



People caring
for nature

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Submission in response to the Draft Code of Practice for Fire Management on Public Land

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Land and Fire Management
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Thank you for the opportunity to comment on the draft Code of Fire Practice.

The Victorian National Parks Association has been advocating for better protection of our biodiversity, and the necessary natural systems that support it, since 1952. We are well aware of the many threats to biodiversity in Victoria, and the difficulties of managing those threats.

As a contribution to fire management in Victoria, we recently held a Fire and Biodiversity in Victoria Symposium in conjunction with the Royal Society of Victoria.

The symposium presenters included a good representation of Victoria's leading fire ecologists and other biodiversity specialists. Attendees included head office and regional DSE and Parks Vic staff involved in fire management, as well as reps from local councils, the CFA, leading research institutions and a range of NGOs. It was clear to us that within both state and local government management agencies, within universities and research organisations, and within the community generally, there is considerable concern about the effects of current and future levels of planned burning on our biodiversity.

Proposed planned burning levels are at a historically unprecedented level. This means we are conducting a landscape-scale ecological experiment the like of which has never been conducted in Victoria.

Given that our natural systems are already under threat from a range of impacts, we have to proceed with great caution here.

Our response to the draft Code of Fire Practice is based on the understanding that the situation in Victoria (where we are faced with the likelihood of an increased frequency of severe fire) will be very difficult to manage from both a public safety viewpoint, and from a biodiversity protection viewpoint.

We don't question the importance of public safety, but the protection of Victoria's 500 million-year-old heritage of biodiversity in our remaining 'natural' areas is also clearly important.

It's the job of this code (and it's a difficult job) to get fire management right.

Response to Questions

1. Does the draft Code provide an effective framework to achieve its purpose which is outlined in paragraph 3?

No, it doesn't. It is unnecessarily vague about how it will protect life and property, and extremely vague about how it will protect biodiversity.

The Victorian Bushfires Royal Commission (BRC) asked for clarification about how these two differing objectives will be achieved, with the protection of human life given the highest priority. But the draft sometimes seems to have interpreted this as a statement that Victoria's biodiversity is to be generally sacrificed for public safety.

That was never the intention of the Commission, and it is not a decision that has been made by the Victorian community. It is certainly not reflected in legislation (see 'Additional Comments' below).

The Royal Commission recommendation 59 for a revised Code of Practice should be seen in the context of Chapter 7, 'Land and fuel management', in the Commission's report. The opening paragraph of their section 7.4.6 on the Code of Practice lists the protection of biodiversity among the obligations to be met.

Further on it lists a number of items that the Code should make explicit. These include (last dot point on p. 302): *'The purpose of landscape mosaic burns is clarified and described.. and understanding is developed about their interaction with biodiversity values.'*

Recommendation 59 should also be seen in the context of recommendation 57 which calls on DSE to report annually on prescribed burning outcomes, including impacts on biodiversity.

We repeat, making protection of life the prime objective should not be interpreted to mean that protection of biodiversity is not a highly important objective.

To draw a parallel, the design of Victoria's roads, and the framing of road rules, clearly has public safety as the prime objective. But it is not an absolute. It is accepted that there are other objectives in road design, and it is understood that people using roads have a responsibility to contribute to public safety, and to their own safety.

If public safety was the only objective in road design, there would be no solid objects within 20 metres of a road, speed limits would be kept at 20 km/hr, and roads would not follow scenic routes edged with steep cliffs. But the public accepts that road design and road rules have to fulfil other objectives (useful travel times, tourism values etc), and road users are expected to modify their behaviour to make allowances for that.

Unnecessarily, throughout the draft, fire protection and biodiversity protection are seen as incompatible objectives. The clearest example of this is the simplified definition in the draft of Zone 2: Strategic Bushfire Moderation Zone (SBMZ).

In the 2006 Code, the Zone 2 description includes (among five paragraphs) these two important points:

- *164: Wherever possible, while delivering asset protection objectives, the Strategic Wildfire [Bushfire] Moderation Zone will aim to maximise ecological*

outcomes by seeking to manage for ecologically desirable fire regimes, provided fire protection objectives can still be met.

- *165: The level of fuel management in the Strategic Wildfire [Bushfire] Moderation Zone may impact on flora, fauna, cultural and economic values. The Department should reduce potential incompatibility between fuel management and these values through consultation with relevant managers and the careful placement and delineation of the zone.*

In the current draft, one very simplistic statement attempts to cover the complex management aims within Zone 2:

- *140: This zone aims to reduce the speed and intensity of future bushfires. This zone complements the APZ in that the use of planned burning in the SBMZ is designed to protect nearby assets from ember spotting during a bushfire.*

While we appreciate efforts to keep the document relevant and uncomplicated, fire management is difficult and multi-faceted, and the code has to reflect this if it is to be at all useful. The five short paragraphs in the 2006 code are easy to read, clear, and helpful in understanding how that zone should be managed. The overly brief definition of Zone 2 in the draft is misleading, and scarcely distinguishable from the definition of Zone 1.

Importantly, there are many areas where decisions in relation to planned burning (eg time and season of burn, severity, which of several EVCs should be burnt etc) that can lead to similar fuel reduction effectiveness but very different biodiversity outcomes. And hopefully, in time, fire managers will increasingly be well-equipped to make very good calls in this regard.

This sort of 'win win' management is not encouraged by the code at present. But it was strongly advocated by the BRC (especially in recs 57 & 58 regarding monitoring and reporting on biodiversity impacts) as the future direction of fire management.

2. Are the over-arching objectives set in paragraph 4 of the draft Code appropriate for fire management on public land?

The first objective – *'to reduce the impact of major and catastrophic bushfires on human life, communities, infrastructure, industries, the economy and the environment'* – is flawed. It propagates the myth that 'catastrophic' bushfires are largely the result of poor management, and that their impact can be significantly reduced by such things as fuel reduction burning.

It also implies that reduction of the impact of less severe bushfires is *not* an objective, yet it is these fires which occur most frequently in Victoria.

There was abundant evidence to the Victorian Bushfires Royal Commission that in extreme fire weather conditions, and particularly in many forested areas of Victoria, fuel reduction burning had only limited local effect, and there were few options to reduce the impact of such fires through fuel management. However enlightened planning, property buy-backs, the reduction of ignition threats (including powerline malfunction) can all contribute significantly to public safety in such extreme weather. Appropriate personal fire plans (including evacuation strategies) are also important.

The BRC's *Fuel Management Topic: Facilitated Expert's Conference, 20 February 2010, Summary of Discussion by Panel* includes the following statements:

Risk reduction:

2. A key question in this area is: "What is the acceptable level of risk posed by unplanned fire?"

(a) There are areas of forest in Victoria where using prescribed burning will reduce the risk of losses due to bushfires.

(b) Local factors in parts of Victoria mean that any answer to that question must be a statement about reduction in relative risk only. There are areas of forest in Victoria which by reason of local features (including topography, road networks, population concentration and vegetation type) will always carry a higher residual risk of loss due to bushfires.

And further:

5. Prescribed burning may not be effective (or be of reduced effectiveness) in some circumstances by reason of the operation of factors such as:

- The weather (wind, temperature, relative humidity)
- The stability of the atmosphere
- Moisture content of soil and fuel litter
- Topography.

It is clear that while the BRC saw fuel reduction as having a role, it did not see fuel reduction as the only (or in many cases the most effective) tool against catastrophic fire.

The first objective in the draft code should read, simply:

'to reduce the impact of bushfires on human life, communities, infrastructure, industries, the economy and the environment'.

This allows the code to distinguish between:

- the management actions likely to be effective in reducing the impact of less severe fires, and
- those management actions useful in dealing with more severe fires.

It is also in line with Recommendation 59 of the BRC to *'provide a clear statement of objectives, expressed in measurable outcomes'*.

3. Are the actions and strategies in each section of the draft Code measurable?

How could these be improved?

Generally the suggested indicators are vague and, in many cases, so vague they can lead to almost any management action being considered reasonable.

It is impossible to comment on whether many are measurable, as the suggested indicator is to be *'set out in policy or operational guidelines'* which may or may not exist.

Other indicators/targets include words such as: *'in a timely manner'*, or *'as deemed appropriate by public land manager'*. Such vague language is meaningless in any table of indicators (or indeed in any policy/strategy/code).

The code should avoid all vague language, as it gives the impression that the code is not to be taken seriously.

The code should reflect the reality that there are some management processes that can be measured relatively easily (eg p. 19 – Number of coupe burns undertaken versus those required [planned?]), and there are some management processes that are very difficult to measure (eg p. 19 – % of public land meeting desired ecological state).

The code should:

- Establish meaningful indicators where they exist
- Acknowledge where reliable indicators have not been developed.
- Outline the necessary monitoring and/or research needed to establish meaningful targets/performance measures where they don't currently exist.

In respect of this last point, the tasks in place, or proposed, in order to implement the BRCs recommendations 57 and 58 should be made very clear.

Importantly, the long-term effectiveness of planned burning programs should be monitored and reported on.

Some important aspects of ecosystem management are not given indicators at all in the draft, because they are only mentioned as issues in passing. In its principles for fire management, the draft Code (par. 22) specifies:

'the use of fire to ensure... natural diversity to maintain healthy ecosystems, species mix, structure, function and supply of ecosystem services such as water and carbon storage'.

While this principle is fine as far as it goes, all of these matters are quite significant, and deserve to be spelled out in detail and have their own management actions and indicators, but the draft Code neglects to do this.

4. Does the risk analysis framework in the draft Code conclusively prioritise the primacy of human life over other values?

Yes, but it's an odd question, and not really pertinent.

The risk analysis framework should be a process for identifying risks to all aspects of fire management, including biodiversity. Only when that is done properly can the need for any necessary 'trade-offs' be assessed and/or evaluated.

The relegation of biodiversity to an (assumed) part of 'ecosystem services' does not give it the status it deserves in this section. Biodiversity is important in itself, not just for the 'services' it provides.

5. The draft Code requires that burn size, percentage treatment and residual fuel loading will be specified in individual burn plans. What is the most convenient way for you to access Fire Operations Plans and supporting information on individual burns?

It is currently almost impossible to evaluate or respond to fire management plans without a considerable investment of time and resources duplicating work that has already been done (or should have been done) by DSE.

DSE is currently engaged in extending the mapping of fire histories across the state. DSE has also developed quite detailed minimum and maximum fire intervals for a range of EVDs across Victoria. Yet long-term fire histories are not included in proposed burn plans, even though long-term histories are essential when identifying the ecological impact of burns.

Similarly, EVCs (or even EVDs) are rarely indicated, yet that information is critical to planning management burns. Listed threatened species (invariably plants) are indicated for a few ecological burns, but that is often the sum of ecological information supplied.

All information relevant to burn plans should be publicly available, and DSE's reasons for conducting burns at any given location or season should be made clear. In addition, guidelines for patchiness, severity, season etc should also be available.

This level of information would probably be unmanageable on the web. However, the level of information on the web could easily include, at least, EVDs and critical fire histories. Further information should be made available on request, particularly in relation to fauna and other aspects of biodiversity and ecosystem health.

Information should also be available on the current condition of areas where burns have been planned. The spectacle of burns (planned some years before) taking place in heavily drought affected B&I woodlands where there was very little understory, wasn't impressive.

There should be more time available for comment on FOPs.

6. Additional comments?

Public and private land

While the code is apparently obliged to look at public land only, it is clearly important to manage fire (as for pests and weeds etc) across all land tenures. It would be useful if the Code looked at important cross-tenure issues that public land managers should employ, or at least seek to employ. This would seem to be sensible from a public safety viewpoint, as well as a biodiversity viewpoint.

Recommendations of the BRC's Expert Panel.

While the BRC made a recommendation to burn 5% of all public land annually, that recommendation did not actually match the advice of its own expert panel.

Members of the expert panel commented on the lack of certainty in applying a 5% (or sometimes up to 10%) target across all treatable public land, and in clarifying this, most members in response to questions from Counsel, were only willing to apply such a target to "foothill forests", or "dry foothill forests" with any confidence. We believe this advice (and the advice of other fire ecologists) that we have much to learn before we can apply targets to other areas of the state with any confidence, is important.

Degrees of uncertainty for planned burning programs in many forest and woodland types should be honestly acknowledged in the code.

In case this advice from the BRC's Expert Panel members has been somewhat lost in the wake of the BRC's report, we have included some quotes from the final afternoon of the Panel's advice here (reference numbers refer to the Commission's transcript):

Mr Tolhurst, for example, says (15246/7-15):

"My understanding of what we were talking about is, if you like, almost a trial sort of use of prescribed burning and we were talking about particularly of progressing this in the foothill forest areas where there would be less contention in terms of the impact of the fire and we knew it was an area of high priority in terms of protection of life and property. So our discussion there was revolving around the first implementation, if you like, of a trial."

Dr Bradstock adds (15247/11-20):

"I think what we said was if you went for something around 5 per cent in foothill forests that it was our consensus that at least that would be okay in terms of vegetation responses, though we noted that there is very little information about animals. So that was part of the deal. We reckoned that the vegetation could cope with that; plenty of evidence to suggest that it could. We don't know much about animals. We need to monitor it if you are going to do it. But that's not a reason not to do it."

Dr Clarke agrees (15247/27-15248/4):

"Absolutely. I endorse Dr Bradstock's comment, particularly in relation to fauna and our ignorance of the impact on fauna. But the evidence to date suggests that that doesn't look like a dangerous level in that habitat. I guess the other thing we were emphasizing in 20(b) was we think this is a habitat that's important for human life and values and assets, and one in which a trial could take place without major risk to ecological values, but that we would want to monitor that."

Asked to clarify his position, he adds (15248/21-25):

"..I think the panel was of the opinion in this particular habitat type of foothill forest the risk was worth taking, provided there is a commitment to learning as we do it, and that couldn't be said for other habitats about which we know less."

And Mr Cheney (though asking for 8 per cent rather than Bradstock and Clarke's 5 per cent), also agrees that the target applies to the foothill forests. (15250/10-16):

"I would also like to say that the panel agreed that this should be a program, not a trial. The word "trial" has come up, which is tending to say we should confine this to a relatively small area. No, the panel said that we should apply this as a program across the dry foothill forests of Victoria as an area basis, not in one specific area."

And Mr Adams adds (15250/31-15251/5):

"But I also think we were quite clear that, as a program, we say that it would take at least 10 years to implement it and that it should be monitored, but it is a program of the five to 10 per cent in the foothill forests, yes, but in the sense of a "trial" we end up on a semantic point."

It is clear that the panel, when clarification was sought, was clear that the proposed at least 5 per cent target was intended to apply to the foothill forests, and that there was a degree of uncertainty even there which can only be clarified through long-term monitoring.

Dr Clarke submitted a Clarification of Expert Opinion to the Commission on 28th February. In that statement he makes it very clear that in his opinion (with his underlining):

"The available scientific evidence suggests that annual prescribed burning of 5% may be justifiable in dry eucalypt forest, if the primary goal is appreciable (perhaps 50%) reduction of risk to life and economic assets... on days of severe fire weather. There is also some evidence to suggest that in this particular habitat the ecological consequences of this level of prescribed burning are unlikely to result in irreversible or undesirable change. Since this habitat type is also the one encompassing or abutting the majority of economic assets at most risk from unplanned fire in this state, it would appear to be the habitat type in which the greatest reductions in risk to life and property might be obtained.

"However scientific evidence of the appropriate level of prescribed burning (percentage of the landscape or habitat type) needed to achieve desirable reductions in risk, while avoiding ecological harm, is not available for most other habitat types in the state. Consequently, in my opinion it is inappropriate to apply a target of 5-10% across the public estate of Victoria. Similar risk and ecological analyses to those conducted in foothill forests need to be conducted in other habitats with the goal of setting appropriately tailored targets for these habitats.

In the absence of such evidence and analyses upon which to base targets for these other habitat types, there is a need in the interim, for careful and transparent setting of local/regional objectives to justify all prescribed burning activity in those habitats."

Although this statement was submitted after Dr Clarke's appearance at the Commission and was therefore not the subject of questions or discussions by the Panel, it is consistent with his advice while on the panel and the qualification expressed by him at paragraph 9 of the Panel's joint statement (TEN.227.001.0003), and it does at least demonstrate that we need to be wary of implementing a target applicable to all public land or treatable public land rather than just the foothill forests.

The above statements suggest that if we are to manage fire and biodiversity effectively, we will have to move towards well-informed and complex local targets. And to get there, we need clever long-term monitoring programs, and intelligent adaptive response processes.

Legislation

The legislative responsibilities in relation to biodiversity protection are not at all clear in the draft.

The DSE website sets out some of what it considers to be its (bushfire-related) responsibilities here: <http://www.dse.vic.gov.au/fire-and-other-emergencies/about-us/mission-and-responsibilities>

To these, we would add:

- In relation to National Parks, the Secretary of DSE has all of the responsibilities set out at [clause 17 of the National Parks Act 1975](#).

- The DSE must be administered so as to have regard to the flora and [fauna management objectives of the Flora and Fauna Act 1988](#). The Secretary of DSE must also promote these objectives.
- The Secretary of DSE is also responsible for preparing the Victorian [Flora and Fauna Strategy](#) and Action Statements (under the *FFG Act*).
- The Secretary of DSE has some weed/pest eradication responsibilities under the [Catchment and Land Protection Act 1994](#).
- The Secretary of DSE has a responsibility to administer the *Forest Acts* generally, and in particular has a responsibility to protect State forests, and to control and manage State forests and plantations ([under the Forests Act 1958](#)).
- In managing timber harvesting under the *Sustainable Forests (Timber Harvesting) Act 2004*, the DSE would need to have regard to the [principles of ecologically sustainable development](#).
- The Secretary of DSE also has responsibility to administer the *Wildlife Act 1975*. The Secretary's responsibilities under this Act include to manage Wildlife and Nature Reserves, to carry out studies to conserve wildlife and their habitats.
- There are also responsibilities in relation to the Federal EPBC Act.

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