

27/03/2021 23:48 **Tim Kelly**

Clarification sought

The key functional components of bushfire prevention in South Australia through the Bushfire Management Plan include:

- Bushfire management zones which are established in priority locations in regard to assets , guiding fuel management for reducing risks to life, property and environmental assets
- The statewide Fire Management Zone Standard and Guidance for Use which describes the different types of zones, appropriate objectives for fire management within the different zones and the required fuel reduction conditions for the zones.
- The Ecological Fire Management Guidelines for Native Vegetation in South Australia, which describe appropriate burning prescriptions for fire management in conservation and native vegetation areas (those areas which are not asset protection, bushfire buffer or strategic risk management zones).

None of these key state documents are described covered in this revised State Bushfire Management Plan. Some references are made in the Appendix: Bushfire Management Planning Handbook, but the Handbook is not the proposed State Bushfire Management Plan and will be reviewed to reflect the final SBMP in the near future.

The previous 2010 Interim SBMP described bushfire management zone in a designated section. The Ecological fire management guidelines were also summarized. These descriptions provided the link between the Fire and Emergency Services Act and bushfire planning activities. The removal of these key Bushfire Management Mechanisms in this plan means that they are no longer supported as the way bushfire management is carried out, and three critical documents lose their status as legal instruments to guide bushfire management.

What is mentioned is the Risk Management Standard ISO 31000 (2018) which would be fine if it was used in conjunction with zoning and burning prescriptions, but if used in isolation with undefined risk treatments it could simply be used as a loophole to approve anything without a clearly defined process.

Questions:

- Is it the intent of the SBCC to diminish the role of the Bushfire Management Zoning Standard and Ecological Fire Management
- Guidelines for Native Vegetation in South Australia, by omitting adequate reference and description in the draft SBMP?
- Can it be confirmed that the SBCC is not seeking feedback on the Bushfire Management Area Plan Handbook Version 2. Despite this document being attached in full to the proposed SBMP?
- Will the non-confidential submissions through this consultation process be published to be on the public record, or will it be necessary
- to posts all matters of potential public interest on this discussion page?

29/03/2021 14:35 **State Bushfire Coordination Committee**

"Thank you for taking the time to read the draft State Bushfire Management Plan. In response to your questions:

- All existing guidelines, policies and Codes of Practice retain their current status unless or until formally rescinded by the SBCC. There is no intent to diminish any existing standards or guidelines.
- The SBCC is not currently seeking feedback on the Handbook. The Handbook attached is the existing endorsed Handbook and is attached to the SBMP in fulfilment of s.73(4)(c) of the FES Act 2005.
- regarding publication of non-confidential submissions, how (eg in summary or in full) and whether submissions made regarding the SBMP are made public is a matter for the SBCC to determine."

29/03/2021 21:27 Tim Kelly

Thank you for responding to the clarification I sought.

On the matter of whether submissions will be made public, given that the SBCC will not meet until well after the consultation closes, I must assume that non-confidential submissions may not be published and on that basis it will be necessary to put the key issues on the YourSay website. This is not ideal. I will seek to minimise posts to this forum but will cover the importance of adequately describing the key state bushfire management documents in this post and will address the Role of the SBCC, description of approval processes and other matters in the near future.

KEY STATE DOCUMENTS MISSING FROM REFERENCE, DESCRIPTION OR INTRODUCTION

On the essential state documents that are omitted from being properly outlined in this document being The statewide Fire Management Zone Standard and Guidance for Use and the Ecological Fire Management Guidelines for Native Vegetation in South Australia, my question was not limited to the "existing" versions of these documents. My question relates to the role of these documents (existing and future updates) as a result of this revised State Bushfire Management Plan. I asked about the role of these documents. Of course existing documents won't change until they are rescinded or updated by the SBCC. I now need to ask the question again.

Is it the intent of the SBCC to diminish the role of the Bushfire Management Zoning Standard and Ecological Fire Management Guidelines for Native Vegetation in South Australia, by omitting adequate reference and description in the draft SBMP?

The role of the Ecological Guidelines is essential to justify the word "Prescription" in prescription burning and prescribed burning.

The role of the Zone Standard is vital to spatially identify the areas agreed as important and to prioritise use of resources for fuel management in relation to life, property and environmental assets.

Without these documents which incorporate the necessary process and guidance, the proposed SBMP jumps from risk assessment straight to Native Vegetation approvals (un-numbered table Pg 25) and Hazard (fuel) reduction (both public land and private land (un-numbered table Pg 26) without any proper description of process on how the decisions are made to determine these as appropriate risk treatment actions for the given location.

Fire Prevention is an enormously important process which justifiably requires the Ecological Guidelines and Zoning Standard to guide the best use of financial resources and the DEW CFS prescription burning and CFS crews undertaking such work.

OTHER MISSING STATE FIRE PREVENTION DOCUMENTS

Two other key documents are missing from mention this plan being the Duties to prevent Fires - Codes of Practice for: Crown Land and Council Land. These are now clearly described in the Regulations and together with the Code of Practice for Private land, were envisaged by the Act in 2005 but have not yet been prepared.

Whilst four key state fire prevention documents are virtually not mentioned, the BMAP Handbook of 73 pages which is not being consulted on, takes up more than half of the document released for public consultation. This is not only confusing but distorts the balance of understanding of fire prevention process in South Australia.

RECOMMENDATION

It is recommended that The draft SBMP introduce and describe the role of the following key state documents of the SA Bushfire Prevention Framework in a balanced way:

- Statewide Zoning Standard and Guidance for Use
- Ecological Fire Management Guidelines for Native Vegetation in South Australia
- BMAP Handbook
- Fire Prevention Code of Practice for Private Land
- Fire Prevention Code of Practice for Crown Land
- Fire Prevention Code of Practice for Council Land

If it is the intent of the SBCC to diminish the role of the Zoning Standard and Ecological Guidelines once the current versions expire or are rescinded, as a result of this SBMP, then that should be openly disclosed and justified.

30/03/2021 9:41 State Bushfire Coordination Committee

Thank you for your feedback on the draft State Bushfire Management Plan 2021-2025. The SBCC will review all comments and submissions at the conclusion of the public consultation period.

30/03/2021 19:07 Tim Kelly

ROLE OF THE STATE BUSHFIRE COORDINATION COMMITTEE

The role of the SBCC described on page 2, is not consistent with State Government Guidelines on Government Boards and Committees should work. The appropriate description of the role of the SBCC is shown on page 49 as the functions of the SBCC under Section 71A but this is only after a different perception is established in the minds of readers on page 2.

It would be appropriate for the text from 71 A to be provided on Page 2, and following that, the Plan could then describe some example interpretations. I regard the text on page 2 as misleading because it implies that the text is from the legislation or reflected in the legislation. The text does not disclose that this description is not from Section 71A. The meanings and emphasis are quite different plus there are omissions.

DESCRIPTION OF HOW THE SBCC OPERATES.

The description of the SBCC as State-level South Australian Government Committee made up of representatives of fire and land management and allied agencies and representative organisations, is

not in accordance the South Australian Governments GUIDELINES FOR AGENCIES AND BOARD MEMBERS.

<https://www.dpc.sa.gov.au/responsibilities/boards-and-committees/resources-and-publications/Boards-and-Committees-Guidelines.pdf>,

Under these guidelines, there is a requirement that:

“Members of boards are appointed for their personal skills and knowledge and are required to exercise these for the benefit of the organisation as a whole. Members are not appointed to represent the views of any particular stakeholder or interest group, even though they may have been nominated by a specific group as specified by legislation. As members of a board, they are responsible to the government through the Minister and ultimately to the community for the manner in which they exercise their functions. There is a consistent line of authority to the effect that no matter how and why a person is appointed to a statutory body, that person is not the representative of the sectional interests from which he or she was appointed, but the person’s duty is owed to the body as a whole (Walter, 1997).

It is therefore inappropriate that the SBCC describe its members as representatives. To serve as representatives would be to stifle strategic and independent thinking on better ways to implement the Fire and Emergency services Act in its functions. It would simply be acting as a government controlled committee with constraints on participation confining member input to agency and organisational positions. Under such a structure there would be an obvious power imbalance with a Government Chair, 9 Government agency representatives, 1 local government representative 2 Government owned corporation representatives, 1 Federal Government entity representative, and 4 non-government representatives.

Statutory Authorities are generally established to be independent. The SBCC is not able to provide independent advice under the text of this draft SBMP

The word representative does not appear in Section 71 of the Act which describes members as being officers or persons nominated by organisations. Again, they are not appointed to represent the views of any particular stakeholder or interest group, even though they may have been nominated by a specific group as specified by legislation. This issue has been unresolved for approximately a decade and does need to be addressed with Crown Law advice and clarification. The issue is particularly concerning where government agencies may be reluctant to support the establishment or review of key documents such as the Fire Prevention Codes of Practice for Private Land, Crown Land and Council Land.

Where there is a discrepancy, the Government guidelines advise that members are responsible to the government through the Minister and ultimately to the community, not the nominating agency.

RECOMMENDATION

Prior to approval of the draft SBMP, CFS should clarify to all stakeholders why the SBCC should be managed as a group of agency representatives rather than being established as an independent statutory authority. The clarification should be supported by crown law advice.

31/03/2021 23:52 Tim Kelly

LEGISLATION

The draft SBCC presents an incomplete and inaccurate portrayal of key parts of legislative requirements.

Under the section of PREVENTION on page 10, the document correctly identifies that under section 105 Private land, (1) An owner of private land must take reasonable steps to:

- prevent or inhibit the outbreak of fire on the land;
- prevent or inhibit the spread of fire through the land;
- protect property on the land from fire; and
- minimise the threat to human life from a fire on the land.

However, the draft SBMP omits section 105F Private land (2) & (3) which states that:

(2) In determining the standard required to comply with subsection (1) (but subject to subsection (4)), the following matters are to be taken into account (insofar as may be relevant and without limiting any other relevant matter):

(a) the nature of the land;

(b) whether the land is in a country, metropolitan, township or other setting;

(c) the activities carried out on the land (including whether flammable or combustible materials or substances are used or stored on the land);

(d) other statutory standards or requirements that apply to or in relation to the land.

(3) The regulations may prescribe 1 or more codes of practice for the purposes of subsection

It is essential that the SBMP guides agencies and landholders in understanding the process of how to have regard to the nature of the land. This is not a simple division of rural and residential, and deals with how to appropriately and realistically consider fire prevention on grazing land, cropping land, intact native vegetation and native vegetation remnants, in Asset Protection, Bushfire Buffer, and Strategic Risk Management, and exclusion zones (where fire is to be precluded for various hazards or other reasons).

Having regard to the nature of the land is why there are Ecological Fire Management Guidelines for Native Vegetation in South Australia, the State Zoning Standard and Fire Prevention Codes of Practice under Section 105. To ignore this requirement and to not describe the processes of how to undertake prevention whilst having regard to the nature of the land, means that the SBMP would fail to guide a key functional component of Bushfire Prevention in South Australia.

RECOMMENDATION

Ensure that where Duties to Prevent Fires under Section 105 are described, that the sections dealing with matters that are to be taken into account such as having regard to the nature of the land are also described.

ENVIRONMENTAL APPROVALS PROCESS

Figure 8: Environmental Approvals for Bushfire Hazard Reduction in South Australia on page 14, makes an incorrect representation that approvals for native vegetation clearance are automatic under BMAPs. Bushfire Management Plans are approved by the SBCC and Park related BMPs are approved by the Native Vegetation Council. However, fuel hazard reduction activities in native vegetation can only be approved by the Chief Officer CFS on a case by case basis.

It is understood that the state prescription burning program has been undertaken with an assumption by DEW and CFS that BMPs automatically provide approval for clearance activities and that approvals have not been sought for burning nominated as relating to a BMAP. However, the Native Vegetation Regulations 2017 (under Part 2 CFS approval "fire hazard reduction: 10 "Approval by Chief Officer), establishes the legal requirement for each clearance activity (including burning) to require an approval.

The Regulations further require that:

(1) The Chief Officer of SACFS must not grant an approval under this Division unless the Chief Officer is satisfied that the clearance of native vegetation is reasonably required or appropriate for the purpose of fire prevention or control.

(2) In considering whether to grant an approval under this Division, the Chief Officer of SACFS must have regard

(a) any applicable bushfire management plan;

This means that the Chief Officer must have regard to a BMP but the process is not automatic. There also needs to be sufficient information and detail for the Chief Officer to satisfy a reasonability test and to confirm that the proposed activity is indeed an activity that is consistent with a BMP and zoning. Without these steps, there is no process and no audit trail.

RECOMMENDATION

That approval processes be described in accordance with the requirements of the Native Vegetation Regulations 2017.

BURNING ON PRIVATE LAND (BOPL) PROGRAM

It is agreed that the Environment Protection and Biodiversity Conservation Act 1999 processes on private land also needs to be integrated within the BMAP process.

Furthermore, the BOPL Program in its entirety, needs to be properly integrated into the SBMP and Bushfire Management Plans as it has been undertaken without the legal support of State Bushfire Management Plan or Bushfire Management Area Plans since it was established in 2016-17. The BOPL Program needs a clear logic and priorities to document why burning areas of unzoned private land is more important than the managing established asset protection, bushfire buffer and strategic risk management zones.

In determining how to integrate the BOPL into Bushfire Management Plans there must be some agreed standards and principles applied. Whilst standards have been worked out for zoned areas, there has been no discussion or agreement on what is appropriate for unzoned areas. For example: Should a single dwelling located in unsafe native vegetation as a lifestyle choice require a 20 metre asset protection zone, a 100 metre asset protection zone, hectares, tens of hectares or hundreds of hectares to be burnt for fuel hazard reduction?

RECOMMENDATION

That the Burning on Private Land Program be properly introduced in this SBMP with a commitment to develop principles and standards in how sites are selected, justified and approved in the BMAP Handbook Version 2.0.

6/04/2021 23:20 **Tim Kelly**

ACTIONS IDENTIFIED IN THIS DRAFT PLAN

Regarding the nine numbered actions identified in this draft Plan (numbered in a way that makes no sense), they are largely inward looking and many are already the core duties, housekeeping responsibilities and existing, roles of CFS and the SBCC.

- A 2.1 CFS should already be providing the best Governance advice and seeking assistance from Crown Law where necessary or requested to resolve uncertainties
- A 2.2 CFS should already be guiding the SBCC and the BMCs to ensure that legislative requirements are met. If CFS has difficulty with this task it should seek the assistance of an independent third party
- A2.3 CFS and SAFECOM should provide guidance on how the SBCC and SEMC engage and fulfill their roles whilst avoiding duplication and competition.
- A3.1 Risk assessment processes are a tool. They should not be used in defining the application of risk treatments. This is the role of standards, guidelines and codes of practice. In the Airline Industry, risk assessment processes point to the standards and procedures that govern how risks are to be addressed. The draft SBMP is probably be the first high level risk management document in the world that seeks to extinguish the essential role of key standards and guidelines and codes through omission, thereby diminishing their status as legal instruments and replacing procedure with ambiguity and loopholes.
- A4.1 This action duplicates A 4.2. Review of the BMAP is a routine task that is already scheduled. It is OK to incorporate risk assessment as a tool but it would be irresponsible to guide BMAPs without the clear role and guidance of the Statewide Zoning Standard and Ecological Fire Management Guidelines, or to omit the Crown Land and Council Land Codes of Practice.
- A1.1 Re: State level Risk assessment. This process should include more science, better fire cause data and factor in climate change to a higher level. All Ignition causes and rekindles need to be assessed as risks, not just arson.
- A4.2 See 4.1.
- A5.1 This is an annual cyclical task. There is room for improvement
- A4.3 relates to 4.2 & 4.1.

6/04/2021 23:26 **Tim Kelly**

Re: QUESTIONS POSED BY THE SBCC

What are your top 3 priorities for bushfire management in South Australia over the next 4 years?

Top three priorities are:

1 Embracing the 2020 revised Statewide Zoning Standard and Guidance for use to guide and bushfire prevention activities in spatially defined and prioritised locations, documented in Bushfire Management Plans. In particular, there is a need to undertake more effort in establishing the Strategic Risk Management Zones, and Bushfire Buffer zones in a tenure blind way on the western and northern boundary areas of rural towns and settlements most exposed to bushfire attack. The priority of effort should broaden in scope from trying to make native vegetation perform as fire breaks, to identifying the strategic use of cleared land and manageable areas where the zoning

would be more effective. This will require collaborative engagement and support of private landholders to opt in and voluntarily manage these zones keeping grasses and fuel levels very low during the fire danger season. It will also require those property areas to be spatially identified and zoning to be documented on an as needs basis.

2 Ensuring that the Bushfire Prevention and Property Preparedness Codes of Practice for Private Land and Council Land are finally established, and that the Code of Practice for Public Land is reviewed with adequate consultation as promised years ago. This will enable communities to have guidance in managing their lands in an equitable manner and will finally provide an opportunity to document better ways to manage roadside vegetation which currently uses limited resources inefficiently and results in many areas of metre high phalaris grass and weeds along huge areas of the Adelaide Hills roadsides during summer.

3 Ensuring that CFS and DEW have adequate resources for preparing and maintaining policy and adhering to governance standards that meet the requirements of legislation and the South Australian Community.

What would assist you as a landholder and/or business owner to better understand your bushfire risk?

4 The three Bushfire Prevention and Preparedness Codes of Practice for Private, Council and Crown land would not only assist landowners in understanding how to meet their duties for bushfire prevention and preparedness, but also guide them in how to have regard for the nature of the land. The clearance approval processes under the Native Vegetation Regulations (2017) need to be clearly laid out in a useable template for landowners including Government Agencies and Government Business Enterprises seeking approval to burn or otherwise clear native vegetation. This will also assist the NVC or Chief Officer CFS in understanding the objectives of the burning or clearance to be undertaken, ensuring that the reasonability test and compliance checks are made before each clearance activity is approved.

5 Knowing that the Statewide Zone Standard, the Ecological Fire Management Guidelines for Native Vegetation in South Australia and the three Fire Prevention and Preparedness Codes of Practice as well as risk assessment tools make up the system that is to be followed in South Australia would provide guidance and certainty in landholders understanding risk. This is not possible at the moment as two out of the three Fire Prevention and Preparedness codes have never been prepared and the Crown Land Code of Practice is inadequate. The Ecological Fire Management Guidelines and the Statewide Zoning Standard are not seen by Government as documents that need to be complied with. Worst of all, this draft SBMP would extinguish the role of those documents in favour of ambiguous risk assessment processes that may be used to justify anything.

What would help you to better prepare your property/business for the bushfire season?

6 There needs to be a more honest approach to Bushfire Prevention and Preparedness in South Australia that acknowledges the limitations of providing any assistance to properties owners where assets are established within and against native vegetation. In many situations, these properties are not safe and will never be safe. There are limitations to any benefit from prescription burning and in many situations burning which damages or destroys the tree canopy, can stimulate rapid growth of understory and weed species that result in greater accessible fuel and fire risk after a short time and for years after, with an increased fire risk persisting.

For property owners and occupiers located in unsafe places, there is an urgent need to ensure Bushfire Survival Plans are current and property preparedness in and around the assets is as good as reasonably possible for assets to survive a fire unattended.

CONCLUSION

In summary, the draft SBMP contains large amounts of text, but does not fulfil the crucial role of connecting the legislation with fire management planning and guidance processes which are required as a continuous annual cycle of preparedness and improvement. This document fails to adequately describe how the system works.

It does not provide accuracy or clarity on the role of the State Bushfire Coordination Committee or on how landholders can fulfill their duties for bushfire preparedness whilst having regard to the nature of the land. It also fails to plainly list the key documents that the SBCC is responsible for establishing and keeping under review.

The document fails to outline that:

- Zoning is a key statewide strategy to prioritise bushfire preparedness in strategic locations, reflected in bushfire management plans
- Property Preparedness Codes of Practice are the key documents to assist landholders in meeting their needs and obligations under the Act in unzoned areas.

Of significant concern is the erosion of the role of the Statewide Zoning Standard and Ecological Fire Management Guidelines by omission in the draft plan which de-legitimises these documents as legal instruments. It is noted that the YourSay discussion response would not confirm whether this is an intentional decision. It is also surprising and unacceptable that the Council Land and Crown Land Codes of Practice have not been mentioned when these are now specifically referred to in the Regulations 2021.

The inclusion of the current BMAP handbook in full is cherry picking one document of many, whilst other key bushfire prevention documents are not mentioned. The BMAP Handbook is not presented for feedback and does not inform south Australians of future direction as this document is past its review. It took up more than half the consultation document, creating no doubt some confusion in readers when a reference would have sufficed.

The Tables were not numbered and are difficult to read in an electronic PDF version as they need to be rotated to view. The tables lack the necessary detail on how things work. The glossy pictures are less important than ensuring that the text of the document meets the needs of the Act and South Australians in describing how the SBMP links the legislation to the process of implementation."

8/04/2021 16:17 Peter Taylor

100m wide break around all trees and scrub. 100m corridors NS and EW through scrub and parks to allow wildlife to have an opportunity for safety, can safely burn 25% regularly, allows safety for fire fighters to get in and out. All trees removed that can fall on power lines. We are not serious about fire prevention currently. We only band aid. Time to get serious.

11/04/2021 15:14 Denys Smith

We need satellite bushfire detection and converted Boeing aircraft to fight fires before they become unmanageable. I know this involves long term planning but it is a good time to buy Boeings at the moment before other nations snap up all the idle planes and adopt this technology (currently in use

in the US). Fire extinguishment teams would need special training in the use of drones to pinpoint targets and in mounting a quick response when warnings occur within minutes of ignition.

Longer term: an eradication program for feral cats, dogs and foxes would enable bettongs to bury leaf litter free of charge instead of paying for regular fuel reduction burns. Is there a will to do this or is it too hard? Warrawong was a fine example of the difference between feral animal free area"

13/04/2021 9:51 **cliff Hignett**

1. There needs to be recognition in the plan for the individuals who 'stay and defend' their homes. I know the CFS do not want to divert resources to help these people (CFS actively suggests that people do NOT stay and defend), but I suspect that some effort put into training and equipping such people in strategic locations (eg edge of towns) might provide a valuable asset in emergencies.

2. There is no facility in the plan to handle and accumulate knowledge about bushfires. It is almost routine to 'have an inquiry' after a serious fire, but after the smoke clears, any knowledge is buried in a report. Also, these inquiries are usually more involved in the 'blame game' than in seeking new knowledge. Fire fighters and firefighting administrators are notoriously resistant to new ideas - possibly with some justification - after all its their life on the line! I know CSIRO runs a dedicated bushfire research team but, as an ex CSIRO scientist, I know they can only work on funded projects. Universities are the same. Who examines any new ideas to decide if an idea warrants research funding? Who's job is it to gather new firefighting info and make sure it gets to those on the front line.

3. As an agricultural scientist, I have come across a safe, cheap, chemical which can be added to firefighting water to increase the effectiveness of the water by making it 'stick' to surfaces. Anyone who listens to the CFS lectures on 'protecting your home' will learn that most assets burn as a result of 'ember attack' - this chemical is probably useless in fighting an existing hot fire, but its effect in stopping ember attack are spectacular. I suspect it will also be very effective in laying a firebreak across a stubble fire. I am aware that this material is being looked at in the USA. I am aware that the CFS has used it in airdrops in high concentrations at huge expense. But where do I take the information (that it is so effective at low concentrations against embers) so that 'stay and defenders' and front line CFS know about it. "

17/04/2021 6:13 **Frank Regan**

Please better resource or CFS. Our volunteers desperately need more trainers and training courses. The service has had a significant influx of people wanting to join the service to serve their communities since the devastating fires of 2019/20 and many of them are waiting for months and months to receive their initial basic training. We will lose those volunteers if this continues. Resource our service and increase funding for more training instructors to facilitate more training courses....please.

19/04/2021 11:37 **Ian Pope**

CFS Brigades and traditional road Appliances may have been a useful tool in the past, however with the size, frequency, speed and verocity of bushfires these days, they are no longer an adequate tool in directly fighting a bushfire. Ongoing development, particularly within metro Adelaide now means residential area have taken much of the accessible land more or less leaving on inaccessible land which often cant be reached (or is no safe to enter) with traditional road going appliances. Concurrently it also means an increasing proportion of residential land now bounds high fire risk areas.

There main purpose these days is perhaps mopping up and protecting valuable built assets.

Aerial firefighting, sensible fire suppressant ecology, strategic buffers, etc is where it at.

Resources should be directed into far more aerial craft which can respond and move to the fire front. There could even be an argument for a core National fleet which could be deployed anywhere in Australia."

26/04/2021 22:11 Caroline Johnson

I have read and listened with interest to the many discussions on bushfires prevention. It seems to me that with each discussion on this topic we seldom hear about the subject of EARLY DETECTION. It's something that I have always regarded as pivotal in the battle against bushfires.

I am not suggesting for a second that the other measures are not important. It's just that even with perfect hazard reduction burning, fire resilient construction and bushfire survival plans there will always be destructive bushfires.

BUSHFIRE PREVENTION - EARLY DETECTION

- Every fire starts small, even as small as a spark.
- The earlier a fire can be detected and attended too the better the chances are of putting it out quickly.
- Any delay in getting to a new fire increases the likelihood of it developing into a larger fire and then getting out of control and burning for days or weeks, possibly joining up with other fires.
- Once a fire is out of control the consequences are catastrophic and last for years - for some it lasts forever.
- Bushfires that get out of control cause loss of life, loss of home and possessions, loss of livelihoods, major human trauma, damage to agriculture and infrastructure, damage to the environment, loss of livestock, wildlife fauna and flora... The list goes on - a tragedy of monumental scale.

So early detection is vital.

How?

- Serious research and investment should be directed into how to achieve the early detection of a fire.
- Bushfire prevention could be treated by the Federal Government on the same level as, or even higher than, terrorism prevention.
- Both require early detection to prevent a catastrophe.

Some brainstorming ideas:

- Develop an Early Detection System to ""spot"" fires as soon as they start.
- Use satellite imagery with special thermal and smoke observation technology and software.
- Use the existing mobile phone towers - add more - to mount high resolution cameras to continuously scan 360 degrees and send warnings of smoke or heat.
- Have drones mounted on top of the mobile towers that are programmed to fly off instantly to check on any sign of smoke or fire.
- Their cameras and special sensory equipment would send back photos, messages and GPS coordinates.

- Have a new ""National Bushfire Response Force"" consisting of specially trained personnel in fire detection and immediate response.
- Invest in a significant number of purpose built aircraft and drones to water bomb and fire retardant bomb suspected fires as soon as they start. A National Bushfire Response Air Force
- Have the National Bushfire Response Air Force aircraft at multiple stations around the country and they go on '24 hour high alert detection' as soon as the weather looks to be dangerous for bushfires.

There has to be a way to detect fires early.

- Think of what is ""saved"" if the fire is detected and contained early.
- If terrorism prevention has a special ""immediate response team"" why not bushfire prevention.
- If funds are the issue maybe we should cancel a couple of those twelve submarines (at A\$1.5 billion each and counting - last report hinted at A\$3 billion each).
- Maybe we need to reassess the countries 'security' priorities.

If a bushfire is detected and contained early the rewards are immeasurable.

Kind regards

Anton Johnson

Aldgate, South Australia