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Dear CFS Bushfire Management Planning Unit

The Conservation Council of South Australia Inc (Conservation SA) welcomes this opportunity to provide comment on the Draft Adelaide Mount Lofty Ranges Bushfire Management Area Plan (BMAP)

Conservation SA is the peak environment and conservation body in South Australia. Conservation SA represents over 50 member groups and their 60,000 supporters and has been a voice for the protection of South Australia's environment since 1971. As the peak conservation body for South Australia, Conservation SA has a good understanding of the likely impacts of bushfire risk management on South Australia's environment. That understanding is expressed in CCSA's "South Australia in a Changing Climate: A Blueprint for a Sustainable Future" which sets out the following principle:

BD5: Fire management should have biodiversity objectives as a key driver

South Australia's management of fire must be world's best practice with biodiversity conservation as a key driver.

This means that:

- fire management must be planned at the landscape scale with regard to biodiversity assets and be integrated across both public and private land*
- fire management should include biodiversity impact assessment based on robust science and the precautionary principle used where scientific uncertainty prevails*
- fire management should be undertaken within an adaptive management framework*
- greater investment is required to better understand appropriate fire management regimes to maintain biodiversity resilience in South Australia as a matter of urgency*
- greater integrated planning of land management including weed abatement, biodiversity assets and fire management is necessary to achieve sustainable biodiversity outcomes while managing the risks posed by bushfire. For example, targeting woody weeds would improve biodiversity outcomes and reduce bushfire threats, and could be achieved via partnerships between the South Australian Country Fire Service and the Natural Resource Management system to educate and train community volunteers or via targeted funding for Bushcare groups.*
- the 'Ecological Fire Management Guidelines' for the South Australian Code of Practice for the Management of Native Vegetation to Reduce the Impact of Bushfire must be adopted on a provisional*

basis only, for a period of no more than two years – to be replaced by scientifically robust guidelines developed through a rigorous process with government and community experts and peer review.

- *Aboriginal expertise in management of fire needs to be recognised and integrated in local fire management practices where appropriate*
- *there needs to be acknowledgement and understanding of fire-dependent ecosystems. Plant species in such ecosystems, requiring fire for germination, risk depletion without appropriate fire management. In addition, the germination of many species may be enhanced by the return of nutrients to the soil from fire. Therefore, regular controlled burns may be necessary to maintain those ecosystems.*

Conservation SA advocates strongly for environmentally sustainable levels of bushfire risk mitigation that do not compromise the significant biodiversity values of the Adelaide Mount Lofty Ranges.

General comments

There are many levels on which the Draft AMLR BMAP is unfinished and these are listed below. In summary the Draft Plan contains serious flaws and omissions and is not ready to approve.

Recommendations to rectify these issues are suggested. Conservation SA would be happy to work together with CFS and other stakeholders to ensure this important topic is addressed and managed as effectively as possible.

1. The consultation and approval process has been rushed, which is risky for all involved. The CFS has informed the Regional and State Committees that the AMLR and Limestone Coast Plans have to be approved because of grant commitments and funding due on 30June16. This is an internal issue only and not a reason to approve a Plan. Numerous Government Plans are delayed and redrafted and there is no reason why this shouldn't be the case here.
2. The FES Act 2005 advises that BMAPs will be informed by the State Bushfire Plan. However this Plan has not been made available to the public during the consultation phase.
3. BMAPs are also underpinned by the State Bushfire Buffer Zone Standards which have a major impact on the controls and activities of this Plan. However these have not been made available to the public during the consultation phase. The Standards are unfinished.
4. Consultation is not valid or complete when the community has not been provided with these 2 major documents that are supposed to underpin and inform Regional Plans.
5. The BMAP process aims to reduce the risk of fire negatively impacting on life, property, and the environment in accordance with the FES Act 2005. *'In the exercising and performance of their powers and functions: the BMC must have due regard to the impact of their actions on the environment'*. We question whether the legal obligations of the Plan, as outlined in this clause, have been met.

6. The FES Act 2005 clearly identifies the need for environmental assets to be listed. However, the Draft Plan has omitted environmental considerations. There are no C or Conservation Zones identified, which has always been part of the BMAP planning process up to this point. This omission makes it impossible for the proposed treatment of bushfire risk to provide adequate protection to the environment.

- No environmental assets are identified.
- No environmental impacts are discussed and how they will be avoided.
- No acknowledgement of other plans and policies and legislation.

There has been an attempt to forecast how the environment will be considered: e.g. Table 1 states Ecological Assets as Threatened Flora, Threatened Fauna, and Threatened Ecologies. However, this is simplistic and would place at risk numerous environmental and ecological values throughout the AMLR.

These omissions are serious as the environment is front and centre of bushfire risk management. The Plan is unfinished and flawed without this information.

Under the legislation, asset treatment needs to consider life, property and the environment and one asset cannot be treated without consideration of all asset classes. Without provision for environmental assets or a process where different assets are co-managed, the socio-economic and environmental fabric of this Region is at risk.

7. There has been a reinvention of buffer zones as 'landscape treatment investigation zones'. This is a new, unclear and un-agreed change from the A, B and C zones which have been in previous Drafts of this Plan. This reinvention has confused the identity of zones and treatments. A buffer zone should only be around an asset. A treatment should only treat a risk, not a zone or an asset. Zones are not created in order to apply treatments. There appears to be buffer zones when there aren't any asset zones. Without C zones the whole process is flawed. There is no process explained or clarification about how A, B and C zones will be managed at the same time when they overlap. Hence the Draft Plan is incomplete and unworkable. Buffer zones do not prevent fires but are part of a wide suite of measures that aim to reduce the risk of fire. The concept that buffer zones create defensible areas on either side is optimistic at best. The idea that a bushfire will stop or even slow down in a buffer zone is not a given and care needs to be taken that this approach is not misleading.

8. In Section 8(d), Local Government Act 1999: Councils roles and functions it is stated that there is a: *need for consistency of all plans, policies and strategies with Regional, State and National objectives and strategies concerning the economic, social, physical and environmental development and management.* This highlights the need for BMAPs to discuss and explain how the relevant legislation, policies and plans are proposed to work together

- Local Government Act 1999
- NRM Act 2004 (SA)
- Native Vegetation Act 1991 (SA)
- Native Vegetation Regulations 2003 (SA)
- National Parks and Wildlife Act 1991 (SA)

- Wilderness Protection Act 1991 (SA)
- Crown Land Management Act 2009 (SA)
- Code of Practice for fire management on public lands (SA)
- Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)
- Water Act 2007 (Commonwealth)

9. The ramifications of this Draft Plan are far reaching because it is a landscape management Plan that involves everyone and everything in that area: every business and economy, every town, farm and house, every person, all wildlife and all remaining native vegetation (10% of original cover). To ensure an approach that adequately encompasses all these factors, further legal and technical input and expertise is required, and further time given to ensure adequate consultation.

10. There is inadequate explanation in the Draft Plan about the delegation in management of risk from the State to the public. The argument appears to be that if Government prescription burning policy is met to ostensibly reduce bushfire risk, then someone else will carry the risk in the event of bushfire. That someone else is largely the community, but this has not been explained in the Draft Plan. Hence, the broader community who the Government now want to carry this risk are unaware of their potential liability. People could support or approve this Plan without full knowledge of the ramifications. The Draft Plan needs to clearly convey what is at stake and proposed new policies need to be followed up with consultation and agreement about an equitable way forward. This takes time, but it is imperative to have an open and transparent discussion before decisions are made which have far reaching consequences.

11. If Government seek to increase participation of others and their greater responsibility so as to minimise risk or avoid costs, it is essential that this is resourced, done transparently and through agreement. A code of practise is required if risk is to be delegated to the community and this would need to be developed in consultation with land managers and land owners. If it is too hard to develop and agree on enforceable codes, then an alternative option that is safer and should be considered is to develop best practise guidelines (in place of a code).

12. One of the main risk management techniques proposed: prescription burning, is simplistic at best and counterproductive at worst. Evidence has shown that prescription burning:

- 1) may not reduce the risk of bushfire (see publications by Price, Bradstock, Gill, etc)
- 2) may cause regrowth that poses a greater bushfire hazard than the original bushland.

Although extreme fire weather may increase along with bushfire risk, the approach of trying to eliminate risk as much as possible may not have any effect in event of extreme fire. However, costs to socio-economic and environmental factors may be significant. Less extreme fires are more treatable in terms of aerial resources, ground crews and landholder efforts.

The premise of prescription burning is to reduce 'fuel', but equating less plant material with less risk of fire is a simplification. Regarding plant material, dead or alive, as a threat and a hazard indicates a lack of understanding about the role of vegetation in the water cycle and the capacity of plants to reduce the risk of fire. Burning selects against fire sensitive species and promotes fire

tolerant species. Repeated fire leads to drier landscape as there is less moisture holding ability with less plant material.

More flammable vegetation can also be an outcome of prescription burning with thickets of weeds i.e. shrubs (e.g. blackberry, broom, South African heath) and native colonisers (ie *Acacia pycnantha*) that form dense stands post fire. In a subsequent fire, flames can more easily ignite the tree canopy. Introduced pasture grasses often colonise after fire due to bare earth and these are taller and denser than native grasslands and pose a greater risk of carrying a faster moving fire. Treating the risk should be focussed on degraded land where invasive weeds have high biomass and connect the understory layer with the tree canopy layer, posing a significant risk of a fire getting away.

Well managed bushland where weeds are controlled poses less risk of fire as compared with poorly managed bushland with weeds. Preserving healthy bushland is one way to manage risk of bushfire.

In catastrophic conditions reducing vegetation or fuel in the landscape is likely to have a minimal impact on the severity and spread of a bushfire. In less severe fires it may assist but in most cases it comes at a cost; habitat degradation, biodiversity impacts, accelerated drying of the landscape increasing the impacts of a hotter drier climate, soil and exposure and subsequent erosion from wind and run-off. This loss of soil carbon is detrimental to ecosystems including agricultural systems. In water catchments it can pollute drinking water supplies and carbon loss from soil and vegetation contributes to greenhouse gas emissions.

13. Whereas the focus is on reducing the costs, impacts and liability of bushfire, the use of prescription burning can have these costs too and this is not discussed. Prescription burns can get out of control and damage properties, livelihoods, environments and endangered wildlife (several examples in recent years). The Draft Plan does not address this problem. To date, 98% of prescription burning in SA is for risk management purpose (ie fuel reduction) and 2% for ecological purposes (DEWNR Pers. Comm.). There is likely to have been significant unknown environmental impacts.

This Draft Plan could improve this situation by labelling all burning as ecological burns because they always involve ecological systems and have ecological impacts. This would encourage prescription burning to focus on weed infestations as a high fire risk.

14. The Draft Plan talks about taking an 'unbiased landscape view' that is 'boundary and tenure blind'. This approach ignores vital information and poses a risk to economies, communities and the wider landscape. At a minimum, the Draft Plan needs to spell out why this approach is proposed and what are the costs and benefits.

15. There is a skewed emphasis on vegetation as a hazard and risk that needs to be treated. This deflects attention from equally relevant hazards and matters to address.

16. The promotion of firebreaks and fire access tracks needs to be managed as a detailed landscape approach taking into account all legislation and policies. Access in event of fire is

important but in many case of the steep Mt lofty Ranges impossible. The danger that trucks and brigades face in using steep access tracks during a fire is a risk that many Units and incident management teams will not allow. Hence, there is little point in directing resources to build tracks in the first place. Track building and maintenance also has environmental impacts. They carve up intact landscapes breaking up connectivity and providing a serious vector for weeds and feral animals. The damage costs from building a track through native vegetation is always left to landowners. The cost of the environmental damage is worn by everyone and can rarely be undone. All tracks and firebreaks need to be planned extremely carefully with full consideration of environmental and other impacts.

17. A shorter Plan with overarching aims and guidance would be simpler and more effective. Attempts to list all assets is micro-managing a complex issue. One risk of over-listing assets is that excluded assets will not have protection measures, while included assets could be treated at the expense of others assets and life, property and environmental considerations. This is obviously a serious issue given the omission of environmental assets.

Listing 1000's of assets is ineffective and unworkable as there is no mention of where the resources will come from to implement asset protection. If a listed asset is not 'treated' and is lost in a bushfire, will blame be apportioned? The legal ramifications need to be explicitly stated. Once this information is clear then it is likely that the method of listing every possible asset will highlight the problems of this approach.

18. An example of the Draft Plan trying to do too much is the interactive map and the emphasis on boundaries. Drawing lines on maps is over prescriptive and can be problematic. This may fit with an emergency services approach to incident management but is inappropriate for landscape scale management of land and water resources, communities, economies and environmental values.

At the Regional scale, risk management needs to be flexible and arbitrary. It needs to be determined by consultation, antecedent conditions, forecast weather, changes in vegetation condition and informed by new information all the time. A whole of Government approach to risk management of bushfire would result in a more realistic approach that takes into account all the relevant legislation and policies.

19. Economic, social and environmental impacts of proposed risk management in this Draft Plan are not discussed despite tourism, agriculture, horticulture, recreation and other land uses, such as the potential International Biosphere Listing under investigation by Adelaide Hills Council. Unplanned and planned fires have major impacts which adversely affect economies, social wellbeing and ecosystem services and this needs acknowledgement. The Draft Plan does not appear to take into account State and National plans, policies and legislation for managing soil, water, vegetation and biodiversity at the same time as proposing 'treatments' on the landscape which are all about these issues. The Draft Plan needs to identify the responsibilities and work within the community and interact with other people to achieve the most from various Plans, Policies and Laws. This is the main way to avoid one group undermining or counteracting the achievements of another. Also, opportunities to add value will become apparent with such an analysis.

20. There is no mention of how forecast climate changes will fit it in with the rigid approach proposed. Flexibility is paramount in an era of changing climate in order for bushfire management to be effective.
21. The Draft Plan fails to mention adaptive management and flexibility, both of which are critically important for treatments that have far reaching consequences. Best practise planning and preventive measure for bushfire is changing all the time. Managing risk will change as new information comes to light and it is imperative that the organisations involved and decision making processes understand and operate in an adaptive management framework. The Draft Plan is supposed to be 'live' and able to be updated on a regular and ongoing basis, but how this is supposed to happen has not been explained.
22. The Draft Plan does not draw from or cite any literature. There is considerable literature to inform bushfire planning and the more peer reviewed science that is included the more robust, accurate, effective and less contentious a Plan. The type and level of land and water management being proposed with its far reach and consequences needs to be proposed and conducted on the basis of best available science. As it stands the Draft Plan is not rigorous, nor academically defensible.
23. The Draft Plan has not been through any peer assessment process. Such a step would have highlighted the inadequacies. It is essential that the Draft Plan is appraised by an independent panel of experts. The objective would be to ensure bushfire risk management is undertaken effectively and in an adaptive management framework.
24. The Draft Plan is ambiguous and confusing making it difficult for any reader to fully understand. Given the gravity of the proposed treatments of the landscape, there is a need for terminology to be crystal clear. The Plan would be greatly enhanced by the inclusion of flow charts and conceptual diagrams to clearly illustrate what is being proposed and why.
25. There is inadequate attention on how to prevent ignition by people. Most fires start this way. This issue needs to be given the necessary attention it deserves. Resource expenditure on this topic may be one of the most effective ways to mitigate risk.
26. There is inadequate attention to resourcing better detection of lightning strikes and ignitions using improved lightning sensor networks and aerial reconnaissance.
27. There is inadequate attention on putting fires out. Better technology including large aircraft and aerial suppression were found to be highly effective when backed up with ground crews who were resourced with top class equipment (National Aerial Firefighting Centre).
28. There is a need to resource, train and prioritise fire-fighting capacity to protect areas with high ecological value. Incident Centres and local Brigades need information about the location of high conservation value places and fire-sensitive vegetation, so as to protect fire from burning SA and National Natural Heritage.

29. There is inadequate attention to building community awareness, looking out for others, rapid response methods, education and awareness about codes of practise, SAPOL operation Nomad, and especially equipment and training for local people and communities. This highlights the need to direct resources to areas where they are most effective.
30. The inclusion and definition of cultural assets which are not mentioned in the Fire and Emergency Services Act needs explanation.
31. Glossary and Acronyms: Amend to clarify definition of all terms.
32. The contribution from environmental organisations is essential to the success of the Plan. Committees and planning processes need to reflect this and would benefit from greater environmental technical input. Other States have drawn from a wide range of environmental professionals and technical experts, and the SA BMAPs would be incomplete without such knowledge and expertise.

Yours sincerely,



Craig Wilkins
Chief Executive