



Animal Liberation ACT

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IN SUMMARY

Animal Liberation ACT aims to protect the interest of all animals, be they native, domestic, or feral, endangered or abundant. We wish to ensure no animal, including kangaroos, reptiles or birds, suffers from habitat loss and urban and commercial development. However in responding to **The Draft controlled Native Species Management Plan 2017** in particular, Animal Liberation ACT aims to protect the interests of the Eastern Grey kangaroo of the ACT.

- Animal Liberation ACT argues against declaring the Eastern Grey kangaroo a ‘controlled native species’ and thus the Controlled Native Species Management Plan in its entirety. We argue against the change of status of the kangaroo to a ‘controlled native species’ considering in the past Kangaroo Management Plan (2010) has appeared sufficient since management of kangaroo populations, in particular culling, began in 2009 without the necessity of changing the status of the kangaroo. We argue the ACT Government has taken this step without community consultation and without transparency. We recommend the ACT Government reconsider this step and rescind the ‘Controlled Native Species’ status recently conferred on the Eastern Grey kangaroos of the ACT.
- We argue the ACT government has not given the community enough time to address the proposed Draft Controlled native Species Management Plan. The Draft was only released to the public on 8/2/2017. Submissions are due by Friday 24 March. This gives the community only six weeks to be able to extensively research not only the additions in the newest proposed Management Plan but Kangaroo Management Plan of 2010 upon which this one is based. It is arguable this is not enough time to do the extensive scientific research required to submit to this proposal. We recommend the government put the introduction of the Draft Plan on hold and extend the date for community consultation and submission.
- We argue the ACT Government has still not addressed alternative research in its so-called evidence based research and strongly recommend that the ACT Government have a transparent discussion around the alternative research re grazing impacts of the kangaroo on grassy eco-systems and eco-system function.
- We argue that kangaroo grazing does not have a deleterious impact on biodiversity. We address issues of fecundity, mortality rate and sexual maturity. These points have been used by the government as part of their ‘evidence’ for culling and fertility control as tools of kangaroo management. Particularly in relation to culling. We recommend the government seriously address the alternative research which counters

the science used in both the 2010 Kangaroo Management Plan and the current proposed Draft Controlled Native Species Management Plan.

- We address the issue of kangaroo habitat and argue the government is incorrect in its implicit assumption that kangaroo habitat is plentiful and that the issue the government addresses further in the report (that of fragmentation and alienation) are equally a problem for the kangaroo as much as any other wildlife. We recommend that government considers urban development and commercial development and its deleterious effect on kangaroo populations and take this into account in the planning stage of said development to ensure good welfare outcomes for the kangaroos which does not include culling because culling is not a good welfare outcome for kangaroo populations.
- We address the issue of environmental impacts and argue against the ACT government claim that kangaroos have no significant predators. We claim that they do have significant predators. They not only have predators in the form of red foxes and eagles, but climate change, and urban development particularly. We recommend that government considers urban development and commercial development and its deleterious effect on kangaroo populations and take this into account in the planning stage to ensure good welfare outcomes for the kangaroos which doesn't include culling because culling is not a good welfare outcome for kangaroo populations.
- We address the issue of alienation and fragmentation of habitat and recommend that the government manage the 'types and intensities' of land use much more than they obviously are as a method for conservation of endangered species instead of focussing on management of kangaroos - that is by killing them. We argue the way land is used or misused by the human in terms of development is the main problem facing the wildlife in general including those under threat.
- We address the issue of impacts of kangaroos on rural lands and recommend that government considers urban development and its deleterious effect on kangaroo populations and take this into account in regard to kangaroo populations on rural land. If populations are forced by urban development onto rural land culling should not be used to ensure good welfare outcomes for the kangaroos because culling is not a good welfare outcome for kangaroo populations. We argue kangaroos are not in competition with domestic animals and government research is lacking in explanation of how this is the case.
- We address the issue of managing kangaroo populations on 'Greenfield' sites and recommend that culling does not take place on Greenfield sites as this is often the

only land left to the kangaroos to live on due to both urban and commercial development, and continued interventions via culling on nature reserves. To use culling on Greenfield sites is to remove the last of their habitat in some cases and is deleterious to the best interests of the kangaroo.

- We address the issue of kangaroos on government horse paddocks and we challenge the government assumption that kangaroos are impacting the welfare of the horses on these sites. We recommend the government address other alternative research outside of the research given in the Kangaroo Management Plan 2010 and the current Draft Controlled Native Species Management Plan 2017 to achieve a balance of perspective on this issue.
- We address managing kangaroo densities through culling and recommend that culling as a management tool cease because it has a deleterious effect on the best interests of the kangaroo.
- We address the issue of using the drug GonaCon as a population management tool and recommend it is not used for fertility control due to the ethics around forced contraception of a native animal which would prohibit its ability to have young in its entire lifetime.

INTRODUCTION

Animal Liberation ACT is an organisation based in the ACT. Animal Liberation is an Australian animal rights organisation dedicated to ending all human activity that harms nonhuman animals and all anthropocentric and speciesist attitudes. As such, we act as a voice for the most exploited and vulnerable creatures on earth. Animal Liberation ACT aims:

- To end the exploitation of and to protect the interests of all animals, both introduced and native, whether living in a wild or captive state, used in agricultural or commercial production, kept as companion animals, used for recreation, sport, entertainment, exhibition, research or education, or any other purpose, or any combination of the above;
- To abolish all human activity that harms the environment and/or individual animals and species who depend on it for their survival and wellbeing;
- To abolish anthropocentric and speciesist attitudes;
- To raise awareness of the impact of human activities on animals and the environment and to encourage a cruelty-free lifestyle;

Animal Liberation ACT aims to protect the interest of all animals, be they native, domestic or feral, endangered or abundant. However, in responding to **The Draft controlled Native Species Management Plan 2017** particularly, Animal Liberation ACT aims to protect the interests of the Eastern Grey kangaroo of the ACT.

THIS SUBMISSION WILL ADDRESS THE FOLLOWING POINTS IN MORE DETAIL:

1. THE CHANGED STATUS OF THE EASTERN GREY KANGAROO IN THE ACT

We argue against the newly declared status of the Eastern Grey kangaroo as a ‘controlled native species’. The government has not given any reasoning as to what led them to this declaration and has not consulted with the community. To change the status of a native animal is to change the value of the animal. In this regard the ACT Government, regardless of its claims to the contrary, have changed the value of the Eastern Grey kangaroo to the detriment of the kangaroo itself. In changing the status of the kangaroo to a ‘controlled native species’ is somehow ‘out of control’ when it is not. In the change of status is the implicit assumption that somehow the kangaroo is a ‘danger’ not only to other animals both wild and domestic but also to humans.

2. LACK OF TRANSPARENCY OF RESEARCH

Table 4 Summary of research on the effects of kangaroo grazing on biodiversity, based on field work in the ACT and published since the publication of the 2010 plan, Draft Controlled Native Species Management Plan 2017 is listed for comment. Though the table lists eight studies conducted since 2010 it does not

actually summarise the research methods or results in any detail whatsoever. Though further on there are summaries of the research, the information is limited and certainly does not contain any critiques of said research. Further, the summaries, for example, do not contain the methodology used which is critical to understanding the research itself. Thus the ACT Government are asking the public to support one of their main platforms of ‘evidence’ used to underpin the basis of Eastern Grey kangaroo management, in particular culling on a seasonal basis, on evidence with little detail available. Yes, the summaries contain references which could be followed up but the public have been hindered on two fronts in attempting to do this. Firstly the Draft Controlled Native Species Management Plan was only announced on **08/02/2017** (http://www.cmd.act.gov.au/open_government/inform/act_government_media_releases/esdd/2017/new-kangaroo-management-plan-guided-by-research-and-best-practice) which gives very little time for the general public or community members to read and critique the research. Secondly many of these papers and other research material would not be available as full text to the general public. In other words the government are asking the public to support this on ‘faith’ rather than actual evidence. In doing this the government has shown a disingenuous approach towards asking for submissions from the community re the Plan.

The government has also shown by their past performance a deliberate attempt to exclude other research that counters their preferred view. If this were not the case the government would be transparent re other research which challenges the views they have put to the community so the community can then make up their own mind. The Draft Controlled Native Species Management Plan 2017 continues in this vein with no transparency of research.

3. ISSUES OF FECUNDITY, MORTALITY RATE AND SEXUAL MATURITY IN REGARDS TO THE IMPACT OF KANGAROOS ON BIODIVERSITY

“ACT data show high levels of fecundity” (Draft Controlled Native Species Management Plan, Table 1 Key features of biology and ecology p. 10)

This statement is in direct contrast to the fact that Eastern Grey kangaroos rarely perform continuous breeding. This is where a female kangaroo is at times able to have an in-pouch young, an at-foot young and an embryo in-waiting. But Eastern Grey kangaroos rarely do this instead only having an in-pouch young and one at-foot still dependent on the mother “one time one blastocyst in embryonic diapause (in some species), one pouch young, and one young at foot” (www.kangaroosatrisk.net). This challenges the claim there are high levels of fecundity in the ACT. The Government has used Fletcher (ACT Government 2017) as defining fecundity ‘*as the proportion of females delivering a young kangaroo permanently from the pouch*’. But this definition is troublesome to say the least. What does ‘delivering a young kangaroo permanently from the pouch’ actually mean with ‘permanently’ the problematic word? Further the Plan does not take into account when Eastern Grey females actually are able to conceive “*Eastern Grey Kangaroos in the wild also start to breed at a much later age than in yard studies. Several yard studies indicate that first breeding may*

start at about 2 years old, but in detailed field observations at Wallaby Creek in Northern NSW, Robyn Stuart-Dick found that first conception did not occur until 3-3.5 years.” (www.kangaroosatrisk.net) which then impacts on the numbers of kangaroos in a given population. Regardless, “Note that holding a blastocyst in embryonic diapause does not give a major reproductive advantage – a blastocyst is comprised of only 70-100 cells, and is only 0.25mm in diameter” (Dawson 1995 cited in www.kangaroosatrisk.net). As we can see the promotion of kangaroos as being able to have one in the pouch, one at foot and one on the way is clearly an overstatement, indeed a well-used tool of propaganda. Of those who promote commercial and non-commercial killing of kangaroos.

However, The Draft Controlled Native Species Plan makes no reference to the possibly high mortality rate of the neonate. The neonate only has one pathway to the pouch. It must climb up on the outside of the female kangaroo’s body to enter the pouch. There is only the mother’s occasional licks of the fur in an attempt to guide the neonate to the pouch lip which give it direction and possibly assist its trajectory. The possibility of mortality rate is extremely high in these circumstances. Eastern Grey kangaroos are notoriously sensitive to their environment. They are a very anxious kangaroo and prone to bounding at the slightest unusual sound. This on its own could cause a high mortality rate of neonates because of their precarious journey to the pouch and sudden movement of the doe. The vulnerability of the neonate on its journey to the pouch will mean that birth rates may not be what the government often insist they are therefore over-population cannot be a problem.

Further Eastern Grey kangaroos have a high level of mortality rate which the ACT Government has not taken into consideration in its management plan particularly in relation to culling and the fertility control approach. Kangaroos have a level of mortality rate of approximately 70% “*Interestingly, juvenile mortality is given for the first year of life as being similar between many mammal species, first discussed by Caughley (1967). Jezierski (1977) and Briedermann (1990) refine juvenile mortality for the wild boar (50 - 75%), however in Queensland mortality in juvenile feral pigs can be as low as 10-15% during good conditions, or up to 100% during drought (McGaw & Mitchell 1998). Arnold (1991) provides 73% mortality in the Western Grey Kangaroo; the ACT Kangaroo Advisory Committee (1997) suggests mortality in juvenile Eastern Grey Kangaroo in the ACT in “over-populated” parks and reserves was “high” (though no quantitative work was undertaken); up to 100% mortality has been reported in Western Grey and Red Kangaroo juveniles, depending on conditions (Shepherd 1987).*” (www.kangaroosatrisk.net) Although the Plan itself lists ‘mortality’ (of Eastern Greys) as ‘*high mortality of young prior to breeding age*’ (p.9) this is seemingly forgotten when promoting (to the public) the need for culling and fertility control (using a drug that may render a doe unable to have young for up to 8 years) (ACT Government 2017 p.38) for the kangaroo population in the ACT region. Thus the government’s argument for a need to reduce the numbers artificially is illogical and uncalled for. At this point their desire to cull regardless of high levels of mortality rate points to not a scientific need but propaganda. The Plan appears to forget (even though this ‘fact’ is mentioned on page 9 of the report) that kangaroos are all Macropods belonging to the family

Macropodidae, and all are similar marsupials so the mortality rate of young in one type will be reflected in the mortality rate in another type. Though as has been pointed out little to no research has been done on the mortality rate of Eastern Grey kangaroos as has been pointed out the “*juvenile mortality is given for the first year of life as being similar between many mammal species, first discussed by Caughley (1967). Jezierski (1977) and Briedermann (1990)*’ (www.kangaroosatrisk.net). This has not been taken into account by the Plan when assessing ‘fecundity’ (which leads to population numbers). If fecundity is to be used by the government as evidence (in part) for managing kangaroo numbers then they have disingenuously portrayed the kangaroo’s ability to ‘delivering a young kangaroo permanently from the pouch’ in a way that leads the reader to assume the Eastern Grey is able to repopulate very quickly whilst under pressure from external sources be that drought or human predation in the form of culling.

“*Table 1 Key features of biology and ecology*” (Draft Controlled Native Species Management Plan p.10) states that female sexual maturity is at 2 years of age. And male sexual maturity is at 4 years of age. This differs with some estimates of 3 to 3.5 for females and 5 for males. The lifespan of a kangaroo is anywhere from 8 – 12 years (www.kangaroosatrisk.net). It should be noted that if a doe does not start breeding until 2-3 years (possibly older) of age and a male doesn’t sexually mature until 4-5 years of age, combined with a short lifespan, high mortality rates of joeys and habitat fragmentation and degradation, it is unlikely that over-population, as is often promoted by the government, can happen. And, is indeed more of a myth, than a fact. The Plan itself states “*in reality the exact number of most wildlife populations is unknowable.*” (ACT Government 2017 p. 61). One can infer, then, that the measures included in this plan for control or population management are not needed.

4. THE MYTH OF OVER-POPULATION OF KANGAROOS

“*The main habitats for Eastern Grey Kangaroos in the ACT are grasslands and grassy woodlands, extending from the plains around Canberra to the foothills and lower elevation valleys of the western and southern ranges. Grasslands in these areas range from those with a high component of native species (for example, remnant areas of natural temperate grassland) to those containing only introduced species (for example, the greens of golf courses). The ACT has a number of characteristics conducive to the establishment, maintenance and growth of kangaroo populations. Suitable kangaroo habitat, combining open grassland and adjacent woodland and/or forest cover, extends throughout the ACT from the lower elevation grassy valleys in Namadgi National Park to the lowland grasslands, grassy woodlands and open forests of the plains, hills and ridges, and river corridors.*” (ACT Government 2017 p.11)

The Plan itself has admitted that alienation, fragmentation and degradation of habitat (in reference to the species listed as needing protection) are some of the main problems enabling

the ‘*extinction processes*’ (ACT Government 2017 p.13). And that “*Over the past 200 years, many Australian ecosystems have been altered, reduced and fragmented to the extent they no longer retain all the ecological processes that existed before European settlement*” (ACT Government p.16). In light of this we argue this same predicament is faced by the kangaroos of the ACT region. We argue that the same habitat problems mentioned equally affect the kangaroo. This is due in part as quoted by the Plan itself “*ACT data show high fidelity to remarkably small home ranges for such a large, mobile animal. Female home range approximately 0.5 square kilometre, male home range approximately 1.0 square kilometre.*” It is arguable that the development of Canberra over the years since its inception has fragmented the kangaroo habitat as much of that as any other animal due to their “*high fidelity to remarkably small home ranges*” (ACT Government 2017). And that due to this fragmentation, alienation and degradation the kangaroo population figures, or guesses of possible population figures in the future (because the actual numbers are not even known) may be woefully inadequate and much less than the government seemed determined to assume.

“There are also extensive areas of relatively undeveloped National Land managed by Commonwealth Government agencies. A significant area of the ACT is held under rural lease and, together with other leased land such as golf courses provides suitable, often ideal, kangaroo habitat.” (ACT Government 2017 p.11)

The Plan fails to recognise ‘*extensive areas of relatively undeveloped National Land*’ are not areas in which the kangaroo population can freely exist without impediment or predation which significantly affects its population. Further, licences are given to farmers, for example, on rural lease land for culling purposes as well. But there is nothing in place other than regulations to stop farmers from killing more than they are licenced too. Though, as stated, there may be regulations these regulations are not enforced in such a manner as to ensure land holders, in this case farmers, do not kill more – there are no spontaneous audits of numbers killed, nor rangers policing the killing on a nightly basis. So the government does not know how many kangaroos are actually killed on rural leased land. This would be the same in land leased for horse agistment. Licences are given out to manage the numbers which usually means culling. But again, even though there are regulations attached to these licences there is no guarantee the numbers killed are not greater than what is allowed. In regards to land used for golf courses kangaroos on this land are restricted due to interventions by the people involved in its use (the fact that there are people on this land throughout the year on a weekly and daily basis would be an impediment to kangaroo settling except in small numbers – remembering that humans are the main predator of kangaroos).

5. PREDATION OF KANGAROOS

“ACT lowland grasslands and woodlands no longer contain the large predators that were present historically. In the absence of these predators, populations can get out of balance with their environment.” (ACT Government 2017 p.12)

The Plan claims there is an absence of predators in one section but then goes on to point out that kangaroos “*...Wedge-tailed Eagles (Aquila audax) and introduced Red Foxes (Vulpes vulpes) (Robertshaw and Harden 1989)*” (ACT Government 2017 p.12). There is a seeming

contradiction here which one might assume comes about from the government portrayal of kangaroos as having no predators and thus needing management, particularly in the form of culling. But as stated here, both eagles and foxes are predators of kangaroos and both of these animals are present in the reserves that are bound by suburbs within the ACT. In further out regions dingoes and wild dogs are also predators. Further, the Plan leaves out humans as predators of kangaroos. The predation takes the form of habitat loss due to development, shooting by licensed and unlicensed shooters, motor vehicles, and dogs off lead. Further the government often point out that there are a lack of dingo-as-predator within reserves in Canberra itself yet dingoes were not an efficient hunter rather taking the old, the sick and the young. Rather it was the English hunting dogs known as kangaroo dogs who were the greatest threat. In 1839 Charles Darwin saw as these dogs as the death knell of the kangaroo along with unceasing shooting saying “*it may be long before these animals are exterminated but their doom is fixed*” (Nicholas F.W. & Nicholas J.M. 2008).

6. THE EFFECT OF KANGAROOS ON OTHER WILDLIFE – A LOCAL EXAMPLE

The government states “*The 2010 plan provides an explanation and references to support the contention that a native species can deleteriously impact on other native species. An example of this in the Canberra region is the elevated predation of small native birds by the native Pied Currawong as a result of the city providing a favourable environment year round for currawongs, which are naturally migratory. Thus the conservation and management of kangaroo populations is important for the conservation of endangered ecological communities, other ecological communities and a wide range of invertebrates, small animals and plants.*” (ACT Government 2017 p.12-13)

This example, in regards to the impact Eastern Greys supposedly have on other species is nothing short of nonsensical. Currawongs and kangaroos are entirely different animals. It would be like comparing apples with bulldozers. They are simply not the same. Though the Plan may have used this analogy or comparison in an effort to make their contention clear this type of example is deliberately obfuscates the relationship between the kangaroo and its environment and the other animals who live within that environment.

7. HABITAT DESTRUCTION – EFFECTS ON KANGAROOS

Table 3 Extinction processes in lowland grasslands and grassy woodlands (ACT Government 2010, Section 3.8.1)

ALIENATION OF HABITAT:

“*Alienation of habitat is the most serious of the threats, meaning conversion of areas of native grassland to uses such as housing, infrastructure and farming. Large areas of native grassland have been transformed to varying degrees by grazing and cropping. Urban development has had a significant impact on ACT grasslands. Of the estimated original ACT lowland grassland, 95% has been alienated and about 5% remains.*” (Draft Controlled Native Species Management Plan 2017)

The ACT government by its own admission points out that ‘*Alienation of habitat is the most serious of threat, meaning conversion of areas of native grasslands to uses such as housing, infrastructure and farming*’ (ACT Government 2017 p.13) yet the kangaroo continues to pay the price for successive government decisions in regards to use of the land through continued culling of their numbers. It is suggested the ACT government would be better off regulating the conversion of native grasslands and other land to reduce any further alienation of habitat. If human interventions on the land have created the problems then we argue the government is out of order blaming the kangaroo for this problem. To declare the kangaroo a destroyer of native grasses and other land such as pasture is to ignore the fact that the kangaroo is an integral part of the eco-system. Indeed the Plan declares this fact “*The kangaroo is a true ‘keystone species’ whose presence appears vital to a number of other species that may disappear in its absence*” (ACT Government 2017 p.12) (yet when this is an inconvenient fact the government attempts to position the kangaroo as almost a foreign entity which destroys not only its own habitat on which its very survival depends but that of others).

FRAGMENTATION OF HABITAT:

“*Fragmentation of remaining native grassland and woodland has resulted from the alienation process and the types and intensities of land uses and management.*” (ACT Government 2017 p.13).

If fragmentation of habitat (as stated by the government’s own research) has resulted from the ‘*alienation process and the types and intensities of land uses and management*’ then it is suggested the ACT government focus, instead of on kangaroos, but on their own land management practices and regulation of these practices to avoid continued ‘*alienation of habitat*’ which in turn leads on to continued ‘*fragmentation of habitat.*’

8. IMPACTS OF HIGH DENSITY POPULATIONS OF KANGAROOS

(3.8.5 Impacts of high density populations of kangaroos on ecosystem function)

“*McIntyre et al. (2015) found that reducing kangaroo density doubled total herbage mass in one reserve, but had no effect on exotic plant herbage mass, species counts or ground cover attributes. In one of the reserves, coarse woody debris also promoted herbage mass, particularly exotic annual forbs, as well as plant diversity. The single burn reduced herbage mass, but changed little else. The greatest driver of change regardless of treatment was the end of drought conditions in 2009 and several years of good rainfall. This increase in rainfall appears to have resulted in herbage mass increasing by 67% (mostly owing to the growth of perennial native grasses), overall native species counts increasing by 18%, and exotic species declining by 20% over this four year period. They suggest that strategic management of grazing pressure, use of fire where herbage mass has accumulated and placement of coarse woody debris in areas of persistent erosion will contribute to improvements in soil and vegetation condition and gains in biodiversity in the future.*” (ACT Government 2017 p.23)

Here we see the government's own Draft Plan indicating that climate change has the greatest effect on growth within the natural environment yet on the other hand, because of the inconvenience of these facts the government continues to advocate for managing grazing pressures even though "*reducing kangaroo density doubled total herbage mass in one reserve, but had no effect on... species counts*". Although it is unclear exactly what the government is declaring here we are interpreting this as no effect on the numbers of species. Whether this is species meaning that of the kangaroo or species where they mean the endangered species they seek to protect. Either way it appears that reducing kangaroo density has had no effect on species counts.

9. IMPACTS OF KANGAROO ON RURAL LANDS

(3.9.1 Impacts of kangaroos on rural and other lands)

"The management of high density populations of kangaroos is essential to...rural productivity and sustainable land management. Key considerations of managing high density populations of kangaroos on rural lands are to reduce competition with domestic stock, manage total grazing pressure and ensure land is managed sustainably." (ACT Government 2017 p.24.)

Competition with domestic stock is questionable and yet the government declares it is a given. Dawson states "*Although competition is notoriously hard to demonstrate in unmanipulated field studies, from the experimental work of Glen Edwards and colleagues it appears 'no' is the answer*" (Dawson 2012). Further he goes on to argue "*The results of studies on red kangaroos and Euros suggest it is likely that other species of kangaroo will also experience competition for with domestic animals in periods of dry and drought times*". Indeed Graeme Caughley (cited in Dawson 2012) suggested '*the effect of sheep on kangaroos on drought may appear greater than the effect of kangaroos on sheep*'. It appears that in the rush to enforce further control over kangaroo lives the government has conveniently ignored other research which contradicts their claims. Indeed the government's own report states "*Eastern Grey Kangaroos have different feeding preferences to livestock.*" (http://www.environment.act.gov.au/_data/assets/pdf_file/0004/1029739/DRAFT-Conservation-Culling-Calculator-Notification-2016.pdf). If kangaroos have different feeding preferences to livestock then kangaroos (and this is regarding kangaroos in the ACT) simply cannot be in competition with domestic stock as claimed in this report. Here we see the government ignoring, not other researchers' facts, but their own.

“Conservation of kangaroo populations in the ACT is not reliant on rural land, given the relatively large area in conservation reserves that provides extensive habitat for kangaroos.” (ACT Government 2017 p.24)

In contradiction to this claim by the government plan, conservation of kangaroo populations in the ACT is reliant on rural lands that surround the conservation reserves. Indeed the management tool of culling uses kangaroo population estimates based on KMUs (Kangaroo Management units) In the ‘Nature Conservation (Eastern Grey Kangaroo) Conservation Culling Calculator Notification’ when addressing the Conservation Culling Formula a reference is made to the KMU or Kangaroo Management Unit. This is defined as “A *KMU typically consists of multiple land tenures occupied by one kangaroo population, which is reflected in the kangaroo counts by conducting the counts across the land components rather than just the Nature Reserve.*” (ACT Government 2017 p.46) The emphasis here is ‘*multiple land tenures*’ which indicates that kangaroos are not reliant solely on conservation areas (nature reserves/parks) as claimed in the above quote to which our argument is being directed. Indeed if kangaroos were not reliant on rural land why is this type of tenure always included in the KMUs from which a calculation of population for this area is taken to decided how many kangaroos are to be culled “*the land areas called Kangaroo Management Units (KMU) are used for the calculation of kangaroo populations in the ACT.*” (ACT Government 2017 p.46). But kangaroos, in the culling season, are not then only shot on conservation reserves but on neighbouring land which is part of the KMU. Further, if kangaroos were not reliant on rural land then why does the ACT government, by their own accord, issue licences to owners of such land, for example farmers, to cull kangaroos (ACT Government, Table 9 Licensed kangaroo culling statistics for ACT rural lands 1997–2015, 2017 p. 53). Importantly if kangaroos are reliant on other lands other than conservation reserves then it is of great concern that these areas are not only part of the cull but land owners of adjacent areas such as farms are asked to work in collaboration with the government ensuring they too are culling kangaroos on their land. This places enormous pressure on the kangaroo. This leads on to what appears to be a deliberate misperception led by the government that hundreds of kangaroos are present on the reserves themselves when in fact the population of a given mob is spread out over the reserve and across neighbouring or adjacent land hence the reserves are not necessarily under as much grazing pressure as the government would have the public believe.

10. GREENFIELD DEVELOPMENT SITES

(5.4.3 Greenfield development sites, Draft Controlled Native Species Management Plan 2017 p. 50)

This new policy development is of great concern to us for the following reasons. Firstly kangaroo habitat is being fragmented on a daily basis with the new and proposed suburban developments cutting through their natural boundaries. On a daily basis kangaroos are forced off their land onto boundaries. Management (i.e. culling) of kangaroos in these areas would then put more pressure on the populations. This of course is not the only pressure, with continued culling on reserves and nightly shooting on rural leases whether they are farms or

horse agistment paddocks, to then culling on the only bits of land left to them is a completely immoral decision. It will leave the kangaroo experiencing pressure from predation (predominantly human based predation) on a daily basis. The Eastern Greys experience stress very easily so increased pressure on them by culling in these once safe areas could contribute to a further increase in population mortality rates as a possible unintended consequence (other than the intended culling in these areas).

11. KANGAROO MANAGEMENT ON HORSE PADDOCKS

(6.2 Kangaroo management on government horse paddocks, Draft Controlled Native Species Management Plan 2017 p. 54).

“During the last decade the number of horses in government paddocks has halved due to the effects of the 2003 fire, drought and grazing pressure from kangaroos.”

The concept of total grazing pressure is based on the idea that a reduction in total grazing pressure could improve ecological outcomes. This is discussed as *“The idea that using kangaroos in sustainable harvests could benefit rangelands was suggested as early as 1967 (Australian Conservation Foundation 1967) and coined as “sheep replacement therapy for the rangelands” (Grigg 1987; 2002) (<http://thinkkangaroos.uts.edu.au/issues/total-grazing-pressure.html>).* But MaCarthy 1996 and Pople 2004 suggest it is *“Rainfall patterns, not harvesting, are the key drivers of kangaroo populations on a regional scale (<http://thinkkangaroos.uts.edu.au/issues/total-grazing-pressure.html>).”* Here the government seemingly chooses to ignore research such as this and favours its own determination that ‘total grazing pressure’ is part of the cause of numbers of horses in government paddocks halving. Certainly the report does not take into account other possibilities such as a reduced interest in horse ownership, cost of horse ownership including agistment (\$1284.40 per annum) which has risen 2003. In addition, Territory Agistment states *“Due to the high demand for horse agistment in the ACT we have a waiting list for many complexes.” (<http://territoryagistment.com.au/index.php>).* The claim we are addressing in this report implies grazing pressure of kangaroos has helped halve the number of horses in government paddocks. Yet there is a waiting list for agistment. A waiting list could infer that government paddocks have their quota of horses and hence the waiting list. Further to this *“Kangaroos only require a fraction of the food and water that livestock do and therefore culling and harvesting have little impact on livestock productivity (Grigg 2002; Munn et al. 2008).” (<http://thinkkangaroos.uts.edu.au/issues/total-grazing-pressure.html>).* If kangaroos only require a fraction of food and water compared to livestock then there is no competition except possibly during severe drought. Plus kangaroos, though having a home range, move around, they are not bound by fences like horses are so they are not going to stay in the one paddock 24/7, 365 days a year.

12. MANAGING KANGAROO DENSITIES

(4.3.3 Managing kangaroo densities p. 35)

12.1 Culling:

Firstly, it is not clear whether where the ‘The National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Non-commercial Purposes’ which states “*Shooters should avoid shooting female kangaroos and wallabies where it is obvious that they have pouch young or dependent young at foot except in special circumstances (i.e. the female kangaroo or wallaby is sick or injured or needs to be killed for management and/or ecological reasons).*” (<http://www.legislation.act.gov.au/di/2014-23/current/pdf/2014-23.pdf>) is reflected in the ACT government practice of culling females in great numbers in the seasonal culls. The government could argue the culling is for management purposes but the code states in ‘*special circumstances...the female...needs to be killed for management and/or ecological reasons*’. The code makes no clear reference to the numbers killed by the ACT government every year implying instead a reference to a special circumstance of an individual kangaroo not multiple kangaroos.

Further to this, the ACT government has yet to produce evidence that the culling they have undertaken since 2009 has actually reduced kangaroo densities to the various levels they feel are required in the different reserves. Though they undertake continued research into possible kangaroo impacts on grassy eco-systems and “*Most areas included in the conservation culling program contain patches of an endangered ecological community, either Yellow Box-Red Gum Woodland (ACT Government 2004) or Lowland Natural Temperate Grassland (ACT Government 2005), or both*” (ACT Government 2017 p. 43) the ACT government are yet to release any definitive research showing their desired outcomes that is whether or not the numbers culled so far have reduced the so-called pressure on the endangered animals they seek to protect.

And importantly, we take issue with the use of culling as a ‘management tool’. This is not, as the government would argue, good kangaroo welfare. Firstly, though the government insist on licencing the shooter and insist on the use of a highly trained shooter nonetheless mistakes can and will be made. The preferred shot is in the kangaroo’s brain. But a kangaroo’s head is a very small target indeed. Plus they often move their heads regularly but the movements are often imperceptible. We argue that shots to the head are not as common as the government would argue and often their jaw is shot or their shoulder. For example, in 2012 kangaroo bodies were removed from pits used to bury dead kangaroos by government workers “*She said they found kangaroos with bullet wounds to their bodies, contrary to government policy, which states that the animals must be shot in the head. “One female kangaroo had her head crushed”*” (Nicholson 2012) <http://www.canberratimes.com.au/act-news/activists-claim-roo-culling-cruelty-20120603-1zqfx.html>).

Of course it is beholden by the government shooter to ensure the animal is dead and if not, then killed. But firstly we do not know if this actually happens – there is no evidence presented to the public that it does. Secondly, the kangaroo at this point in time would be experiencing pain and fear, much fear. These are not good welfare outcomes. Other welfare outcomes that are questionable in regards to culling kangaroos is the problem of the joeys.

Pouch joeys are delivered a forceful blow to the head (<http://www.legislation.act.gov.au/di/2014-23/current/pdf/2014-23.pdf>). But is there evidence to prove this actually happens. Our concern is the joeys (particularly the pouch joeys) are merely buried in the pit without being killed first. We are expected to take the word of the government that the joeys are killed with a blow to the head on ‘faith’ but not evidence. Then the at-foot joeys are to be killed with a shot to the head or heart (<http://www.legislation.act.gov.au/di/2014-23/current/pdf/2014-23.pdf>). However, at-foot joeys are even smaller in size than their adult counterparts. One wonders how accurate a shot would be on such a small target. Indeed even though the report claims there is no ‘ghost population’ (joeys left alone due to the death of their mothers during the cull) (4.3.1 (g) Pouch young and ‘ghost’ populations, ACT Government 2017 p. 34) again we are asked to accept this on ‘faith’ rather than evidence.

Further “*The shooter must be certain that each kangaroo or wallaby is dead before another is targeted.*” (<http://www.legislation.act.gov.au/di/2014-23/current/pdf/2014-23.pdf>). Again we must accept on ‘faith’ rather than evidence that this actually occurs. There are no ‘independent’ observers present. The veterinarian and any RSPCA observers who could be present (as is often touted by the ACT Government) are certainly not what we would call ‘independent’ as in both cases they agree with culling of kangaroos and thus do not have the best interests of the kangaroos in mind.

Indeed the best interest for the kangaroos and the best welfare outcome is not to cull them.

Review of population counts, count results and method of determining the number of kangaroos to be culled.

It appears the ACT government has still to provide an independent, peer-reviewed assessment of their population counts in relation to numbers to be culled. In “*April 2014, Kurahaupo Consulting (Parkes and Forsyth 2014) independently reviewed the kangaroo population count methods, the count results and the method of determining the number of kangaroos to cull set out in ‘Calculation of the Number to Cull’ (ACT Government 2016a) and the science behind the relevant parts of the 2010 Kangaroo Management Plan. The review endorsed the ACT Government’s counting methods and culling advice.*” However Kurahaupo Consulting which was used in this review appear to be primarily a pest management consulting business. They also give recommendations, for example, for hunting agencies or individuals (<http://www.bcl.kiwi/testimonials/>). Thus we have considerable concerns about the independence and relevancy (which has no vested interest in harvesting of kangaroos) of this consultancy firm.

12.2 Fertility control program:

“*In 2008, the ACT Government partnered with staff from CSIRO (funded by the Invasive Animals CRC) to trial GonaCon Immunocontraceptive Vaccine, a Gonadotrophin Releasing Hormone (GnRH) vaccine that disrupts the hormonal control of reproduction in the brain. A single injection of GonaCon has caused infertility for at least eight years in a high proportion of females treated before they reached sexual maturity (Environment and Planning*

Directorate 2015, CSIRO and ACT Government unpublished data).” (ACT Government 2017 p.38).

There are real ethical concerns with the use of this drug. If the drug GonaCon causes infertility of at least 8 years this means that a female kangaroo will never be able to have a joey in her lifetime. This is an intervention that is only in the best interests of the managers certainly not in the best interest of the doe. This, in a human population, would be considered immoral yet in the kangaroo population it is considered ethical. Animal Liberation ACT cannot see the difference and argue that both human and kangaroo are morally equal in reproductive rights.

13. CONCLUSION

Animal Liberation ACT aims to protect the interest of all animals, be they native, domestic, or feral, endangered or abundant. We wish to ensure no animal, including kangaroos, reptiles or birds, suffers from habitat loss and urban and commercial development. However in responding to **The Draft controlled Native Species Management Plan 2017** in particular, Animal Liberation ACT aims to protect the interests of the Eastern Grey kangaroo of the ACT. To this end we argue the ACT Government has not taken into account the alternative research available to them. Pointedly we argue the ACT Government from the ACT Civil and Administrative Tribunal legal challenges to kangaroo culls to this Draft Plan have determined to ignore any research which contradicts its science and its claims. It has been more of an exercise in ideology than science. Thus we recommend that the **Draft Controlled Native Species Management Plan 2017** not be accepted. Further we recommend that the decision to declare the Eastern Grey kangaroo of the ACT region a ‘controlled natives species’ be rescinded.

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