

7 April, 2020

Dear Mr Owens and Professor O’Kane,

The Kangaroo Valley Community Bushfire Committee (KVCBC) has prepared numerous submissions to the NSW Independent Bushfire Inquiry. Given the number and detail of these submissions, we have compiled them as one document for consideration by the Inquiry.

By way of background, the KVCBC is a community-based organisation made up of residents from Kangaroo Valley. It was formed in September 2018, following a large public meeting called by the then Kangaroo Valley Rural Fire Service (RFS) Volunteer Brigade captain and the local police officer to discuss the risk and potential impact of bushfire in the valley.

Work done by the KVCBC has highlighted bushfire mitigation planning deficiencies within a number of agencies, including the RFS. The deficiencies we encountered are likely to apply across many regions in NSW and, for this reason, we wish to bring them to the attention of the Inquiry. They include a local bush fire risk management plan that fails to include critical infrastructure, generic fire-fighting plans that do not address unique features within the locality and a failure to adopt recommendations from previous inquiries, such as, the 2009 Victorian Bushfire Royal Commission. One of the key recommendations from the Victorian Inquiry was to support liaison with local communities in bushfire preparation and to adopt community-based plans as part of the planning and preparation process.

Regrettably, the RFS did not support the formation of the KVCBC. As a result, the Kangaroo Valley community was required to take it upon ourselves to proactively respond and build local resilience. Due to KVCBC initiatives, the community has reached a point where there is now a far greater awareness of bushfire risk as well as sophisticated communication linkages and bushfire ready neighbourhood plans in many neighbourhoods. The Currowan fire experience proved that the preparations made by our community worked and, indeed, mitigated to a large degree the threat posed by this fire. Importantly, despite structures being destroyed, no lives were lost.

In conceptualising how to formulate a resilient community plan, aviation principles of a safety management system were adopted. Aviation safety systems promote a proactive and predictive response to risk by identifying pre-existing conditions or risks and removing them or reducing their effects to a tolerable level. It appears that, to date, the RFS and other entities have adhered to a model that is largely reactive, waiting until a major bushfire event occurs before a response plan is formulated and action taken. In comparison, the Kangaroo Valley community has sought to mitigate bushfire impact by preparing well in advance for bushfire events that, unfortunately, are inevitable and likely to become more regular.

The submissions from the KVCBC have been made within this overarching approach that is focused on planning, preparation and risk mitigation. We trust that you will give our submissions due consideration.



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Compendium of Submissions to the
NSW Independent Bushfire Inquiry
2020

KANGAROO VALLEY COMMUNITY BUSHFIRE COMMITTEE

Executive Summary

The Kangaroo Valley Community Bushfire Committee (KVCBC) is a community-based organisation made up of residents from Kangaroo Valley. It was formed in September 2018, following a large public meeting called by the then Kangaroo Valley Volunteer Fire Brigade captain and the local police officer to discuss perceived risks and potential impact of bushfire due to the ongoing drought.

The KVCBC has made a number of submissions to the NSW Independent Bushfire Inquiry and, for ease of reference, has compiled these recommendations as one document for consideration by the Inquiry. The vast majority of the submissions concern preparation and planning for major bushfire events and, as such, respond to the following items in the Terms of Reference:

Item 2. The preparation and planning by agencies, government, other entities and the community for bushfires in NSW, including current laws, practices and strategies and building standards and their applications and effect.

Item 5. Preparation and planning for future bushfire threats and risks.

The submissions have been grouped into the following subject areas:

- Planning for bushfire
- Community information and safety
- Transparency and accountability.

However, issues related to transparency and accountability are a common thread throughout each area with the prime example being hazard reduction which is dealt with under both community safety as well as transparency and accountability.

Planning for bushfire

KVCBC seeks to highlight deficiencies within NSW bushfire risk management planning where plans lack location-specific detail or defined actions to be carried out. Other planning shortcomings can be found in planning for the protection of critical infrastructure including backup power supply and Static Water Supply and risk assessment for roads and bridges. In Kangaroo Valley, there is an absence of bushfire planning for predominant sectors such as the dairy industry, outdoor education, tourism, and camping and picnic grounds. Furthermore, as in most areas of regional NSW, there is a lack of planning regarding the defence of Neighbourhood Safer Places. One of the key recommendations from the 2009 Victorian Inquiry was to support liaison with local communities in bushfire planning and preparation and to adopt community-based plans as part of the planning and preparation process. However, KVCBC has encountered resistance from government agencies in seeking to initiate community input into bushfire planning and preparation.

Community information and safety

In the experience of KVCBC, bushfire emergency information systems need improvement including the Fires Near Me application. Effective and humane evacuation of vulnerable people and people with animals, both during days of Severe, Extreme or Catastrophic fire risk and during an actual bushfire, needs greater attention. The current Community Protection Program is inadequate and more needs to be done in policy-making and planning bushfire refuges. Detailed public information is needed on private bushfire shelters and household sheltering. There is a strong need to identify other safer locations and communities need guidance in this regard. Detailed guidelines are also needed on landscaping around buildings and retrofitting of buildings including last-minute retrofits.

Accountability and transparency

Issues of accountability and transparency abound in regard to bushfire planning and preparation starting from implementation of Bush Fire Risk Management Plans to implementation of the National Strategy for Disaster Resilience, the NSW Critical Infrastructure Resilience Strategy and Emergency Management Arrangement for NSW. Notably, many of the findings of the 2009 Victorian Bushfires Royal Commission have not been actioned in NSW. There needs to be a public register of the responses to all recommendations that arise after a public inquiry into bushfires. Issues of transparency also arise in relation to hazard reduction where the public and RFS volunteers alike currently have no access to either the works program or the monitoring and review process.

RECOMMENDATIONS

PLANNING FOR BUSHFIRE

Bush Fire Risk Management Plans

1. The State revise its policy and legislation on bush fire risk management planning as set out in the *Rural Fires Act, 1997*. Overarching goals of the revised policy and legislation should be to:

- significantly improve the quality of bush fire risk management planning undertaken at the level of local government taking into account the experience of other states such as Victoria
- actively involve the local community in the planning process
- provide for accountability in planning with requirements for making information on the implementation and performance of bush fire risk management plans publicly available.

Community bushfire planning

2. The State implement recommendation 1 from the 2009 Victorian Bushfires Royal Commission and revise its policy and legislation on bushfire risk management planning as set out in the *Rural Fires Act, 1997* with the objective of providing for community-based risk management planning and, as such

- implement community bushfire planning approaches set out in the National Strategy for Disaster Resilience, the NSW Critical Infrastructure Resilience Strategy and Emergency Management Arrangements for NSW
- ensure that local solutions are tailored by, and known to, communities through local bushfire planning
- ensure that NSW Government departments and agencies are required to comply with a community-based approach
- adopt community-based bushfire planning that utilises volunteers from the community to which a local plan relates
- implement community-based planning for all emergencies under the auspices of a State Emergency Management agency, as in Victorian Vic Emergency model. The LEMC would then be responsible for community-based planning within a LGA rather than the combat agencies.

Planning for protection of critical infrastructure

3. The State revise policy and legislation in relation to bushfire protection of critical infrastructure (CI). The policy and legislation should ensure the following

- LEMC audits their list of CI and confirms that the list is complete and comprehensive
- LEMC facilitates the provision of Bushfire Risk Assessments, Bushfire Mitigation Plans, Bushfire Management Plans and Bushfire Pre-Incident Plans for all CI
- accountability in bushfire planning outcomes for CI by the provision of these plans to local communities
- LEMC identifies whether a CI has a standby generator or a generator changeover switch and, if not, installs such generator or generator changeover switch as required utilising community funds where offered
- LEMC identifies whether a CI has an associated SWS and, if not, installs a suitable SWS.

4. WaterNSW revise policy in relation to protection of water infrastructure from bushfire with the following measures

- bushfire planning guidelines for reticulated water supply infrastructure
- consistent public messaging on the need for households to have a SWS for bushfire fighting purposes, even in areas with reticulated water supply
- coordination of research on how SWS can be used in combination with reticulated water supply to improve CI bushfire resilience.

Roads

5. The State implement recommendation 62 of the 2009 Victorian Bushfires Royal Commission and to, this end, NSW RMS revise policy in relation to bushfire protection of road infrastructure with the following measures

- systematic state-wide bushfire risk assessment of all roads and bridges for which it is responsible
- inclusion of critical road infrastructure in BFRMPs prepared by LEMCs across the state
- roadside bushfire planning guidelines for use by local government.

Primary Industry

6. The LSS revise its policy in relation to bushfire protection of primary industry with the following measures

- bushfire planning guidelines for primary industry in general
- pre-incident plans to ensure the supply of critical goods and services to primary producers
- specific bushfire planning material for the dairy industry on the basis that the only viable option is to stay and defend.

Outdoor Education

7. The Department of Education develop policy in relation to outdoor education by

- working with the outdoor education sector to develop guidelines for bushfire planning
- developing bushfire survival and sheltering advice for school groups and others involved in remote outdoor activities.

Tourism

8. The State develop policy and establish legislative requirements specific to the tourism sector operating in bushfire prone areas to require

- village-level documentation of all local information necessary for a visitor to survive a bushfire in a manner similar to the Victorian Survival Guides
- bushfire management plans by tourism operators that include trigger points for evacuation and bushfire survival information that is not reliant on the Internet or mobile phone reception.

Camping and Picnic Areas

9. The State develop policy and establish legislative requirements specific to the range of landholders responsible for camping and picnic areas to require

- publicly available bushfire plans including trigger points for site closure
- accurate information about the open or closed status of sites through physical signage, information on websites and social media.

Neighbourhood Safer Places

10. The State revise its bushfire safety policy and related legislation to ensure that

- NSPs have a Bushfire Mitigation Plan, Bushfire Management Plan and Bushfire Pre-Incident Plan
- these plans be made available to the public to secure accountability and transparency.

COMMUNITY INFORMATION AND SAFETY

Protection through hazard reduction

11. The State introduce a revised approach to hazard reduction in order to

- ensure fuel load management in bushfire prone areas is given sufficient priority by the RFS

- overcome risk aversion within the RFS to hazard reduction
- reduce the workload currently placed on RFS volunteers so that they can concentrate on the core responsibility of protecting rural communities by reduction in fuel loads.

Public communication and advice systems

12. The State revise its policy in relation to communication and advice so that

- RFS Fires Near Me is changed to an Emergency Near Me and incorporates all emergencies including Fire & Rescue NSW Fires
- the real level of risk posed by a bushfire is indicated by displaying only the active fire edge.

Evacuation and relocation - vulnerable people

13. The State introduce a comprehensive approach to evacuation and relocation with guidelines and procedures relevant to vulnerable people. The approach should cover

- preparation of individualised evacuation care plans by government and non-government agencies to ensure that the dignity of vulnerable people is maintained whilst risk is mitigated
- provision of suitable services and facilities for vulnerable people who wish to relocate after a declaration of Severe, Extreme, or Catastrophic bushfire conditions.

Evacuation and relocation – people with animals

14. The State introduce a comprehensive approach to evacuation and relocation with guidelines and procedures relevant to people with animals including wildlife rescue carers. The approach should cover

- identification of sites suitable to be Animal Safer Places
- bushfire management and operational plans for Animal Safer Places with trigger points for when these sites will be open and operational
- locations and suitable indoor facilities for people with animals who wish to relocate after a declaration of Severe, Extreme, or Catastrophic bushfire conditions.

Community Protection Plans

15. The State change the RFS Community Protection Plan (CPP) program in order to

- provide community information guides as in Victoria and other southern states
- adopt a map display that is usable on a small screen similar to the Victorian guide
- provide a similar level of quality information as in the Victorian guide
- provide transparency in decision-making as to how communities are selected
- provide a 5-year rolling schedule for the implementation of the guides.

Bushfire shelter options

16. The State implement recommendation 4 of the 2009 Victorian Bushfires Royal Commission and introduce a comprehensive approach to shelter options including

- help for communities and individuals who seek to identify and assess Other Safer Locations
- criteria for assessing whether a site is suitable to be included as an Other Safer Location
- design and construction of community refuges including standards
- improved information on private bushfire shelters
- detailed practical information on household sheltering and the practice of active sheltering.

Buildings and structures

17. The State implement recommendation 44 of the 2009 Victorian Bushfires Royal Commission develop and publish bushfire mitigation guidelines on preparing buildings and landscape jointly with the building and horticultural sectors respectively including

- retrofitting public and private buildings
- last-minute retrofitting techniques for both houses and critical household infrastructure
- simple and cost effective methods for improving rural property bushfire resilience
- landscaping in bushfire prone areas.

ACCOUNTABILITY AND TRANSPARENCY

Previous bushfire inquiry recommendations

18. The State amend the *Rural Fires Act, 1997* and any other relevant legislation so that NSW RFS and Fire & Rescue NSW maintain and make publicly available a register of their responses to all bushfire inquiry recommendations.

Implementation of the National Strategy for Disaster Resilience

19. The State revise its approach to bushfire risk management so that it

- closely implements concepts and approaches set out in the NSDR
- provides a focus on planning and preparation for bushfires
- requires NSW Government departments and agencies to demonstrate compliance with the NSDR
- makes information as to compliance publicly available in the interest of accountability and transparency.

Transparency in hazard reduction

20. The State amend the *Rural Fires Act, 1997* and subordinate regulations to ensure accountability and transparency in hazard reduction programming including public access to information specifically relating to each local government area on

- hazard reduction schedules
- performance monitoring of hazard reductions
- outcome of hazard reductions
- historical hazard reduction outcomes.

Disaster resilience funding

21. The State revise the Community Resilience Innovation Program so that it no longer requires applicants for disaster resilience funding to have endorsement from a government agency with emergency management responsibilities.

Local Emergency Management Committees

22. The State amend the *State Emergency and Rescue Management, 1989* and subordinate regulations to ensure that

- local communities and individuals have the opportunity to participate in planning and preparation for disasters by the LEMC
- support is provided for the establishment of local community-based emergency management committees
- the LEMC is required to make their committee meeting minutes publicly available.

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PLANNING FOR BUSHFIRE

Bush Fire Risk Management Plans

Item 2 and Item 5

The 2019/2020 fire season in NSW has laid bare the inadequacies in bushfire risk management planning in NSW. Nowhere is this better demonstrated than in the Shoalhaven where just over 82% of the Local Government Area has been burnt. A comparison with equivalent bushfire risk management plans for local government areas in other southern states demonstrates the poor quality of NSW plans.

The local community, including the local flora and fauna, should have been protected by the Shoalhaven Bush Fire Risk Management Plan (SBFRMP) prepared by the Shoalhaven Bush Fire Management Committee in accordance with Part 3 Division 4 of the *Rural Fires Act, 1997* and approved by the Bush Fire Co-ordinating Committee of NSW. However, the bulk of the main text of the SBFRMP is largely a cut and paste of the same information used across the state; it contains very little information specific to the Shoalhaven.

Three appendices to the SBFRMP contain the following Shoalhaven information:

Appendix 1 - Community Participation Strategy: contains a short list of meetings and public information sessions held over a 3-year period. Given the large number of villages in the Shoalhaven, this list demonstrates how little the RFS communicates with the various communities in the Shoalhaven. The table gives the appearance that the Shoalhaven community somehow participates in the bushfire planning process.

Appendix 2 – Asset Register: contains a partial list of some of the Shoalhaven assets. As an example, many of Kangaroo Valley’s important assets are missing from the list. Given what occurred with the Currowan fire, the assignments allocated on the ‘likelihood’ and ‘risk’ columns have been shown to be completely inaccurate. As an example, in the SBFRMP, the Scots College Glengarry campus in Kangaroo Valley was allocated ‘unlikely’ and ‘high’ respectively, with no treatments identified. The school lost multiple buildings and most of its important infrastructure, and will be out of action for most of this year.

Appendix 3 – Treatment Register: allocates possible treatments for some of the assets. Again, using the Glengarry campus as an example, no treatment was actually identified. Most of the treatments identified are hazard reduction based and there is no attempt to indicate whether or not the RFS has the resources or the ability to implement the identified treatment.

The current NSW approach to bush fire risk management planning indicates that some community engagement has occurred and that some hazard reduction may be undertaken. It creates an illusion that effective bushfire risk management planning has been carried out when, in fact, the reality, for communities such as Kangaroo Valley, is that there has been no significant engagement with the community or systematic planning. The Kangaroo Valley community’s experience is that the RFS has failed to put in place any methodology for recording or monitoring the performance of bush fire risk management plans and there has been no attempt to evaluate specified treatments

Recommendation

1. The State revise its policy and legislation on bush fire risk management planning as set out in the *Rural Fires Act, 1997*. Overarching goals of the revised policy and legislation should be to
 - significantly improve the quality of bush fire risk management planning undertaken at the level of local government taking into account the experience of other states such as Victoria

- actively involve the local community in the planning process
- provide for accountability in planning with requirements for making information on the implementation and performance of bush fire risk management plans publicly available.

Community bushfire planning

Item 2 and Item 5

The 2009 Victorian Bushfires Royal Commission stated as part of recommendation 1:

Ensure that local solutions are tailored and known to communities through local bushfire planning.

Further on, in the detailed Royal Commission Report under Section 1.6.3: Advice and Local Planning are Crucial, it is stated that:

A continued focus on providing frank and meaningful advice on the risks and what is required to adequately prepare for and survive a bushfire is essential. Local planning and emergency management processes are also essential if this advice is to have a sound basis.

Kangaroo Valley started to actively focus on local community bushfire planning in September 2018 following a community meeting organised by the local police officer and the captain of the Volunteer Rural Fire Brigade. This was quickly followed by one large locality, Upper Kangaroo River, organising into nine bushfire ready neighbourhoods. Other localities and neighbourhoods followed suit. These meetings were organised to address concerns over the heightened bushfire risk, especially for potentially severely impacted areas (e.g., one road in/one road out). As such, the Kangaroo Valley community is in a unique situation, in that it actively tried to prepare for a major fire and then subsequently experienced the Currowan fire, a major fire event.

Currently, in NSW, there is little or no organised community bushfire planning. The RFS provides a very high level Local Government Area (LGA) Bush Fire Risk Management Plan (BFRMP) which does not effectively address local community needs. In the case of Kangaroo Valley, the current 2018 version has significant deficiencies in that half of Kangaroo Valley's critical infrastructure is not even included in the BFRMP.

The National Strategy for Disaster Resilience highlights the important role that communities have to play in planning and preparation for natural disasters including bushfires. Ultimately, due to the finite resources of governments and their agencies, it is only communities that can deliver the changes required to build bushfire resilient communities. In the same way that our society relies on volunteers for the bushfire response, it also makes sense to use the community's own resources for planning and preparation.

The NSW RFS bushfire planning processes for a community such as Kangaroo Valley leaves a very large gap between the LGA BFRMP level and the household level Bushfire Survival Plan.

The KVCBC has filled this gap by developing a Kangaroo Valley Bushfire Plan along with many areas developing Locality/Neighbourhood Bushfire Plans. The overall community Kangaroo Valley Bushfire Plan looks at the big picture issues that affect the broader community while the Locality/Neighbourhood Bushfire Plans deal with the details of protection and mitigation of a relatively small group of properties. The Kangaroo Valley experience has shown that for local community planning to be truly effective, it needs to be undertaken below the 'big picture' level, down to, effectively, the street level, often referred to as the 'neighbourhood' level.

The Kangaroo Valley neighbourhood groups have proven to be extremely effective at:

- improving communications
- facilitating the dissemination of critical emergency information
- helping everyone who participates to prepare a household Bushfire Survival Plan
- assisting vulnerable people
- providing an access point for RFS community engagement and bushfire advice
- having frank and meaningful conversations as identified by the 2009 Victorian Bushfires Royal Commission
- helping people to make sound decisions with respect to staying and defending
- helping with the immediate bushfire response by the provision of detailed neighbourhood maps to firefighters
- helping with the practical side of the recovery process
- helping with the emotional side of the recovery process by developing a sense of community and the support that comes with it.

The KVCBC believes the number and quality of written household bushfire survival plans in the community has increased significantly with the introduction of the neighbourhood groups. This has occurred largely due to the sharing of written household plans and the discussions held about locality specific information during the neighbourhood group meetings.

The Kangaroo Valley experience has shown that community-level bushfire planning can be effective when it is conducted by trusted people within the local community. This factor was also identified in the detailed findings of the 2009 Victorian Bushfires Royal Commission.

In 2012, the Victorian CFA introduced a trial program called *Community Led Planning* in response to the 2009 Victorian Bushfires Royal Commission. The CFA website states:

The trial found that communities, when supported, are in the best position to lead activities that result in a stronger, more connected and prepared community.

The CFA now provides assistance to those communities that want to be better prepared for bushfires to develop a *Community Led Action Plan*.

The South Australia Country Fire Service has implement *Community Fire Safe* groups supporting neighbours to prepare for bushfire. The CFS website states:

By working together with your neighbours or group you will be in a better position to prepare for fires, thereby increasing your chances of survival.

The Tasmanian Fire Service has also implemented a *Bushfire Ready Neighbourhood Groups*. The TAS website states:

BRN Groups are formed when small groups of people living in high risk bushfire areas take responsibility for their own safety and work together to devise plans and actions to suit their lifestyle, environment and community.

The Western Australian Department of Fire and Emergency Services has implement *Bushfire Ready Groups*. The DFES website states:

Bushfire Ready is a local community action program aimed at encouraging local residents to work together in preparing and protecting their families and properties against bushfires. Bushfire Ready aims to build the community resilience by providing an opportunity for neighbours to network, share ideas and information and develop and implement strategies to reduce their bushfire risk.

The Kangaroo Valley experience has been that NSW Government agencies, including the RFS, have been unsupportive of community bushfire planning. This lack of support is contrary to the National

Strategy for Disaster Resilience, the NSW Critical Infrastructure Resilience Strategy, and Emergency Management Arrangements for NSW.

Some Kangaroo Valley neighbourhood groups are now operating to support the community during the Coronavirus crisis, demonstrating the disaster resilience capacity of this arrangement and affirming the concepts put forward in the National Disaster Resilience Strategy.

Recommendation

2. The State implement recommendation 1 from the 2009 Victorian Bushfires Royal Commission and revise its policy and legislation on bushfire risk management planning as set out in the *Rural Fires Act, 1997* with the objective of providing for community-based risk management planning and, as such
 - implement community bushfire planning approaches set out in the National Strategy for Disaster Resilience, the NSW Critical Infrastructure Resilience Strategy and Emergency Management Arrangements for NSW
 - ensure that local solutions are tailored by, and known to, communities through local bushfire planning
 - ensure that NSW Government departments and agencies are required to comply with a community-based approach
 - adopt community-based bushfire planning that utilises volunteers from the community to which a local plan relates
 - implement community-based planning for all emergencies under the auspices of a State Emergency Management agency, as in the Victorian Vic Emergency model. The LEMC would then be responsible for community-based planning within a LGA rather than the combat agencies.

Planning for protection of critical infrastructure

Item 2 and Item 5

Critical infrastructure generally

As defined in the 2018 NSW Critical Infrastructure Resilience Strategy, critical infrastructure (CI) is 'the assets, systems and networks required to maintain the security, health and safety, and social and economic prosperity of NSW'. This strategy has identified bush fire as a hazard for CI and emphasises that we must prepare for all threats.

In October 2018, the KVCBC identified that much of Kangaroo Valley's CI is missing from the Shoalhaven EMPLAN or BFRMP or both including the following:

- a) Tallowa Dam - WaterNSW
- b) Kangaroo Valley Power and Pumping Station – Origin Energy
- c) Bendeela Power and Pumping Station – Origin Energy
- d) Transgrid Electrical Substation – Transgrid
- e) Mt Scanzi Road Electrical Substation – Endeavour Energy
- f) Moss Vale Road B73 – RMS
- g) Hampden Bridge – RMS
- h) Ambulance Station and Community Centre – NSW Ambulance
- i) Volunteer Rural Fire Station - RFS
- j) Public School – Department of Education
- k) Glengarry Campus – Scots College Sydney

- l) Water Treatment Plant – Shoalwater
- m) Sewerage Treatment Plant – Shoalwater
- n) Showground – Shoalhaven Council
- o) Upper River Road Communications Tower
- p) Wattamolla Road Communications Tower
- q) The Kangaroo Valley Service Station

The KVCBC believes that very few CI in Kangaroo Valley has either a bushfire management plan for staff, visiting workers and tourists, or a bushfire mitigation plan detailing how bushfire risk could be lowered.

As a result, many of these sites have no, or inadequate, asset protection zones. Furthermore, none of these sites have active bushfire defence systems in the form of sprinklers. Importantly, none of these sites have a bushfire pre-incident plan detailing how the RFS or Fire & Rescue NSW would defend them during a bushfire. Most of these sites have little or no adequate Static Water Supply (SWS) to assist fire fighters in defending them.

When the Currowan Fire entered Kangaroo Valley, none of these sites were actively defended by firefighters. No aircraft were available for active defence of CI. Crews only became available after the fire front had passed through Kangaroo Valley and headed to Bundanoon.

The KVCBC is of the view that the lack of planning and preparation of CI greatly increases risks to firefighters being tasked to defend these assets and that this is an inappropriate and unsustainable situation.

The apparent failure to properly plan and mitigate for bushfires with respect to CI in NSW represents a failure by NSW Government departments and agencies as well as asset owners to comply with well documented policy and strategies. There also exists a failure by these bodies to be transparent with respect to their disaster planning.

The KVCBC believes that for the successful protection of CI bushfire planning needs to consist of four major components:

- Bushfire Risk Assessment: CI owner appoints independent consultant to identify level of risk
- Bushfire Mitigation Plan: CI owner identifies strategies to lower the level of bushfire threat and reduce risk, for example, APZs, maintenance programs, sprinklers, ember guards
- Bushfire Management Plan: CI asset owner describes protective actions to be followed when fire threatens
- Bushfire Pre-Incident Plan: RFS & Fire & Rescue NSW set out how they will defend the CI.

As the first step, the risk assessment should be undertaken by an independent consultant as is the case for new developments. The mitigation and management plans should be the responsibility of the CI owner while the pre-incident plan should be developed by paid staff of the combat agencies rather than the volunteers.

[Backup power supply](#)

During the recent Currowan fire, there were many stories of the chaos that ensued when the electricity network failed - fire trucks were unable to operate due to a lack of fuel as the local service station had no power, communications systems failed, water supply failed and evacuation centres or neighbourhood safer places were unable to function optimally.

The KVCBC considers that to help improve the disaster resilience of communities across NSW all CI in a bushfire prone area should have either a backup generator or a connection point with a changeover switch so that a generator can be easily connected. In the case of the Kangaroo Valley Volunteer Rural Fire Station and the Community Centre/Ambulance Station, the local community has offered to pay the cost of installing a permanent standby generator.

Water supply

Static Water Supplies (SWS) are rarely associated with critical infrastructure. In addition, villages and urban interface areas often do not have easily accessible SWS.

The KVCBC understands that rural village reticulated water supplies may not have built-in disaster resilience features to make them a reliable source of water during bushfires. This can be for a range of reasons including: power failure, damaged infrastructure from the fire, and extreme demand due to the fire. Firefighters, including our own local brigade, often report on the lack of reliable water supply when bushfires impact on villages and urban areas.

Some water supply authorities actively acknowledge this unreliability. This is an example of a message from the WA Water Corporation:

Residents living in or near bushland are reminded not to rely on public water supplies if they plan to stay and defend their homes during a bushfire.

We really want to get the message out to everyone who may be affected by bushfires that their usual public water supply may not be available. Residents need to have an independent water supply, such as a concrete or steel tank with a minimum 20,000 litre capacity.

The KVCBC believes that the NSW Government, water supply authorities, and combat agencies in NSW are currently either unaware of, or have no consistent approach to, addressing these deficiencies.

Recommendations

3. The State revise policy and legislation in relation to bushfire protection of critical infrastructure (CI). The policy and legislation should ensure the following
 - LEMC audits their list of CI and confirms that the list is complete and comprehensive
 - LEMC facilitates the provision of Bushfire Risk Assessments, Bushfire Mitigation Plans, Bushfire Management Plans and Bushfire Pre-Incident Plans for all CI
 - accountability in bushfire planning outcomes for CI by the provision of these plans to local communities
 - LEMC identifies whether a CI has a standby generator or a generator changeover switch and, if not, installs such generator or generator changeover switch as required utilising community funds where offered
 - LEMC identifies whether a CI has an associated SWS and, if not, installs a suitable SWS.
4. WaterNSW revise policy in relation to protection water infrastructure from bushfire with the following measures
 - bushfire planning guidelines for reticulated water supply infrastructure
 - consistent public messaging on the need for households to have a SWS for bushfire fighting purposes, even in areas with reticulated water supply
 - coordination of research on how SWS can be used in combination with reticulated water supply to improve CI bushfire resilience.

Roads

Item 2 and Item 5

The 2009 Victorian Bushfires Royal Commission recommendation 62 identified the need for a 'systematic state wide program of bushfire risk assessment for all roads...'. In response to the recommendation, VicRoads developed the Road Bushfire Risk Assessment Guideline and Risk Mapping Methodology. The CFA has also developed Roadside Fire Management Guidelines. Neither the NSW RFS nor NSW RMS have developed any bushfire management or risk assessment plans for NSW roads equivalent to the work undertaken in Victoria.

In 2018, the KVCBC brought their concern about lack of bushfire planning for road infrastructure in Kangaroo Valley to the notice of NSW RFS and NSW Roads and Maritime Services (RMS). Both the NSW RFS and NSW RMS failed to take any steps to address this lack of planning. The Shoalhaven Bush Fire Risk Management Plan fails to even identify as an asset major roads or major bridges, such as, the Hampden Bridge in Kangaroo Valley.

Prior to the Currowan fire, the RMS appeared to have no awareness that the Hampden Bridge needed a bushfire risk management plan, mitigation plan or a pre-incident plan. This is in spite of the fact that the Hampden Bridge is made largely of timber and steel, is the only link between the north and south parts of the village, carries the village's reticulated water supply, has a historic character being on the NSW Government heritage register, and is surrounded by bush with no asset protection zone.

The Currowan fire demonstrated that prolonged closure of roads can have a major effect on business and tourism in particular. Significant damage was done to both the Princes Highway and the Kings Highway due to fire which resulted in significant delays in reopening both roads.

Recommendation

5. The State implement recommendation 62 of the 2009 Victorian Bushfires Royal Commission and to, this end, NSW RMS revise policy in relation to bushfire protection of road infrastructure with the following measures
 - systematic state-wide bushfire risk assessment of all roads and bridges for which it is responsible
 - inclusion of critical road infrastructure in BFRMPs prepared by LEMCs across the state
 - roadside bushfire planning guidelines for use by local government.

Primary Industry

Item 2 and Item 5

The KVCBC is of the view that dairy farmers require special consideration by those charged with responsibility to manage the bushfire response as it is not possible to evacuate a large dairy herd. In 2018, the KVCBC identified that Kangaroo Valley dairy farms should be included in a community bushfire plan. This decision was, in part, based upon stories from the August 2018 Kingiman Road fire where dairy farms around Milton were severely affected by a lack of planning.

The KVCBC approached our Local Land Services (LLS) office and asked for assistance with the development of a bushfire plan for the local dairy farms. The LLS office declined the request on the basis that it thought it would not be supported by the local RFS District Office.

When the Currowan Fire approached Kangaroo Valley, the KVCBC approached our local Member of State Parliament to request assistance for Kangaroo Valley dairy farms. The drought and the effect it

was having on the profitability of the dairy farms was discussed in addition to the vulnerability of dairy farmers to the Currowan fire.

By way of example, conversations with the Chitticks dairy farm revealed that not only would they be affected by the inability of the milk trucks to access the farm if roads were closed due to fire, but the greater financial impact would come from the failure of grain and hay deliveries.

In the end, it appears to the KVCBC that the only assistance offered by the NSW Government to Kangaroo Valley dairy farmers was a New Year's Eve text message to inform them that there were fires in the area.

Recommendation

6. The LSS revise its policy in relation to bushfire protection of primary industry with the following measures
 - bushfire planning guidelines for primary industry in general
 - pre-incident plans to ensure the supply of critical goods and services to primary producers
 - specific bushfire planning material for the dairy industry on the basis that the only viable option is to stay and defend.

Outdoor Education

Item 2 and Item 5

Kangaroo Valley currently has a Sydney secondary school with a permanent outdoor education campus and another permanent outdoor education facility located on the edge of the valley at Fitzroy Falls. A number of outdoor education companies also use Kangaroo Valley on a regular basis for bushwalking, canoeing, and mountain bike trips for city-based schools.

The outdoor education sector currently has no national or state-based industry association bushfire planning policies or guidelines. Some individual operators do have their own plans to varying levels of detail.

It would appear that the NSW RFS and NSW Department of Education currently provides no information on bushfire planning for the outdoor education industry. Only limited information is available on how to shelter if caught in a bushfire while bushwalking or undertaking any outdoor activity.

The remote nature of these outdoor activities means there is little likelihood of emergency warning messages being received or mobile reception being available for communication. The KVCBC is aware of school groups lighting camp fires when total fire bans have been declared, due to a lack of awareness that a ban has been imposed. As the fire season has grown in length, there are now occasions when dangerous fire conditions occur outside the official bushfire season. This lengthening of the fire season and the associated increased risk for those undertaking outdoor education activities means there is an even greater need for bushfire policies and guidelines in the industry.

Recommendation

7. The Department of Education develop policy in relation to outdoor education by
 - working with the outdoor education sector to develop guidelines for bushfire planning
 - developing bushfire survival and sheltering advice for school groups and others involved in remote outdoor activities.

Tourism

Item 2 and Item 5

Tourists in Kangaroo Valley are likely to be visiting from a major city. Many are unlikely to have any particular bushfire knowledge. They are also very unlikely to have a good understanding of the local area in which they are staying. The KVCBC believes this creates a particular set of problems that needs to be addressed separately rather than by the use of the standard bushfire educational material such as those targeted at residents preparing their household Bushfire Survival Plan.

Some Local Government Areas (LGAs) have developed an Emergency Management Fact Sheet for Tourism Operators, with important information for visitors that the tourism operator can offer as part of an information pack. However, because these fact sheets are developed at the LGA level, they are still quite general in nature and do not provide local village or community information that someone caught in a bushfire would need.

Additionally, these fact sheets often rely on references to websites for more detailed information. This does not work in many localities due to a lack of Internet or mobile reception. As the Currowan fire has shown, during a major fire the communications network may be compromised.

Other states, including Victoria, have decided to develop bushfire information for visitors at the locality or village level. Highly relevant, locality specific information on sheltering, Neighbourhood Safer Places, Other Safer Places and other data can be provided.

The NSW RFS currently supplies very little information specifically targeting tourists. There is currently only a couple of fact sheets available which are very general in nature.

Recommendation

8. The State develop policy and establish legislative requirements specific to the tourism sector operating in bushfire prone areas to require
 - village-level documentation of all local information necessary for a visitor to survive a bushfire in a manner similar to the Victorian Survival Guides
 - bushfire management plans by tourism operators that include trigger points for evacuation and bushfire survival information that is not reliant on the Internet or mobile phone reception.

Camping and Picnic Areas

Item 2 and Item 5

Kangaroo Valley has a number of camping and picnic areas in bushfire prone areas managed by a range of landholders. Most of these sites have little or no mobile reception so public communication and advice systems will not be effective and cannot be relied upon. The sites managed by NSW National Parks and WaterNSW are well controlled during major fires and on days with a catastrophic forecast.

However, the KVCBC has noted the following deficiencies:

- lack of physical signage close to main roads to reduce the number of visitors actually reaching these locations during periods of dangerous conditions
- inadequate information on NSW Government websites about the closure of these sites
- lack of information through social media on the status of these areas

- lack of bushfire management plans with trigger points for the closure of these sites and other useful information

Unofficial sites in Kangaroo Valley, such as, Flat Rock in Upper Kangaroo River and the Brogers pool in Brogers Creek are both currently unmanaged by their respective local government. Residents in both locations have witnessed fires being lit during Total Fire Bans and have made requests to Council to have these sites managed. During the Currowan fire, local residents took matters into their own hands and closed off access.

Recommendation

9. The State develop policy and establish legislative requirements specific to the range of landholders responsible for camping and picnic areas to require
 - publicly available bushfire management plans including trigger points for site closure
 - accurate information about the open or closed status of sites through physical signage, information on websites and social media.

Neighbourhood Safer Places

Item 2 and Item 5

The Kangaroo Valley Showground, also called Osbourne Park, has been identified by the NSW RFS as the Neighbourhood Safer Place (NSP) in Kangaroo Valley. During the Currowan fire, as the fire approached Kangaroo Valley, the showground was used twice by the local community as an evacuation place.

Currently, in NSW there is no requirement for an NSP to have a bushfire management plan. NSPs are required to be inspected to ensure they are still suitable, but the KVCBC has been unable to find any publicly available record of these inspections having taken place or the findings of the inspection.

In the same way that households are required to have a Bushfire Survival Plan, the KVCBC believes there is an obvious need to have a plan for how to cope with the arrival of residents, and possibly their animals, in an NSP. For example, one of the lessons learnt during the Victorian fires was that cars in an NSP need to be spaced out to reduce the possibility of a 'car park' fire. Access to water and hoses as well as available facilities such as toilets and showers should be discussed and planned for in advance.

During the Currowan fire, the local Volunteer Rural Fire Brigade decided to set up a portable fire pump at the Kangaroo Valley Showground. A council manager from Nowra tried to intervene and stop the local swimming pool being used as a Static Water Supply by the RFS. This is an example of the type of confusion that can arise when no bushfire management plan has been developed and agreed upon by all stakeholders.

The KVCBC is of the view that all facilities in a bushfire prone area should have a bushfire management plan and that this should particularly apply to an NSP where there is likely to be a significant number of people sheltering from a bushfire.

Recommendation

10. The State revise its bushfire safety policy and related legislation to ensure that
 - NSPs have a Bushfire Mitigation Plan, Bushfire Management Plan and Bushfire Pre-Incident Plan
 - these plans be made available to the public in the interest of accountability and transparency.

COMMUNITY INFORMATION AND SAFETY

Protection through hazard reduction

Item 2 and Item 5

The KVCBC's recommendation regarding hazard reduction concern the inadequate protection provided by the RFS for forested areas on private landholdings and assets identified on the Shoalhaven Bush Fire Risk Management Plan (BFRMP) as being in need of protection. The KVCBC has no criticism of hazard reduction work undertaken in Kangaroo Valley by either WaterNSW or the NSW National Parks and Wildlife Service; combined, they are responsible for approximately 100 square kilometres of publicly-owned land in Kangaroo Valley.

The KVCBC understands that the RFS has primary responsibility for around 200 square kilometres of Kangaroo Valley, most of which is privately owned. A good deal of this area is heavily forested and has had no major fuel reduction since the 1983 fires. Prior to the Currowan fire, approximately only 0.15% of this area had its fuel load reduced by hazard reduction. This figure is based on a 10-year hazard reduction cycle and means that very little protection by way of hazard reduction is being offered to the Kangaroo Valley community by the RFS.

This is in no way a criticism of local volunteers, as the KVCBC is well aware of the efforts made by them to undertake hazard reduction. A combination of factors make hazard reduction very difficult to achieve in Kangaroo Valley, such as the following:

- Autumn and winter fogs lead to a burn window of only about 3 hours on many days.
- Local and NSW Government planning rules have allowed many houses to be constructed in heavily forested areas which increases the risk associated with hazard reduction and makes planning and conducting of hazard reduction significantly more difficult.
- Restrictions are being placed on volunteers by the RFS as it becomes increasingly risk adverse.
- Limited volunteer availability has arisen as a result of a significant increases in other RFS activities. By the time volunteers fulfil administrative duties, training requirements, and respond to a doubling in regular call-outs with the much longer fire season, there is very little time left for hazard reduction.
- The transition away from the traditional 'bush fire brigade' in the Rural Fire Service organisation has seen a shift in focus from bush firefighting and fuel management to activities associated with urban firefighting and auxiliary activities such as safe working on roofs, trail bikes, chain saws, remote area firefighting (also carried out by associated land managers, such as, NPWS, NSW Forestry Corporation, and WaterNSW), aircraft operations etc. The RFS focus has shifted away from fuel management to 'toy' management.

Recommendation

11. The State introduce a revised approach to hazard reduction in order to
 - ensure fuel load management in bushfire prone areas is given sufficient priority by the RFS
 - overcome risk aversion within the RFS to hazard reduction

- reduce the workload currently placed on RFS volunteers so that they can concentrate on the core responsibility of protecting rural communities by reduction in fuel loads.

Public communication and advice systems

Item 3 and Item 11

The current RFS Fires Near Me program demonstrated some significant limitations. As identified by our local community they are listed below:

1. Once fires reach any significant size, the current fire status and maps do not reflect the active parts of the fire and, hence, the current risk posed by the fire cannot be seen.
2. General emergencies, such as trees across roads and power lines down, are only sometimes displayed and then not in a very useful way.
3. Fire & Rescue NSW emergencies are either not shown or not displayed in a useful way.

The general public do not understand the different emergency combat agencies in NSW or their roles and operating areas. They may be left confused by information that shows the same fire being displayed differently depending on which agency's territory the fire is located in.

As well as the difficulties described above, people were often confused by the display of old information. It would be very helpful if only the current fire status and current risk to a local area was displayed.

Many members of our local community swapped over to using the various 'hot spot' apps to obtain more accurate information on a current fire status.

Recommendation

12. The State revise its policy in relation to communication and advice in the following ways
 - RFS Fires Near Me is changed to an Emergency Near Me and incorporates all emergencies including Fire & Rescue NSW Fires
 - the real level of risk posed by a bushfire is indicated by displaying only the active fire edge.

Evacuation and relocation - vulnerable people

Evacuation during bushfire

There would appear to be no formal or well understood process for how vulnerable people, who cannot self-evacuate and who do not have immediate family to assist, can be evacuated in a suitable and caring manner. Rather than the police riot squad or the SES, suitably trained health care workers, as an example, may be much better suited to assisting the ambulance service.

Prior to the Currowan fire, the KVCBC had undertaken significant bushfire planning which included support and caring for vulnerable people within the community. The KVCBC feels that the NSW Government's emergency response in relation to vulnerable people was undertaken without partnering or consultation with the local community.

In spite of the size and serious impact of the Currowan fire in Kangaroo Valley, the KVCBC understands that other than some minor injuries, no one was seriously hurt and no one required medical attention as a direct result of the fire.

Two elderly people did, however, pass away, possibly as a result of the stress of evacuation. In one case, where the family undertook the evacuation, the person was moved to a safer location only to then be impacted by a second fire. In the second case, an elderly couple were forcibly evacuated on two separate occasions, first, by the ambulance service with police riot squad assistance and, later, by the ambulance service with SES assistance.

It is our understanding that some of the local ambulance officers were not happy with how the evacuation was arranged and handled. The elderly couple's neighbours, the local Volunteer Rural Fire Brigade, council staff and the local ambulance officers had been holding discussions on how best to evacuate the couple and some other vulnerable people when 'big brother' stepped in, apparently without consulting those involved in their care.

Relocation during Severe, Extreme or Catastrophic conditions

The NSW Government advises that when Severe, Extreme or Catastrophic fire conditions are forecast residents should 'leave early'. This poses difficulties for vulnerable people in our community as, in NSW, evacuation centres are only opened when fires have started to impact on properties in the vicinity.

For some vulnerable people, leaving early is not an option when there is nowhere suitable for them to go and no family support. As a result, many vulnerable people do not leave early when required or even evacuate when there has been a prediction of Catastrophic conditions. There is an absence of suitable services and facilities that would provide options to vulnerable people not just when a bushfire is imminent but also when dangerous fire conditions are forecast.

Recommendation

13. The State introduce a comprehensive approach to evacuation and relocation with guidelines and procedures relevant to vulnerable people. The approach should cover
 - preparation of individualised evacuation care plans by government and non-government agencies to ensure that the dignity of vulnerable people is maintained whilst risk is mitigated
 - provision of suitable services and facilities for vulnerable people who wish to relocate after a declaration of Severe, Extreme, or Catastrophic bushfire conditions.

Evacuation and relocation – people with animals

Evacuation during bushfire

The difficulties and complications that arise for animal owners trying to evacuate during a bushfire is something that has been well documented in previous bushfire inquiries and has been the subject of significant research. Animal owners often make late and poor decisions about evacuation due to difficulty in knowing where to take their animals. The KVCBC believes that, similarly to human evacuation centres and NSPs, there is a need for both animal evacuation sites and Animal Safer Places (ASP) sites.

During the Currowan fire, late and, at times, conflicting information was provided by those tasked with arranging and managing animal evacuation locations in the northern Shoalhaven. Given the

timeframe for the Currowan fire to travel from the southern Shoalhaven to the northern Shoalhaven, there should have been ample time to prepare and organise animal evacuation sites.

This poor management of a well-understood problem contributed to unnecessary stress and angst within the community. At the moment, the Local Emergency Management Committee (LEMC) does not publish bushfire management and operational plans for animal evacuation sites. The KVCBC believes that it would have assisted animal owners if the Kangaroo Valley Showground had been designated not only as a NSP but also as an ASP.

Relocation during Severe, Extreme or Catastrophic conditions

Many residents who are animal owners also need to relocate themselves and their animals when Severe, Extreme or Catastrophic conditions have been forecast and they have been advised to leave early as a precaution. However, evacuation centres and animal evacuation sites are only opened when actual fires are impacting on properties in the vicinity.

There is a lack of suitable services and facilities to provide relocation options for people who own or are caring for animals such as wildlife rescue carers. The absence of suitable options for animal owners and carers contributed to people being forced to risk remaining at their homes with the animals, causing stress and angst within the community on days of forecasted Severe, Extreme or Catastrophic bushfire danger.

Recommendation

14. The State introduce a comprehensive approach to evacuation and relocation with guidelines and procedures relevant to people with animals including wildlife rescue carers. The approach should cover
 - identification of sites suitable to be Animal Safer Places
 - bushfire management and operational plans for Animal Safer Places with trigger points for when these sites will be open and operational
 - locations and suitable indoor facilities for people with animals who need to relocate after a declaration of Severe, Extreme, or Catastrophic bushfire conditions.

Community Protection Plans

Item 2 and Item 5

The NSW RFS currently provides locality- or village-based *Community Protection Plans* (CPP) as a means of offering additional protection to hazard reduction and community engagement. The RFS website indicates that 117 communities across NSW have a CPP. Kangaroo Valley, in spite of its Very High bushfire risk rating, is not included nor listed to have a CPP in the future. Based on the format of existing CPPs, even if a plan were to be provided, most likely it would only address the immediate village area and would provide no protection to the localities and neighbourhoods that comprise most of Kangaroo Valley.

The Victorian Country Fire Authority (CFA) changed its Township Protection Plans to *Community Information Guides – Bushfire*. These guides currently have been rolled out to 278 communities. The Victorian approach provides very easy to understand local information that can be viewed on a smart phone. In comparison, the NSW approach provides difficult to understand maps that need a tablet or bigger sized screen. The Victorian maps, by virtue of their design, are accessible to both locals and tourists, while the NSW maps would only be accessible with significant local knowledge or a tourist with a high degree of map reading skills.

The KVCBC believes that the current CPP program is totally inadequate for the following reasons:

- no accountability or transparency as to which communities are selected
- the maps are difficult for the general public to understand
- lack of quality local information
- maps are not useable on a smart phone screen
- roll out of the program is such that large sections of the NSW will never be protected
- lack of independent evidence that the CPP has been successful at providing protection to communities.

Recommendation

15. The State change the RFS Community Protection Plan (CPP) program in order to
- provide community information guides as in Victoria and other southern states
 - adopt a map display that is usable on a small screen similar to the Victorian guide
 - provide a similar level of quality of information as in the Victorian guide
 - provide transparency in decision-making as to how communities are selected
 - provide a 5-year rolling schedule for the implementation of the guides.

Bushfire shelter options

Item 2 and Item 5

The 2009 Victorian Bushfires Royal Commission recommendation 4 states:

The State introduce a comprehensive approach to shelter options that includes the following:

- developing standards for community refuges as a matter of priority ...
- designating community refuges ...
- working with municipal councils to ensure that appropriate criteria are used for bushfire shelters ...
- acknowledging personal shelters around their homes as a fallback option for individuals.

Subsequently, Emergency Management Victoria developed the *Bushfire Shelter Options – Position Paper 2015*. NSW has yet to prepare a similar position paper on bushfire shelter options.

Other Safer Locations

The April 2017 NSW RFS Neighbourhood Safer Places Guideline defines an *Other Safer Location* as –

A place that individuals have personally assessed and decided is a safer option relative to their situation.

The RFS website goes on to say:

Not all areas will have a Neighbourhood Safer Place. If there is no Neighbourhood Safer Place in your area, you should identify Other Safer Locations you can go to as a last resort. This might include a nearby home which is well prepared, a shopping centre or oval which is well away from the bush.

For communities and individuals that live in rural areas, and in particular on ‘one way in/one way out’ roads, which applies to a good deal of the Shoalhaven and to Kangaroo Valley in particular, there is a greater requirement for the identification of Other Safer Locations. This is for two reasons: firstly, in most of these communities a Neighbourhood Safer Place will not have been identified and, secondly, a fire that starts locally and then blocks egress on the only road out could quickly become life threatening.

The NSW RFS message of 'have a bushfire plan' and 'leave early' will not be effective for local fires or in forecast conditions of High and Very High fire danger, as virtually no one will leave early on those days. Most residents do not leave even on Severe and Extreme days, as these days have increased in number and have become the 'new normal'.

In these situations, there is a real need for communities and residents to be able to identify Other Safer Locations. Most of these communities, especially in rural areas close to national parks, state forests and other extensive bushland, will not have a shopping centre or oval to go to as a last resort. Currently, the RFS provides no criteria or practical assistance in helping communities or residents to identify possible Other Safer Locations or to know how to assess them or have them assessed as being appropriate.

The NSW RFS current advice that individuals should *personally* assess and decide on Other Safer Locations is not realistic as very few residents have the level of technical knowledge required to make that assessment. The Upper Kangaroo River community in Kangaroo Valley even tried to pay for professional advice to assist in identifying and assessing suitable Other Safer Locations but failed to find anyone willing to consult in this area.

Victoria's *Bushfire Shelter Options – Position Paper 2015* acknowledges the possible need for 'simple and easy to use community guidelines for the identification and assessment process for sites that could be used as informal shelters.'

Construction of community refuges

In relation to community refuges, the Victorian government has provided *Construction & Project Management Guidelines for Community Fire Refuge 2015*, and these guidelines go a long way towards addressing recommendation 4 pertaining to community refuges.

In comparison, the NSW RFS's only reference to community sheltering is a short paragraph in *Planning for Bush Fire Protection 2019* which states:

Community bush fire refuges need to comply with the design and construction of the community bush fire refuges handbook published by the Australian Building Codes Board. In NSW, any proposal to construct a community bush fire refuge should be referred to the NSW RFS.

The KVCBC considers that the approach to date in relation to community sheltering using community bushfire refuges is wholly inadequate.

Private shelters

Emergency Management Victoria has released *Private Bushfire Shelters in Victoria 2016* which goes a long way towards addressing recommendation 4 pertaining to private shelters. In comparison, the NSW RFS refers to private shelters in *Planning for Bush Fire Protection 2019* and *Community Resilience Fast Facts 3/10 2012* both of which provide only a limited amount of information on private shelters.

The KVCBC considers that the approach to date in relation to private shelters is wholly inadequate. The Currowan fire's impact in Kangaroo Valley demonstrated the incredible value and success of private bushfire shelters; it appears that all private shelters survived the Currowan fire intact, including very old shelters built well before standards were introduced for private shelters.

Household bushfire sheltering

When an emergency warning is issued by the NSW RFS, it states that it is too late to leave and that you need to 'shelter in place'; for most people, that will be a house or a building of some type. The

NSW RFS website contains very limited information on how to shelter and that information is scattered in different locations. One example given is as follows:

Shelter in a room on the opposite side of the house from the approaching fire and one that has a clear exit out of the house.

The KVCBC is of the view that the current approach to household sheltering is completely inadequate.

As stated above, Emergency Management Victoria has developed a *Bushfire Shelter Options – Position Paper* 2015. In addition, the CFS website provides a short description of how to actively shelter in a building.

The CSIRO research paper *Sheltering practices during bushfires* 2015 states in its key conclusions:

This research highlights that safe sheltering requires considerable planning and preparation by residents. It is important that residents shelter actively by continually monitoring conditions inside and outside the house, and by taking action to protect shelter occupants. This emphasises the relevance of active sheltering and the benefits of group dynamics in improving survival prospects.

The University of Wollongong research paper *Experiences of Sheltering during the Black Saturday bushfires: Implications for policy and research* 2017 states:

Sheltering is a necessary consideration for people who live and work in areas at risk from bushfire, regardless of whether they intend to stay and defend or leave. Although results presented in this paper suggest a limited degree of planning and preparation for sheltering, preparations made by those who stayed to defend enabled many to shelter safely.

Furthermore, this study found that the majority of those who sheltered during the bushfires sheltered actively, engaging in regular monitoring and action to protect the shelter and its occupants. Education materials and campaigns to encourage planning and preparation for active sheltering are needed, but should emphasise that sheltering should not be planned for as a sole response. Initiatives should underline the importance of regular monitoring and actions required to protect the shelter and its occupants, including timely egress.

This research clearly shows the importance of ‘active’ sheltering. At this stage, the NSW RFS has not passed this key survival information onto the public even though it often advises the public to ‘shelter in place’.

The Currowan fire impact in Kangaroo Valley has demonstrated the value of the active sheltering message. In the last few days prior to the fire arriving in Kangaroo Valley, small community street meetings were held to help educate and assist residents to make well informed decisions. Most chose to leave early but those that chose to stay were provided with information on how to actively shelter - information that is not readily available, if at all, from the NSW RFS. Residents who stayed saved their houses and no one was hurt.

Recommendation

16. The State implement recommendation 4 of the 2009 Victorian Bushfires Royal Commission and introduce a comprehensive approach to shelter options including
 - help for communities and individuals who seek to identify and assess Other Safer Locations
 - criteria for assessing whether a site is suitable to be included as an Other Safer Location
 - design and construction of community refuges including standards
 - improved information on private bushfire shelters

- detailed practical information on household sheltering and the practice of active sheltering.

Buildings and structures

Landscaping

In NSW, information on how best to landscape around a building to minimise the impact of bushfire is very limited. The NSW RFS *Standards for Asset Protection Zones* 2014 provides a small amount of relevant information on landscaping. By way of comparison, in Victoria, the Country Fire Authority (CFA) has, in response to recommendation 44 from the 2009 Victorian Bushfires Royal Commission, published the very comprehensive *Landscaping for Bushfires* 2011.

The KVCBC considers that information provided to the public on landscaping in bushfire prone areas needs to be significantly improved for the following reasons:

- survivability of buildings and anyone sheltering in them can be significantly enhanced or endangered by the type of plants used in landscaping
- NSW climate is different from other parts of Australia and the public should have access to information on the local climate
- the impact of climate change needs to be taken into account - rainforests and other ecosystems are now burning in ways never experienced and information on landscaping needs to be updated and maintained to reflect these changes
- NSW has not adequately responded to recommendation 44 of the 2009 Victorian Bushfires Royal Commission.

Retrofitting

In NSW, only very limited guidance is available on how to retrofit existing buildings to increase ability to withstand a bushfire. The NSW RFS website refers to a Building Best Practise Guide 2013 entitled *Upgrading of Existing Buildings* which contains limited information. The KVCBC considers there is a lack of detailed information on retrofitting buildings built prior to current building regulations coming into force.

By way of comparison, in Victoria, the Building Commission and the Country Fire Authority (CFA) have jointly published a very comprehensive guide entitled *A guide to retrofit your home for better protection from a bushfire*. For public buildings, the Victorian Building Authority and CFA have also jointly published a guide on retrofitting entitled *A guide to retrofitting certain existing Class 9 buildings for better protection from bushfire ember attack*.

Last minute retrofitting

Currently, NSW publications on upgrading or retrofitting existing buildings largely involve expensive and time-consuming methods for improving bushfire resilience. However, during the 2019/2020 fires, many residents showed that it is possible to protect existing buildings and assets at very little cost and in a very short time period. A significant number of houses in Kangaroo Valley that experienced the full impact of the Currowan fire survived due to last-minute retrofitting of sprinklers, window coverings, and other simple techniques such as wrapping vulnerable infrastructure in reflective material such as sarking.

In some cases, houses were saved but most critical household infrastructure - electricity, water and sewage - were lost as often this infrastructure is not bushfire resilient. What some residents have shown is that with relatively inexpensive sarking and tape many thousands of dollars can be saved.

While these short-term solutions should not replace a more comprehensive approach, there is clearly a place and need for the dissemination of this type of information.

The KVCBC believes that due to the large amount of existing critical household infrastructure on private property, the provision of detailed information on last-minute retrofitting techniques would greatly improve the disaster resilience of NSW.

Recommendation

17. The State implement recommendation 44 of the 2009 Victorian Bushfires Royal Commission and publish bushfire mitigation guidelines on preparing buildings and landscape jointly with the building and horticultural sectors respectively including
- retrofitting public and private buildings
 - last-minute retrofitting techniques for both houses and critical household infrastructure
 - simple and cost effective methods for improving rural property bushfire resilience
 - landscaping in bushfire prone areas.

ACCOUNTABILITY AND TRANSPARENCY

Previous bushfire inquiry recommendations

Item 4 and Item 5

In undertaking research into disaster resilience, the KVCBC identified that a number of the recommendations of the 2009 Victorian Bushfires Royal Commission have not been actioned in NSW. Indeed, throughout the NSW bushfire crisis, there were a number of media articles questioning why the NSW Government should hold another inquiry when recommendations of previous inquiries have not been actioned.

The KVCBC is of the view that this cycle of inaction, with the ignoring of bushfire inquiry recommendations, needs to be broken and that greater accountability and transparency is key to changing a culture of inaction.

Recommendation

18. The State amend the *Rural Fires Act, 1997* and any other relevant legislation so that NSW RFS and Fire & Rescue NSW maintain and make publicly available a register of their responses to all bushfire inquiry recommendations.

Implementation of the National Strategy for Disaster Resilience

Item 2 and Item 5

The need for a consistent national approach to disaster management was recognised by the Ministerial Council for Police and Emergency Management prior to the 2009 Black Saturday fires in Victoria. In late 2009, the Council of Australian Governments (COAG) agreed to the development of a National Strategy for Disaster Resilience (NSDR). The NSDR was subsequently released in 2011.

The Office of Emergency Management in the NSW Department of Justice subsequently adopted concepts identified in the NSDR as part of the Emergency Management Arrangements (EMA) for NSW 2016 and the NSW Critical Infrastructure Resilience Strategy 2018.

The KVCBC was formed as a local effort to implement the recommendations for community involvement in building disaster resilience, as described in the above strategies. It has been working

to improve the disaster resilience of the Kangaroo Valley community for the last 18 months, following increasing concern over the elevated fire risk in October 2018 due to the drought.

The KVCBC experience has been that the local RFS Shoalhaven District Office has been less than helpful in this process. The committee originally prepared a Kangaroo Valley Bushfire Plan Brief which was totally rejected by the RFS Shoalhaven District Office. The committee then decided to convert the brief into a Kangaroo Valley Bushfire Plan Discussion Paper as it was felt that it would be harder for the district office to object to a 'discussion'.

Both the original NSDR and the EMA for NSW identify that a key element for building disaster resilience is for government departments and agencies to work with, and partner with, local communities. Both the NSDR and EMA recognise that for disaster resilience to be effective there needs to be a change in the mindset and thinking of the combat agencies.

The KVCBC experience has been that the RFS mindset is still very much stuck in the Response and Recovery phase of disaster management and that little effort has been made to focus on the Planning and Preparation phases as emphasised in the NSDR and EMA.

The KVCBC experience has also been that our local district office has a very poor ability to 'engage and partner with local communities'. The Shoalhaven Bush Fire Risk Management Plan was last updated by the Shoalhaven RFS District Office in 2018. The KVCBC understands that this review received no feedback or submissions from across the Shoalhaven. The KVCBC believes that the local district office does not value community input and, hence, makes no effort to seek it out and, in our own experience, actively worked against community-based resilience building.

The NSW RFS Corporate Planning & Policy documents make no reference as to how the RFS intends to implement the NSDR or even the NSW EMA. The KVCBC is of the view that the RFS has failed to adopt key elements in the NSDR, namely to:

- plan and prepare rather than simply respond and recover
- partner and work with communities
- partner and work with businesses
- partner and work with owners of critical infrastructure
- partner and work with other agencies.

Recommendation

19. The State revise its approach to bushfire risk management so that it
 - closely implements concepts and approaches set out in the NSDR
 - provides a focus on planning and preparation for bushfires
 - requires NSW Government departments and agencies to demonstrate compliance with the NSDR
 - makes information as to compliance publicly available in the interest of accountability and transparency.

Transparency in hazard reduction

Item 2 and Item 5

Currently, in the Shoalhaven, there is no transparency with either hazard reduction planning or performance monitoring. The Shoalhaven Bush Fire Risk Management Plan (BFRMP) says that there

will be annual works programs along with associated performance monitoring and review; however, the BFRMP only makes reference to state-level performance measurement.

Members of the public and RFS volunteers alike have no access to the works program or the monitoring and review process. There is no opportunity for the public to review the hazard reduction schedule for the Shoalhaven over the next 5 years. There is also no opportunity for the public to review the history of the hazard reductions that have been undertaken to protect the community.

Recommendation

20. The State amend the *Rural Fires Act, 1997* and subordinate regulations to ensure accountability and transparency in hazard reduction programming including public access to information specifically relating to each local government area on
- hazard reduction schedules
 - performance monitoring of hazard reductions
 - outcome of hazard reductions
 - historical hazard reduction outcomes.

Disaster resilience funding

Item 4 and Item 5

The KVCBC has been working on improving the disaster resilience of Kangaroo Valley since September of 2018. Our community group has been approached on a couple of occasions to make an application for disaster resilience funding via the Community Resilience Innovation Program (CRIP) run by the NSW Office of Emergency Management. When investigating this possibility, the KVCBC came across a very significant hurdle in that the local RFS district office would need to endorse the application. As set out on the CRIP website:

Applicants **who are not** a government Emergency Management Agency are required to provide a letter of endorsement with their application from a government agency with emergency management responsibilities.

The KVCBC experience has been that our local RFS district office does not support community disaster resilience planning. We did not, therefore, expect that they would endorse our application.

Both the National Strategy for Disaster Resilience and the Emergency Management Arrangements for NSW identify the need for cultural or behavioural change in combat agencies. The KVCBC experience has been that this cultural and behavioural change has not occurred. The very nature of the organisation that needs to undergo behavioural change being in control of endorsing programmes that could result in such change means that these projects are extremely unlikely to be supported.

Recommendation

21. The State revise the Community Resilience Innovation Program so that it no longer requires applicants for disaster resilience funding to have endorsement from a government agency with emergency management responsibilities.

Local Emergency Management Committees

Item 2 and Item 5

Local Emergency Management Committees (LEMC) are established under the *State Emergency and Rescue Management, 1989* as amended (SERM Act) and the *State Emergency Management Plan 2012* (NSW EMPLAN). Currently, the LEMC minutes of meetings in the Shoalhaven are not available for our local community. According to the NSW Government information guide on LEMCs, one of the main responsibilities of the LEMC is planning and preparation for disasters. Community engagement is also identified as a core function.

The KVCBC is of the view that one of the main reasons for the obvious lack of planning and preparation with respect to the NSW 2019/2020 fire season is the lack of transparency in those organisations tasked with undertaking planning and preparation and the lack of any means for the community to contribute to the planning and preparation process. We further believe that if the LEMC minutes were made available to the community the standard of planning and preparation for bushfires would subsequently improve.

Recommendation

22. The State amend the *State Emergency and Rescue Management, 1989* and subordinate regulations to ensure that
 - local communities and individuals have the opportunity participate in planning and preparation for disasters by the LEMC
 - support is provided for the establishment of local community-based emergency management committees
 - the LEMC is required to make their committee meeting minutes publicly available.