastoral activity at a national scale and it led to a distinctive high country way of life.
>
> **The AANP has outstanding heritage value to the nation under criterion (a) for historic values relating to transhumant grazing.**

237 The ABA submitted that the brumbies in the Australian Alps provide a clear link and evidence of Australia's transhumant grazing and pastoralism history. The ABA further submitted that to remove an entire population of brumbies from one region (the Bogong High Plains) and around half of the population from another region (the Eastern Alps) would likely have a significant negative impact on the National Heritage value of transhumant grazing in the AANP.

238 I accept the ABA's submission that the brumbies in the Australian Alps provide a link to and evidence of Australia's transhumant grazing and pastoral history. However, I do not consider that the proposed removal of the brumbies from the Bogong High Plains, and the removal of

about half of the present population of brumbies from the Eastern Alps, satisfies the test in s 15B(5) of a significant impact. It is helpful to consider the matters of context and intensity as referred to by Branson J in *Booth*.

239 As to context in the present case, the value that is sought to be protected is a value associated with a form of pastoral activity that has now ceased in the Australian Alps. Recognising that the value is of an historic heritage kind, it is notable that the statement of the value in the Listing does not refer to brumbies, but refers to other physical reminders of the activity in the landscape (huts, the former grazing landscapes, stock yards and stock routes). I do not read that list as an exhaustive statement of the present-day physical reminders of transhumant grazing. But I do agree with Mr Travers' opinion that the omission of any reference to brumbies is significant. It does not mean that brumbies are irrelevant to the value; nor that the removal of brumbies would have no impact on this National Heritage value. However, in my view it does indicate that brumbies are secondary to the physical manifestation of that value.

240 As to intensity, the action will not remove all brumbies from the Australian Alps. The Action will remove all brumbies from the Bogong High Plains and about half the population from the Eastern Alps. It follows that a population of brumbies will remain in at least the Victorian Alps section of the Australian Alps. As noted by Mr Travers in his evidence, it is likely that the population of brumbies in the Australian Alps has changed over time. As such, there would be no necessary connection between the population and location of brumbies at the time that transhumant grazing was practised and the present. Therefore, the proposed reduction in the spread of brumbies, and their overall population would have a less intense impact on the transhumant grazing value.

241 Overall, I am not satisfied that the proposed Action is likely to have a significant impact on the "transhumant grazing" value under criterion (a).

Criterion (e)

242 Under criterion (e), the ABA relies on the "aesthetic" value of the Australian Alps, reflected in the statements that "The AANP is a powerful, spectacular and distinctive landscape highly valued by the Australian community … Snow-covered eucalypts, huts in mountain settings and mountain landscapes are distinctive Australian images captured by numerous artists and photographers".

243 The ABA acknowledged that brumbies are not referred to in the aesthetic value of the Australian Alps described under criterion (e), but submitted that they are part of and contribute to this value. In that respect, the ABA argued that it is relevant that the statement of the value in the National Heritage Listing refers to huts in mountain settings, which are linked to the region's pastoralism and transhumant grazing history. The ABA also sought to draw support for its argument from various passages in the National Heritage Assessment Report relating to imagery and community associations. It is necessary to reproduce the relevant passages so that they can be read in context.

> ***Defining Images***
>
> The mountain peaks of the AANP repeatedly feature in art. Mount Kosciuszko has become a cultural icon not only because it is Australia's highest mountain, but because it is repeatedly painted and photographed. Responses to its visual purity date from its European discovery (Strzelecki in 1845 and the geologist Clarke in 1860), and this was soon represented by von Guérard (1860s) for others to see. Later artistic images for travel and tourism, commemoration, and artistic purposes are seen nationally each year. Some 30,000 people walk or ski to the summit of Mount Kosciuszko every year.
>
> The Victorian alpine mountain peaks are regarded as 'inspirational landscapes' eliciting aesthetic responses by artists, photographers, writers such as von Guérard's *North-east view from the northern top of Mount Kosciuszko* 1863, *Mount Kosciuszko seen from the Victorian border (Mount Hope Ranges)* 1866, *Chevalier's The Buffalo Ranges, Victoria* 1864, Streeton painted the Bogong Plains and Mount Feathertop (Crocker and Davies 2005b). Nicholas Caire's photos of Mount Bogong, taken in 1877, are well known. Frank Hurley (1885-1962) produced a number of images of the Alpine NP, including photos of Mount Bogong, held by the National Library of Australia. Harry Nankin's books contain images of Alpine landscapes and other well known photographers have also published photos taken in the park, eg David Tatnall and Steve Parish (Crocker and Davies 2005b, 36). John Bowman's *Mount Kosciusko* drawing of 1873 later became and (sic) engraving. Piguenit painted the *Kosciuszko massif Mount Kosciusko and the Valley of the Upper Murray* in 1883 and *Kosciusko* in 1903 (Andrews 1991). Imant Tillers painting of *Mount Analogue* (1985) is an interpretation of von Guérard's Mount Kosciuszko painting.
>
> Alpine features included in paintings and photographs are: Mount Speculation, Mount Bogong (Victoria's highest peak), Mount Buffalo, Mount Cobberas, Mount Cobbler, Mount Cope, Mount Feathertop, Mount Howitt, Mount Pinnibar, Mount Warwick, Mount Wombargo, The Bluff, The Pinnacles, Mount Kosciuszko, Mount Townsend and general views of Great Dividing Range.
>
> A number of films have been shot in the Alps area including The Man from Snowy River (1982), The Plains of Heaven (1982), Snow: the Movie (1982), Cool Change (1986), The Far Country (1987), The Man from Snowy River II (1988), and The Silver Brumby (1993). The works of Banjo Paterson - *The Man from Snowy River* and Elyne Mitchell - *The Silver Brumby* have been inspirational to Australians of all ages, encouraging romantic appreciation of the alps landscape. Poets and writers such as Banjo Paterson, Marie Pitt, Albert Bartlett, Sidney Jephcott, Henry Kingsley, Rolf Boldrewood, Edward Harrington, Barcroft Boake, Henry Kendall, David Campbell, Betty Casey Litchfield and Sidney Porteus have referred to the mountain landscapes. A number of films use the landscape as settings such as The Plains of Heaven (1982),

The Far Country (1987), The Man from Snowy River (1982), Snow: the Movie (1982), Cool Change (1986) as well as, The Man from Snowy River II (1988), and The Silver Brumby (1993) (Crocker 2005). The mountains and mountain way of life have inspired music and the Numeralla and Nariel folk festivals feature folk music associated with the mountains.

The Alps have featured in numerous posters, books, guides, tourism and bushwalking publications, calendars, and large format books for over 30 years. Crocker and Davies (2005 b, 36) referred to some examples being, *Alps at the Crossroads*, Dick Johnson, Victorian National Parks Association 1974; *Australia A Timeless Grandeur*, Reg Morrrison and Helen Grasswill, 1981; *Discover Australia's National Parks and Naturelands*, Michael and Irene Morcombe, 1983; *Wild Australia*, Readers Digest, 1984; *Australia's Wilderness Heritage, Vol 1*, Geoff Mosley et al, 1988 Weldon Publishing with the ACF, New South Wales; *Victoria's National Parks Explorers Guide* 1999; *Inspired by Nature*, Steve Parish 2004; *Australia's National Parks - A Journey of Discovery*, Steve Parish, 2004.

Alpine scenery such as snow clad eucalypts is a distinctly Australian image has been captured by photographers and appears in books, calendars, travel and tourist information celebrating Australia's beauty.

Community Associations

The community's attachment to the Alps is demonstrated in the depth and breadth of community responses and the popularity of artistic alpine imagery. The landscape has been painted, photographed and filmed to become part of our national identity. Photographs of snow gums, alpine wild flowers, high country animals, snow scenes and mountain huts, often location free, are instinctively recognised as the Alps. Community action has contributed to the declaration of the Alps as national parks.

Several community groups' workshops held for the Regional Forest Agreement (RFA) studies (1999 and 2000) identified the Alps and its features as significant for aesthetic value. This shows that the AANP is well-known and valued by the regional and the wider community for their aesthetic values.

The AANP is the largest contiguous snow clad landscape in Australia. Other mountain ranges in Australia having National Heritage aesthetic value include the Blue Mountains, the Grampians, Glass House Mountains and the Warrumbungles. The Blue Mountains and the Grampians are significant for their dramatic landscape, the aesthetic responses experienced from scenic drives and lookout points, as a defining image painted by artists and with the Grampians for its concentrations of rock art. The Warrumbungles display distinctive and spectacular volcanic landscape of spires, domes, plugs and dykes that is uncommon in Australia and have scenic vistas important to the community. The Glass House Mountains are noted for embodying significant landmark qualities for the community and evoke strong emotional responses. They are a dominant and instantly identifiable landform from a number of distant observation points and their summit lookouts offer strong aesthetic experiences including broad panoramas. The Glass House Mountains have inspired a number of works by significant Australian artists.

The AANP compares strongly with all these inspirational mountain landscapes. As the only alpine area in Australia it has provided defining images which have inspired art, literature and film. Its dramatic and uncommon landscape contains features of beauty and inspiration. Today the region has become appreciated for their difference from the 'typical' Australian landscape. Their distinctiveness continues to inspire artistic and emotional reactions that emphasise the aesthetic value the AANP holds for Australians.

244 I reject the ABA's submission that the brumbies are an attribute of the listed "aesthetic" value of the Australian Alp under criterion (e). Both the statement of the value in the National Heritage Listing and the National Heritage Assessment Report make plain that the aesthetic value, which contributed to the listing of the Australian Alps as a National Heritage place, concerned the dramatic mountain landscape. The aesthetic value is reflected in "The mountain vistas, including distinctive range-upon-range panoramas, snow-covered crests, slopes and valleys, alpine streams and rivers, natural and artificial lakes, the snow-clad eucalypts and the high plain grasslands, summer alpine wildflowers, forests and natural sounds evoke strong aesthetic responses. Much of the terrain of the AANP is highly valued for its remoteness, and naturalness, including views to and from the region that capture snow clad ranges and mountain silhouettes against clear skies as well as expansive views of natural landscapes from the high points of the Alps." The brumbies are not referred to in those descriptions. I agree with the opinion of Mr Travers that the omission of any reference to brumbies indicates that brumbies do not speak to the values identified.

245 The ABA placed reliance on the reference, in the Assessment Report, to the central role of brumbies in the poem *The Man from Snowy River* and Elyne Mitchell's *Silver Brumby* novels. However, the reference to the films of those literary works in the Assessment Report does not support a conclusion that brumbies are part of the aesthetic National Heritage value. That section of the Assessment Report refers to the significance of the Australian Alps as the backdrop to those films, not the subject matter of the films themselves.

246 The ABA also placed reliance on the reference to the community attachment to the Australian Alps. In my view, that does not support the ABA's argument. The Assessment Report is referring to the community's attachment to the aesthetic value of the Australian Alps as described.

247 For those reasons, I am not satisfied that the proposed Action is likely to have any impact on the "aesthetic" value under criterion (e).

Criterion (g)

248 Under criterion (g), the ABA relies on the "pioneering identity" value, reflected in the statements that "The pioneering history of the high country is valued as an important part of the construction of the Australian identity featuring in myths, legends and literature. The ballad 'The Man from Snowy River' epitomises horsemanship undertaken historically in the rugged landscape."

249 As submitted by the ABA, the brumbies are an important part of the story depicted in the poem "The Man from Snowy River". The poem tells the story of a valuable horse, the colt from Old Regret, worth a thousand pounds, that had got away and joined the wild bush horses, which was the expression Banjo Paterson used for the brumbies. Pastoralists, referred to as bushmen in the poem, go out to retrieve the colt. The story is ultimately about one of the bushmen, referred to in the poem as the man from Snowy River, who demonstrates great bravery and horsemanship in pursuing the colt and bringing it back. Elyne Mitchell's Silver Brumby novels are children's fiction in which the central characters are anthropomorphic brumbies.

250 The National Heritage Assessment Report provided the following background information and commentary in respect of this value:

> The social value of the AANP is expressed through the tangible elements of the landscape and the intangible cultural associations with that landscape. The mountain cattlemen of the high country have national recognition. The 'community', in this case, consists of those men and women who share the interest of the traditional practice of alpine grazing; with around 150 years of traditional practice of grazing on the summer pastures of the alpine region. These people have a strong attachment to the place. The community of mountain cattlemen is sizeable although dispersed across the region. The community of mountain cattlemen and its association with the place and traditional practice has recognition beyond the region and the state. Representatives from the Mountain Cattlemen Association of Victoria (MCV) attended regional community workshops to identify places of social value for the Regional Forest Assessment process. The community holds events such as 'get togethers' which commenced in 1983, parades at shows and rallies as listed in the nomination to the National Heritage List. The national recognition of the community is evident through literature, and public media such as the books by Holth and Barnaby (1980), Holth and Barnaby (1990, 225-35), and Holth (1991, 155-63).
>
> The practice was handed down from one generation of the community to the next, adapting and modifying to changing circumstances over its long history. Most of the practice and rituals undertaken by the associated community are now undertaken outside Alpine National Park. Although transhumant alpine grazing in the AANP was gradually reduced over time until it ceased in 2005, the imagery of the cattlemen/stockmen/horsemen generally retains iconic popularity with many Australians.
>
> The mountain cattlemen community have been associated with the place since the 1830s through the traditional practice of grazing in the high country. Transhumant grazing was also practiced in the high country of Tasmania, specifically on the Central Plateau, the sub-alpine areas around Cradle Valley, Middlesex Plains, Vale of Belvoir and the Surry Hills area. The practice in Tasmania commenced by the late 1830s, progressing until well into the twentieth century but declining before the Second World War (Cubit and Russell:1999, p.40).
>
> Although the association between cattlemen and the high country still exists in Tasmania, the community association is stronger in the Alps because of its extent and its longevity. The national significance is based on how the place is treasured by the community, the longevity of the community association, the direct association of the nationally important story, as described under criterion (a), and how the story is

> continuing as an iconic story that has recognition in the nation.
>
> The mythology created by Banjo Patterson's the Man from Snowy River, arguably Australia's best known ballad, maintains the sense of the AANP as a distinctive part of Australia's cultural heritage and has contributed to our national identity. The iconic association is demonstrated in the depiction of the Man from Snowy River on the Australian $10 note and the representation in the opening ceremony of the 2000 Sydney Olympic Games (Truscott et al. 2006). Elaine Mitchell's Silver Brumby novels further enhance the association of the Australian community with the AANP. The AANP has heritage value to Australians for the iconic mythology of the Man from Snowy River and the horsemanship undertaken in a very rugged landscape, known as the 'high country'.

251 Parks Victoria submitted that this value did not include the brumbies. Rather, the value derived from The Man from Snowy River is "horsemanship undertaken historically in the rugged landscape" and the value derived from the Silver Brumby novels are stories, legends and myths of the mountains and mountain lifestyles. In my view, this is too narrow a view of the value.

252 In assessing whether the proposed Action is likely to have a significant impact on this National Heritage value, I accept Dr Mclntyre-Tamwoy's opinion that the values listed under this criterion are about association of people and place and refer to a range of communities of people who have an association with the Australian Alps, including the descendants of the pastoralists who grazed cattle in the Alps. I also accept Dr Mclntyre-Tamwoy's opinion that the continuing presence of brumbies in the Australian Alps contribute to this National Heritage value through the social connection of the pastoral community to the Australian Alps and in the maintenance of the "*myths, legends and literature*" of the Australian Alps.

253 Thus, the context in which to assess the impact is the social and cultural connection between communities, including particularly the descendants of the pastoralists who grazed cattle in the Alps, and the brumbies and the myths and stories associated with them. However, it is important not to overstate the significance of the brumbies in that context. The brumbies are one aspect or attribute out of many that establish the connection between communities, including the pastoral community, and the Australian Alps. As noted above, this aspect of the National Heritage values that is sought to be protected is associated with a form of pastoral activity that has now ceased in the Australian Alps. Thus, the brumbies are one physical reminder of the historic activities and, in that sense, contribute to the social connection of the pastoral community to the Australian Alps.

254 With regard to the intensity of impact, it is again relevant that the Action will not remove all brumbies from the Australian Alps. The Action will remove all brumbies from one area, the Bogong High Plains, and will reduce the population in another location, the Eastern Alps.

255 Having regard to the foregoing factors, on balance I do not consider that the proposed Action is likely to have a significant impact on this National Heritage value. While there will be some impact by reason of the connection of the brumbies to the myths, stories and legends of the Australian Alps with which communities have a connection, the retention of a significant population of brumbies in the Eastern Alps has the result that the Action cannot be regarded as significant.

Criterion (h)

256 Under criterion (h), the ABA relied on the "Australian writers" value, reflected in statements that "Through his ballad 'The Man from Snowy River', Andrew Barton 'Banjo' Paterson captured the imagination of the Australian people, stimulating a passion for the High Country and the way of life associated with the mountains" and "The writer Elyne Mitchell and poet David Campbell lived near the mountains and their strong association with the place is expressed in much of their nationally important literary works."

257 The evidence of Dr Mclntyre-Tamwoy on this value fluctuated somewhat. In her report, Dr Mclntyre-Tamwoy expressed the opinion that this value is about association of people to place, relevantly here Banjo Paterson and Elyne Mitchell. She gave evidence that if all traces of the world that their works evoke are removed from the landscape, so as to create a new landscape of an imagined natural past, then the connection reflected in the National Heritage value would be diminished in the physical cultural landscape. However, in the joint report of the heritage experts, Dr Mclntyre-Tamwoy said that while the proposed Action would diminish this value, she agreed with Mr Travers that the Action would not have a significant impact on the value. In re-examination, however, Dr Mclntyre-Tamwoy backed away from that concession.

258 I am not satisfied that the proposed Action is likely to have a significant impact on this value. The value concerns the connection between various writers, of relevance here Banjo Paterson and Elyne Mitchell, and the Australian Alps. It can be accepted, as Dr Mclntyre-Tamwoy said, that if all traces of the world that their works evoke were removed from the landscape, then the connection reflected in the National Heritage value would be diminished to some extent. However, the brumbies are only one element of the works of Banjo Paterson. While the brumbies are central to Elyne Mitchell's stories, other attributes of the stories connect them closely with the Australian Alps. Further, the proposed Action will reduce the number of brumbies in the Australian Alps, but not remove them completely.

Conclusion on the section 15B(5) issue

259 In conclusion on the s 15B(5) issue, I am not satisfied that the Action, involving the removal of brumbies from the Bogong High Plains and the reduction in number of brumbies in the Eastern Alps, will have or is likely to have a significant impact on the National Heritage values of the Australian Alps.

CONCLUSION

260 In conclusion, the ABA has not satisfied me that, for the purposes of s 15B(6) of the EPBC Act, prohibiting the Action is appropriate and adapted to give effect to Australia's obligations under Article 8 of the Biodiversity Convention. Accordingly, s 15B(5) is inapplicable to the Action. If it were necessary to decide the issue, I am also not satisfied that, for the purposes of s 15B(5), the Action will have or is likely to have a significant impact on the National Heritage values of the Australian Alps. The same conclusions apply to s 15C(10).

261 Accordingly, I dismiss the application with costs.

I certify that the preceding two hundred and sixty-one (261) numbered paragraphs are a true copy of the Reasons for Judgment herein of the Honourable Justice O'Bryan j.

Associate: 

Dated: 8 May 2020