

## Submission to the Victorian Legislative Council

## **Inquiry into Fire Season Preparedness**

Friends of the Gippsland Lakes Parks and Reserves (FOGL) PO Box 128, Bairnsdale 3875 Prepared for FOGL by Nancy McMurray secretary@fogl.org.au 17/06/16

FOGL has a broad base of supporters throughout the Gippsland Lakes and hinterland region who care deeply about the environment, biodiversity and ecosystems. Our Mission is to strive to protect and enhance the natural environment and biodiversity of the Gippsland Lakes area through research, evidence-based submissions to government bodies, initiation of on-ground projects and engaging the community through activities and education.

FOGL would like to address in particular three of your Terms Reference and add a special note about a recent burn in our area in East Gippsland. We attach our Position Statement on Planned Burns (also available on our website: www//fogl.org.au). All scientific references listed below are from that Position Statement.

Term of Reference C: Overwhelming scientific evidence indicates that burning the bush any

**distance from built assets will NOT protect those assets** <sup>(4,10,15,21,22,23,24,25,26,27)</sup>. If people want to feel 'safe' then perhaps they should be burning their own gardens and their own bush, not that of the public, as there is some evidence that burning around a building immediately before a firefront may afford some measure of protection<sup>23</sup>. In many instances, people are simply living in fire-prone areas where it is inadvisable. We should not be losing fauna habitat and biodiversity because of the personal decisions of private individuals. Burning public land under the assumption that doing so will protect private assets raises several important issues:

- 1) Public assets (land and habitat) appear to be undervalued
- 2) Many would argue that public assets should be valued over private assets
- 3) Many would argue that it is the public asset that should be protected
- 4) Scientific evidence does not support the assertion that burning the bush will protect assets any distance from that bush.

**Term of Reference D: There is substantial evidence – see much of David Lindenmayer's work – that burning the bush puts many species at risk** <sup>(2,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,30,)</sup>. Often animals that survive the initial burn will subsequently die because of lack of food or shelter. It can take many years for areas that have been burned to host returning animals and birds and some species never return. Why would we want to do this to our biodiversity when burning the bush does not protect built assets anyway?

Term of Reference E: There is substantial evidence that planned burns put many species of flora at risk and may even contribute to greater fuel loads than would have been there had the area not been burned <sup>(1,3,16,19,27,28,31,37)</sup>. There is evidence that current so-called 'preventive' burn practices may be *increasing* our risk of fire.

### MOORMURNG FLORA AND FAUNA RESERVE in East Gippsland

Public land that is burned belongs to ALL of us, and should be protected and managed for biodiversity outcomes and the common good. So-called 'preventive' burning should not be allowed on public land for the purpose of protecting private land, as the overwhelming scientific evidence indicates burning the bush does NOT protect built assets. But that is just what has recently happened here in East Gippsland, where a planned burn in Moormurng Flora and Fauna Reserve incinerated 163 HA of extremely important habitat, including destroying many-old growth trees with large hollows. These old trees with hollows cannot be replaced within a hundred years and their loss will have devastating consequences to our local biodiversity.

Moormurng Flora and Fauna Reserve is a very special and important parcel of remnant bush that is surrounded by farmland. It consists of Gippsland Red Gum Grassy Woodland, which is listed as a *Nationally Threatened Ecological Community* under the Environmental Protection and Biodiversity Conservation Act 1999. This parcel of remnant bush is extremely important for its old-growth trees that provide large nesting hollows for many of our native birds and animals. Almost all hollows in the area are contained within Moormurng Flora and Fauna Reserve – there are few old trees in the surrounding area that provide nesting hollows of any size, let alone the really large ones that are needed by some of our native species. It is also an area of bush that is struggling because of years of illegal grazing and firewood collection.

This small but critical bit of remnant bush, only 930 HA, needs to be *protected*, not destroyed, but the recent planned burn incinerated a significant part of its total area and it must be noted that there are no wildlife corridors leading from Moormurng along which animals could disperse or escape a fire. A visit to the burned site indicates this was not a mosaic burn; it was not a cool burn; it was an extremely hot burn over a large area and *there were no ecological reasons whatsoever for this burn.* According to the FOP, the reason for the burn was: 'To provide protection to the adjacent private property and assets by creating a fuel-reduced area which will reduce overall fire hazard in the landscape to minimize the spread of bushfires.'

It appears to FOGL that under the current regime we are destroying critical habitat and putting our precious biodiversity at risk under the misguided and unfounded assumption that doing so will protect private property, when overwhelmingly the scientific evidence indicates burning the bush will NOT achieve this protection. This seems seriously flawed and will lead to increased environmental degradation. With regard to the issues flagged above under Terms of Reference C,

- Many would argue that it is wrong to value private assets over public assets, in this case, Moormurng Flora and Fauna Reserve. A public asset such as Moormurng Flora and Fauna Reserve, which contains critical habitat for our native species that would take hundreds of years to replace, should be highly valued and placed above adjacent property.
- It is the public asset that should be protected, not the private asset. In the case of Moormurng Flora and Fauna Reserve, fire protection, such as slashing or fire breaks, should perhaps take place outside its boundary fences in order to protect all its habitat and old-growth trees. We shouldn't be destroying significant sections of a valuable asset in order to protect it.

# There is clearly an urgent need to publicly address the misconception that fuel-reduction burns protect built assets, as overwhelmingly, the scientific data do not support this.

If people adjacent to remnant bush feel unsafe, they should move. We should not be burning precious habitat and destroying our biodiversity because someone feels unsafe. The public needs to be educated and the government needs to be open and honest about what is actually happening. It should be noted that over 30 old-growth trees with nesting hollows were found to have fallen in the days immediately following the Moormurng burn. Thirty hollow-bearing trees have been lost. For what? It will take hundreds of years for them to be replaced. Some species that have lost their homes may never return. We cannot keep doing this.

The government needs to act to protect our biodiversity against practices that cause harm. We need to move employees and resources away from burning the bush and into jobs that contribute in a positive and meaningful way to enhancing our environment and biodiversity, such as fauna monitoring, bush revegetation, track maintenance, community engagement and environmental education regarding positive environmental behaviour. There is so much that could and should be being done for our environment and those currently engaged in burning it could be redeployed in roles that will protect and enhance the environment.

The government needs to be open and honest with the public and communicate in ways that will replace ignorance and fear with understanding.

A public awareness campaign needs to be mounted that challenges, with scientific evidence, the belief that planned burns protect communities and do no harm to wildlife and biodiversity.

#### References

1 Lindenmayer, D & Bergen, M (2005). *Fire and Biodiversity* <u>Practical Conservation Biology</u>, CSIRO: Melbourne. <u>www.publish.csiro.au/onborrowedtime</u>

**2** Vernes, K (2000). Immediate effects of fire on survivorship of the northern bettong (Bettongia troika): an endangered Australian marsupial. <u>Biological conservation</u>, <u>96</u>, 305-309.

3 Gill, AM, (1996) How Fires Affect Biodiversity. Australian National Herbarium. Canberra
4 Enright, N, & Fontaine, J, (2014). Climate change and management of fire-prone vegetation in
Southwest and Southeast Australia. <u>Geographical Research</u>, <u>52</u>,(1), 34-44.

**5** Australian Government <u>State of the Environment</u> 2001. CSIRO Publ: Melbourne.

**6** Gill, AM, McKenna, DJ & Wouters, MA (2014) Landscape Fire, Biodiversity Decline and a Rapidly Changing Milieu: A Microcosm of Global Issues in an Australian Biodiversity Hotspot. Land, <u>3</u>, 1091-1136; doi:10.3390/land3031091

**7** Keith, DA, McCaw, L & Whelan, RJ (2002). *Fire regimes in Australian heathlands and their effects on plants and animals*. In <u>Flammable Australia: The Fire Regimes and Biodiversity of a Continent</u>, RA Bradstock, J Williams & AM Gill (Eds). Pp 199-237. Cambridge University Press: Cambridge

**8** Calver, MC & Dell, J (1998). Conservation status of mammals and birds in southwestern Australian forests. I: Is there evidence of direct links between forestry practices and species decline and extinction? <u>Pacific</u> <u>Conservation Biology</u>, <u>4</u>, (4) 295-314.

**9** VNPA Issue Paper: Fuel Reduction Burning: Response to the Final Report of the 2009 Victorian Bushfire Royal Commission.

**10** Comrie, N (2014). *Bushfire Royal Commission Implementation Monitor Annual Report.* Victorian Bushfire Commission

**11** McKenny, HJA & Kirkpatrick, JB (1999). *The role of fallen logs in the regeneration of tree species in Tasmanian mixed forest.* <u>Australian Journal of Botany, 47</u>, 745-753.

**12** Lindenmayer, DB & Possingham, H (2013) *No excuse for habitat destruction* <u>Science</u> <u>680</u>, 340.

13 York, A (1999). Long term effects of repeated prescribed burning on forest invertebrates: Management implications for the conservation of biodiversity. In AM Gill, Woinarski, JCZ & A York (Eds). <u>Australian Biodiversity: Responses to Fire</u>, pp 181-266. Department of the Environment and Heritage, Canberra. Available at <u>www.deh.gov.au/biodiversity/publications/technical/fire/index.html</u>

**14** MacHunter, J, Menkhorst, P, & Loyn, R (2009). *Towards a process for integrating vertebrate fauna into fire management planning*. ARI Environmental Research Technical Report 192. DEPI: Heidelberg.

**15** Penman, TD, Christie, FJ, Anderson, AN, Bradstock, RA, Cary, GJ, Henderson, MK, Price, O, Tran, C, Wardle, GM, Williams, RJ & York, A, (2011) *Prescribed burning: How can it work to conserve the things we value?* <u>International journal of Wildland Fire, 20</u> (6), 721-733. CSIRO Publ: Melbourne

**16** Birds Australia (now Birdlife Australia).Nomination: *Fire regimes that cause biodiversity decline* as Key Threatening Process. November 2010.

**17** Penman, TD, Binns, DL & Kavanagh, RP (2007). *Burning for Biodiversity or Burning the Biodiversity?* <u>Proceedings of the Australasian Fire Association council conference.</u> Hobart.

http://proceedings.com.au/tassiefire/papers\_pdf/fri\_penman.pdf

**18** Nimmo, D, Bennett, A, & Clarke, M (2014). *Burnoff policies could be damaging habitats for 100 years* <u>The Conversation.</u> 8 August.

**19** Australian Wildlife Protection Council. *Pause and Review all Prescribed Burning* <u>AWPC Conference</u>, Nov 9, 2014. awpc.org.au retrieved online 25/02/15

**20** Crockford, RH & Richardson, DP. *Litterfall, litter and associated chemistry in a dry sclerophyll eucalypt forest and a pine plantation in south-eastern Australia: 1. Litterfall and litter.* <u>Hydrological Processes, 12</u> (3), 365-384. DOI.10.1002/(SICI)1099-1085(19980315)12:3<365:AID-HYP588>3.0CO;2-0.

**21** Comrie, N (2012). *Bushfire Royal Commission Implementation Monitor Annual Report.* Victorian Bushfire Commission.

**22** Comrie, N (2013). *Bushfire Royal Commission Implementation Monitor Annual Report.* Victorian Bushfire Commission.

**23** Penman, TD, Collins, L, Syphard, AD, Keeley, JE & Bradstock, RA (2014). *Influence of Fuels, weather and the built environment on the exposure of property to wildfire*. PLOS/ONE. Oct 31.

9(10):e111414.doi:10.1371/journal.pone.0111414

**24** Gill, AM & Bradstock, RA (2003). *Fire regimes and biodiversity: A set of postulates*. In <u>Australia</u> <u>Burning: Fire Ecology, Policy and Management Issues</u>. GJ Cary, DB Lindenmayer, & S Dowers (Eds). pp 15-25. CSIRO Publishing: Melbourne.

**25** Gibbons, P, van Bommel, L, Gill, AM, Cary, GJ, Driscoll, DA, Bradstock, RA, Knight, E, Moritz, MA, Stephens, SL & Lindenmayer, DB *Land Management practices associated with house loss in wildfires*. <u>PLOS/ONE</u> January 18, 2012. Doi:10.137/journal.pone.0029212

**26** Gill, AM & Stephens, SI (2009). Scientific and social challenges for the management of fire-prone wildland-urban interfaces. *Environment Research Letters*, <u>4</u>, 1-10.

**27** Driscoll, DA, Lindenmayer, DB, Bennett, AF, Bode, M., Bradstock, RA, Cary, GJ, Clarke, MF, Dexter, N, Fensham, R, Friend, G, Gill, M, et.al. (2010) Resolving conflicts in fire management using decision theory: asset protection versus biodiversity conservation. *Conservation Letters*, *1-9* 

**28** SEQ Fire & Biodiversity Consortium. (undated). Nomination to List: '*Fire regimes that cause biodiversity decline*' as a Key Threatening Process under the *Environmental Protection and Biodiversity Conservation Act 1999*.

29 Bilney, RJ (2014) Austral Ecology, 39 (8), 875-886. DOI:10.111/aec.12145.

**30** Christensen, PES. (1980). *The biology of 'Bettongia pencillata' (Gray, 1837) and 'Macropus eugenii' (Desmarest, 1837) in relation to fire.* Bulletin, No 91, Forests Department of Western Australia.

**31** Russell-Smith, J, Yates, CP, Whitehead, PJ, Smith, R, Craig, R, Allan, GE, Thackway, R, Frakes, I, Cridland. S, Meyer, CP, Gill, AM (2007). *Bushfires 'down under': Patterns and implications of contemporary Australian landscape burning*. <u>International Journal of Wildland Fire, 16</u> (4) 261

**32** Sutherland, EF & Dickman, CR (1999). *Mechanisms of recovery after fire by rodents in the Australian environment: A review.* <u>Wildlife Research, 26</u>, 405-419.

**33** Atkin, PF (1983). Mammals. In <u>Natural history of the Southeast</u>, MJ Tyler, CR Twidale, JK Ling, JW Holmes (Eds). Royal Society of South Australia: Adelaide.pp.127-133.

**34** Baker, J, Whelan, RJ, Evans, L, Moore, S, & Norton, M (2010). *Managing the Ground Parrot in its fiery habitat in south-eastern Australia*. <u>Emu: Austral Ornithology</u>, <u>110</u> (4) 279-284.

**35** Clarke, MF (2008). Catering for the needs of fauna in fire management: Science or just wishful thinking? *Wildlife Research*, <u>35</u>, 385-394.

**36** Christensen, P (1998) *The precautionary principle and grazing, burning and medium-sized animals in northern New South Wales.* <u>Australian Forestry, 61</u>, 195-203.

**37** Lindenmayer, DB, Franklin, JF & Fischer, F (2006) *General management principles and a checklist of strategies to guide forest biodiversity*. <u>Biological Conservation, 131</u> (3) 433-445. doi:10.1016/j.biocon.2006.02.019