



INDEPENDENT HAZARD REDUCTION AUDIT PANEL

ENHANCING HAZARD REDUCTION IN NSW REPORT

MARCH 2013

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Executive summary

The NSW Government established the Independent Hazard Reduction Audit Panel to conduct a review of the hazard reduction programme in NSW and to provide recommendations to the Minister for Police and Emergency Services on potential enhancements.

The Panel comprised the Chief Executive Officer, Ministry for Police and Emergency Services (Chair), Commissioner, NSW Rural Fire Service, President, NSW Rural Fire Service Association, Vice President, Volunteer Fire Fighters Association and two eminent academics from NSW and Victoria.

An advisory group made up of key stakeholders was also established to support the work of the Panel.

From the outset, the Panel recognised the importance of community and stakeholder engagement in the review of the State's hazard reduction programme. For this reason, the Panel, with the assistance of the advisory group, developed a discussion paper for public comment and held five public consultation meetings across the State.

Fifty four submissions to the discussion paper were received from both individuals and organisations, such as councils, environmental groups and government agencies. Attendees at the public consultation meetings also covered a broad spectrum of individuals and representatives from organisations.

The input from the community and stakeholders was invaluable and informed the Panel's deliberations when framing the recommendations in this report.

Overall, the Panel found that the hazard reduction programme is strategic and well administered. The marked increase in funding for hazard reduction from the NSW and Australian Government since 1997 has enabled the hazard reduction programme to be developed and refined.

The targets set in Goal 28 of NSW 2021 have also ensured that agencies remain focused on the NSW Government commitment to put NSW in the best position to deal with major bush fires. The targets are:

- increase the number of properties protected by hazard reduction works across all bush fire prone land tenures by 20,000 per year by 2016
- increase the annual average level of area treated by hazard reduction activities by 45 per cent by 2016.

The recommendations contained in this report identify a number of areas where the hazard reduction programme could be enhanced.

Recommendations 1 - 8 propose a number of changes to the *Rural Fires Act 1997*.

Recommendations 1 & 2 seek to extend the NSW Rural Fire Service's role to protect infrastructure, environmental, economic, cultural, agricultural and social assets, in addition to property.

To ensure Bush Fire Risk Management Plans are robust **Recommendation 3** proposes to give the NSW Rural Fire Service Commissioner the power to direct Bush Fire Management Committees to amend inadequate plans.

Recommendation 4 aims to enhance the NSW Rural Fire Service's ability to conduct hazard reduction where a landowner cannot be contacted to consent to hazard reduction works.

Given the maintenance of fire trails is essential for their utility and includes the reduction of hazards, **Recommendation 5** seeks to include “the establishment or maintenance of fire trails” in the definition of “bush fire hazard reduction work”.

To facilitate greater transparency in the hazard reduction programme, **Recommendations 6 & 7** propose amendments to the way public authorities report to the Commissioner of the NSW Rural Fire Service on hazard reduction works.

Supporting landowners to conduct hazard reduction on their land is a key component of the hazard reduction programme. To this end **Recommendation 8** seeks to streamline the application process for low impact works.

To encourage resilience in the community **Recommendation 9** proposes that the NSW Rural Fire Service hold discussions with the Department of Planning and Infrastructure and Local Government NSW about ways to achieve better compliance with development standards for bush fire prone land.

Roads often serve as a fire break. Commonwealth approval may be required before conducting hazard reduction on roadsides under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). **Recommendation 10** suggests the NSW Rural Fire Service hold discussions with the Commonwealth Department of Sustainability, Environment, Water, Population and Communities to further explore this issue, including potential changes to the NSW Bush Fire Environmental Assessment Code.

Recommendations 11 & 12 note that, while the NSW bush fire management system is best practice, more work needs to be done to ensure the community and NSW Rural Fire Service members are aware of its components.

The importance of transparency and accountability to the community and stakeholders are dealt with in **Recommendations 13 & 14**. Easy access to Bush Fire Risk Management Plans is a key component of transparency and accountability.

Recommendation 18 builds on this foundation by suggesting the NSW Rural Fire Service apply for funding to develop a business case for a BRIMS replacement that includes internal management, risk communication, community engagement capability and publishing activities of websites.

Scientific developments in bush fire management are advancing. Much work has been done to establish fire frequency thresholds for the State. **Recommendation 15** seeks to utilise this knowledge by suggesting Bush Fire Management Committees be required to take into account fuel age and fire frequency thresholds when developing Bush Fire Risk Management Plans.

Understanding bush fire risk and utilising this knowledge in risk management strategies is a key component of the NSW bush fire management system. **Recommendation 16** suggests the NSW Rural Fire Service investigate some tools to quantify the level of bush fire risk to critical values and assets.

NSW Government funding for hazard reduction is provided each financial year. To enable more strategic planning and better administration of the hazard reduction programme **Recommendation 17** suggests that the NSW Rural Fire Service explore options with the NSW Treasury to ensure unspent hazard reduction funds be carried over to the next financial year in a timely manner and to ensure that hazard reduction funding has a seamless transition from one financial year to the next.

List of recommendations

1. That section 3(c) of the *Rural Fires Act 1997*, which sets out the objects of the Act, be extended to include protecting infrastructure, environmental, economic, cultural, agricultural and social assets from damage.
2. That section 9(4)(b) of the *Rural Fires Act 1997*, which sets out the functions of the NSW Rural Fire Service, be amended to include protecting infrastructure, environmental, economic, cultural, agricultural and social assets from damage.
3. That section 56 of the *Rural Fires Act 1997* be amended to give the Commissioner of the NSW Rural Fire Service the power to direct a Bush Fire Management Committee to amend its Bush Fire Risk Management Plan if it is inadequate, in the opinion of the Commissioner.
4. That the *Rural Fires Act 1997* be amended to allow the Commissioner of the NSW Rural Fire Service to carry out hazard reduction on land without the consent of the owner after reasonable attempts to contact the landowner have failed, without serving a notice under section 66 of the *Rural Fires Act*.
5. That the definition of "bush fire hazard reduction work" in the Dictionary of the *Rural Fires Act 1997* be amended to include the establishment or maintenance of fire trails.
6. That section 74 of the *Rural Fires Act 1997* be amended to require public authorities to report to the Commissioner of the NSW Rural Fire Service within one month of the end of the financial year on activities undertaken to reduce bush fire hazards on managed land during the preceding financial year.
7. That section 74 of the *Rural Fires Act 1997* be amended to require public authorities to report monthly to the Commissioner of the NSW Rural Fire Service on activities undertaken to reduce bush fire hazards on managed land during the preceding month and the reasons why any planned activities did not take place.
8. That section 100I of the *Rural Fires Act 1997* be amended to allow hazard reduction certificates to be issued for annual low impact works for a period of three years, where appropriate.
9. That the NSW Rural Fire Service hold discussions with the Department of Planning and Infrastructure and Local Government NSW on ways to improve compliance with development consents under section 76A of the *Environmental Planning and Assessment Act 1979*.
10. That the NSW Rural Fire Service hold discussions with the Commonwealth Department of Sustainability, Environment, Water, Population and Communities about hazard reduction and roadside vegetation, including potential changes to the NSW Bush Fire Environmental Assessment Code.
11. The Panel notes and endorses the NSW bush fire management system based on a multi-agency, tenure blind approach using locally focused Bush Fire Management Committees, Bush Fire Management Plans and the Bush Fire Environmental Assessment Code as best practice.

12. That the NSW Rural Fire Service develop a strategy to better inform the community and NSW Rural Fire Service members about the NSW bush fire management system and its components.
13. That Bush Fire Risk Management Plans be posted on the NSW Rural Fire Service website.
14. That Bush Fire Risk Management Plans be tabled at Local Emergency Management Committees for comment.
15. That Bush Fire Management Committees be required to take into account fuel age and fire frequency thresholds when developing Bush Fire Risk Management Plans.
16. That the NSW Rural Fire Service investigate use of appropriate modelling, such as PHOENIX RapidFire and the Bayesian Network analysis, to quantify the level of bush fire risk to critical values and assets.
17. That the NSW Rural Fire Service and the NSW Treasury explore ways to ensure that unspent hazard reduction funds be carried over to the next financial year in a timely manner and to ensure that hazard reduction funding has a seamless transition from one financial year to the next.
18. That the NSW Rural Fire Service apply for funding from the NSW Treasury for the development of a multi-agency business case for a BRIMS replacement that includes internal management, risk communication, community engagement capability and publishing activities on websites.

Introduction

The Australian landscape has evolved under a natural and cultural regime of fire. Hazard reduction programmes aim to reduce the impact of bush fires on communities. This is done by reducing fuels and moderating the spread and severity of bush fires.

It is important to note, however, that hazard reduction is not a panacea for bush fires. Combined with appropriate development and other measures, such as suppression and community engagement and resilience, hazard reduction can reduce, but not eliminate the risks associated with bush fires. To facilitate community engagement the current hazard reduction programme enables communities to report hazards affecting their property and work with fire services and public land managers to become more resilient.

The NSW Government recognises the importance of hazard reduction programmes in the suite of measures designed to mitigate the risk of bush fire to communities and make them more resilient.

For this reason, the NSW Government established the Independent Hazard Reduction Audit Panel. The Panel was chaired by the Chief Executive Officer of the Ministry for Police and Emergency Services, Mr Les Tree. The Commissioner of the NSW Rural Fire Service was a Panel member. Other Panel members were drawn from the NSW Rural Fire Service Association, Volunteer Fire Fighters Association and academia. A list of Panel members is at attachment A.

The aim of the Panel was to conduct a review of hazard reduction programmes across NSW and provide recommendations to the Minister for Police and Emergency Services in relation to potential enhancements. The Panel was tasked to:

- audit current bushfire hazard reduction arrangements across NSW
- make recommendations for achieving the hazard reduction targets outlined in *NSW 2021: A Plan to Make NSW Number One* ('NSW 2021')
- identify any issues likely to impede effective hazard reduction and the achievement of the NSW 2021 targets
- make any additional recommendations aimed at enhancing the conduct of bushfire hazard reduction in NSW as determined necessary
- consider how hazard reduction fits in with the broader issue of community resilience and the protection of the community and other assets.

The complete Terms of Reference are at attachment B.

The Panel was supported by an Advisory Group. Representatives from the following organisations were invited to be on the Advisory Group:

- Ministry for Police and Emergency Services (Chair)
- NSW Rural Fire Service
- Fire & Rescue NSW
- Aboriginal Land Council
- NSW Farmers Federation
- NSW Nature Conservation Council
- Division of Local Government, Department of Premier and Cabinet
- Crown Land Division, Department of Primary Industries
- NSW Rural Fire Service Association
- Volunteer Fire Fighters Association

- Local Government and Shires Association (now Local Government NSW)
- Forests NSW, Department of Primary Industries
- National Parks and Wildlife Service, Department of Primary Industries.

A list of representatives is at attachment C.

The importance of hazard reduction is also highlighted in *NSW 2021: A Plan to make NSW Number One* which provides for measurable hazard reduction targets based on strategic need.

Goal 28 of NSW 2021 is “to ensure NSW is ready to deal with major emergencies and natural disasters”. It sets targets in relation to hazard reduction to:

- increasing the number of properties protected by hazard reduction works across all bush fire prone land tenures by 20,000 per year by 2016
- increasing the annual average level of area treated by hazard reduction activities by 45 per cent by 2016.

The relevant priority actions under this goal are to limit bush fire severity by:

- establishing annual bush fire hazard reduction works targets for land management agencies responsible for bush fire prone land consistent with the State target
- increasing the number and area of hazard reduction activities undertaken on national parks and reserves.

The NSW Rural Fire Service is the lead agency responsible for meeting this target.

To inform its deliberations, the Panel released a discussion paper on 31 August 2012. Fifty four submissions were received from a variety of individuals and organisations, such as councils, environmental groups and government agencies. A summary of the responses to the discussion paper are at attachment D.

The Panel also conducted a series of five public consultations around the State at the Blue Mountains, Tamworth, Batemans Bay, Orange and Coffs Harbour. A summary of the discussions at the meetings are at attachment E.

The information, obtained from the submissions to the discussion paper and the public consultations, was invaluable to the Panel’s deliberations and provided the Panel with insights into the issues that are important to the community. This process also highlighted the importance of community engagement generally in emergency management.

With this in mind, the Panel would like to thank all those who took the time to respond to the discussion paper and/or attend one of the public consultation meetings.

Finally, the Volunteer Fire Fighters Association’s member on the Panel wrote to the Chair of the Panel on 25 March 2013 setting out a number of suggested reforms to the management of the NSW Rural Fire Service (attachment F). Given this is outside the remit of the Panel, these suggestions have not been considered by the Panel.

Discussion

What is hazard reduction?

Hazard reduction is an activity carried out for the purpose of reducing fuel loads. An activity that has hazard reduction as a by-product rather than as a primary purpose was not considered to be hazard reduction by the Panel. Similarly, the use of fire for land management purposes was not considered by the Panel.

"Bush fire hazard reduction" is defined in the *Rural Fires Act 1997* as:

- (a) the establishment or maintenance of fire breaks on land, and*
 - (b) the controlled application of appropriate fire regimes or other means for the reduction or modification of available fuels within a predetermined area to mitigate against the spread of a bush fire,*
- but does not include construction of a track, trail or road.*

Hazard reduction encapsulates a range of activities but it is predominantly carried out by burning or mechanical/manual works. Mechanical/manual works include the removal of fuels using heavy machinery such as bulldozers, tritters, mowers and hand held tools such as chainsaws, brushcutters, rakes and the use of herbicide sprays.

Properly carried out, hazard reduction can reduce the spread and severity of bush fire by reducing the amount of fuel available to the fire. However, as many other circumstances are involved in determining fire behaviour, hazard reduction does not prevent or eliminate bush fires. Similarly, once a bush fire ignites and takes hold suppression operations will not always be able to extinguish it, particularly in extreme bush fire weather conditions. Hazard reduction, however, in conjunction with building design, defensible space, community engagement and fire suppression, is part of a comprehensive suite of strategies for bush fire management.

Community and stakeholder engagement

All agencies understand the importance of having input from the community on issues that involve its safety and protection. Equally, it is recognised that there are a number of key stakeholders who all play an important role in the success of the hazard reduction programme.

While agencies are working hard to provide the community and stakeholders with up-to-date and accurate information on the hazard reduction programme, there is still work to be done to make the hazard reduction programme more transparent and accessible.

A strong theme in the submissions was the need to improve engagement with both the community and key stakeholders. The key issues that were raised about community engagement were engaging with people who have recently moved to bush fire prone areas and overcoming complacency in the community.

A number of the Panel's recommendations in this report address community and stakeholder engagement on various aspects of the hazard reduction programme.

The submissions highlighted that the Hotspots Fire Project is a good community engagement tool and the Panel wishes to acknowledge the good work being done by this

project. Hotspots is an education and training model for sustainable fire management practices that protect biodiversity and cultural values, while at the same time providing protection for life and property. The programme is a series of workshops underpinned by the best available science and delivered by trained teams.

The Hotspots Fire Project adds to community understanding of the use of fire for land and bush fire management, increasing community understanding and acceptance of fire in the landscape.

This programme has been operational for over six years and is managed through a partnership approach, principally with the NSW Rural Fire Service and the NSW Nature Conservation Council (NCC), with over nine agency and non Government partners involved in its delivery. The NCC provide a critical role in developing materials for programs in new areas, including indigenous communities, as well as programme promotion, stakeholder management and advocating for integration of Hotspots into other natural resource management areas. This programme has also proven valuable and is accepted by the farming community.

Cost effectiveness

A key constraint on hazard reduction is the availability of resources, that is people, equipment and funding. Despite the involvement of a large number of volunteers in hazard reduction, particularly for prescribed burning, such work is costly. Costs of hazard reduction also vary widely according to their context. For example, prescribed burning may cost less than \$100 per hectare to carry out in remote areas, whereas burning adjacent to urban properties can cost considerably more than \$1000 per hectare.

Expenditure on hazard reduction work is constrained within the overall budget for fire management. Funding for fire management and risk mitigation is ultimately limited and hazard reduction must compete with other risk mitigation measures for limited resources. In turn, fire management and mitigation competes with other sectors for public expenditure. It is important to understand the cost-effectiveness of hazard reduction in order to evaluate the worth of future options in terms of allocation of public resources for protection of the communities and ecosystems.

There is a long history of debate about the effectiveness of hazard reduction measures, particularly prescribed burning. However, recent advances in research have led to an improved, quantitative understanding of the way that prescribed burning can alter the incidence, size and intensity of wildfires and mitigate risks to people and property. Such research indicates that current levels of treatment (that is, an average of about one per cent of fire prone lands treated per annum) reduce risk by a small amount.

Major increases in the rate of treatment (for example, in the range of two to five per cent per annum) are therefore likely to result in a modest reduction of risk, with a high level of residual risk likely to remain. A commensurate increase in expenditure would be required for implementation. For example, based on current levels of expenditure, treatment of five per cent per annum of fire-prone land in NSW with prescribed fire is estimated to cost at least \$100 million per annum. Such expenditure would be largely additional to current levels of expenditure. Existing fire management infrastructure and resources would need to be retained to deal with the relatively high level of residual risk.

Research indicates that treatment of Asset Protection and Strategic Fire Advantage Zones, along with appropriate maintenance of yards and gardens close to buildings, provides a highly cost-effective means of reducing risk to people and property, even though such treatments are relatively expensive on an area basis. The increased

emphasis on strategic treatment of this kind, embodied in NSW 2021, is consistent with these principles.

Further strengthening of this approach to hazard reduction will be of benefit to the community, if appropriate resources can be obtained. Such approaches do not preclude the necessity for hazard reduction work in the wider landscape to reduce risk posed by deleterious fire regimes to ecosystem values. Improvements in strategic planning, implementation and provision of resources will be required to improve the cost effectiveness of future treatment programs in this regard.

Climate change

The climate across NSW will become warmer and possibly drier in the near future. Scientific evidence shows there are strong links between fire and climate in local ecosystems. For example, in local forests, the area burned by fires is typically larger during periods of prolonged drought compared with periods of average or above average rainfall. By contrast, in dry woodlands in the arid and semi-arid margins of western NSW, the area burned by fires is often large following years of above average rainfall. These differing responses of fire to climate reflect differences in fuel types across NSW. In forests, the primary fuel is litter from woody plants (trees and shrubs) that accumulates on the ground surface, whereas in dry regions where tree cover is low the primary fuel is dry grass and herbage.

As a result of a warmer and drier climate, fire activity is most likely to increase in the forests and woodlands of eastern NSW. For example, increases in area burned of the order of 10 to 20 per cent by the mid 21st century as a result of climate change, have been modelled for the dry forests of the Sydney region. The occurrence of intense fires may also increase. Given these predictions, the effects of climate change on fire may be most acutely felt in the most densely populated parts of NSW. The chance of loss of property and lives (risks to humans) will rise accordingly.

Fuel reduction is a key means of managing risk. Increases in fuel reduction will be required to counteract increasing risk that is likely to arise from climate change. The scientific evidence suggests that strengthening of Asset Protection and Strategic Fire Advantage Zones will provide the most feasible and cost-effective way of adapting to the challenges posed by climate change. Improved targeting of fuel reduction in the broader landscape may also be required to mitigate risks to other values such as biodiversity and ecosystem services.

Legislation

The *Rural Fires Act 1997* is the peak Act that regulates bush fire management. It provides for:

- the prevention, mitigation and suppression of bush and other fires in local government areas and rural fire districts
- for the coordination of bush fire fighting and bush fire prevention throughout the State
- for the protection of persons from injury or death, and property from damage, arising from fires
- the protection of the environment having regard to the principles of ecologically sustainable development in certain circumstances.

A core requirement of the Act is for all land owners, occupiers and public authorities to take practicable steps to prevent the occurrence and spread of bush fires on or from their land. The land owner is liable for the costs associated with this responsibility. Where a land owner does not satisfy his/her duty to prevent bush fires, the NSW Rural Fire Service Commissioner may intervene.

A number of other Acts that complement the *Rural Fires Act* are:

- *Fire Brigades Act 1989*
- *Environmental Planning and Assessment Act 1979*
- *Threatened Species Conservation Act 1995*
- *National Parks and Wildlife Act 1974*
- *Native Vegetation Act 2003*
- *Protection of the Environment Operations Act 1997*
- *Forestry Act 1916*
- *Crown Lands Act 1989*
- *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*.

While the Panel recognises that the legislative scheme is generally working well, there are some areas where the scheme could be improved.

At present the objects of the *Rural Fires Act* restrict the NSW Rural Fire Service, in some circumstances, to protecting property from damage. This restriction is repeated in the provisions setting out the functions of the NSW Rural Fire Service. A theme that was drawn out of the submissions to the discussion paper and at the public consultation meetings was that the community and stakeholders are of the view that other important assets should also be protected. These include infrastructure, environmental, economic, cultural, agricultural and social assets.

Recommendation 1

That section 3(c) of the *Rural Fires Act 1997*, which sets out the objects of the Act, be extended to include protecting infrastructure, environmental, economic, cultural, agricultural and social assets from damage.

Recommendation 2

That section 9(4)(b) of the *Rural Fires Act 1997*, which sets out the functions of the NSW Rural Fire Service, be amended to include protecting infrastructure, environmental, economic, cultural, agricultural and social assets from damage.

Section 56 of the *Rural Fires Act* gives the Commissioner of the NSW Rural Fire Service the power to exercise the functions of a Bush Fire Management Committee, if the Committee has failed to submit a draft Bush Fire Risk Management Plan in accordance with the Act or has submitted an inadequate plan.

On many occasions where a Bush Fire Risk Management Plan is inadequate, the most appropriate response from the Commissioner will be to ask the Bush Fire Management Committee to address the inadequacies itself. The Panel recommends that section 56 of the *Rural Fires Act* be amended to give the Commissioner the power to direct a Bush Fire Management Committee to amend its Bush Fire Risk Management Plan.

Recommendation 3

That section 56 of the *Rural Fires Act 1997* be amended to give the Commissioner of the NSW Rural Fire Service the power to direct a Bush Fire Management Committee to amend its Bush Fire Risk Management Plan if it is inadequate, in the opinion of the Commissioner.

It is not unusual for a hazard reduction burn to cut across a number of private properties and/or government lands. The consent from all the land owners/managers must be obtained before this cross tenure work can be carried out. Where land has been abandoned or the owner visits the land irregularly, obtaining consent can delay the carrying out of the hazard reduction burn.

Where consent is not forthcoming a notice can be served on the landowner to carry out the hazard reduction. If the landowner fails to comply with this notice the Commissioner of the NSW Rural Fire Service may authorise the carrying out of the work.

In the case where the land is unoccupied, service of the notice becomes difficult. Clause 38(1)(f) of the *Rural Fires Regulation 2008* provides that a notice may be served by way of fixing the notice to a conspicuous part of the land. However, clause 38(3) provides additional means of service. Clause 38(3)(b) provides that the notice may be served by way of an advertisement in a district newspaper.

In the case of an absentee landowner, it is unlikely that the notice process will result in the hazard reduction being carried out by the landowner. The notice process will, however, significantly delay the carrying out of the hazard reduction.

The Panel recommends that the Commissioner of the NSW Rural Fire Service be permitted to carry out hazard reduction on land without the consent of the landowner after reasonable attempts to contact the landowner have failed without the need to service a notice under section 66 of the *Rural Fires Act*.

Recommendation 4

That the *Rural Fires Act 1997* be amended to allow the Commissioner of the NSW Rural Fire Service to carry out hazard reduction on land without the consent of the owner after reasonable attempts to contact the landowner have failed, without serving a notice under section 66 of the *Rural Fires Act*.

At present, there is no legislative requirement to maintain fire trails to an appropriate standard. Poorly maintained fire trails inhibit access to remote areas by fire fighters during bush fires, which compromises fire fighting efforts at crucial times.

The definition of "bush fire hazard reduction work" in the Dictionary of the *Rural Fires Act* excludes tracks, trails and roads. The Panel recommends that fire trails be included in the definition of "bush fire hazard reduction work" to facilitate an appropriate oversight mechanism for the maintenance of fire trails. This amendment will mean that the relevant sections of Part 4 of the Act will apply to fire trails.

Recommendation 5

That the definition of “bush fire hazard reduction work” in the Dictionary of the *Rural Fires Act 1997* be amended to include the establishment or maintenance of fire trails.

Currently, section 74 of the *Rural Fires Act* requires each public authority responsible for managed lands to report to the Commissioner of the NSW Rural Fire Service within three months of the end of the financial year on activities to reduce bush fire hazards during the preceding financial year.

The Panel recommends that this reporting timetable be altered in two ways to better promote transparency and accountability. First, it is recommended that each public authority responsible for managed lands be required to report to the Commissioner within one month of the end of the financial year to allow this information to be included in the NSW Rural Fire Service annual report.

Secondly, it is recommended that each public authority responsible for managed lands be required to report to the Commissioner of the NSW Rural Fire Service on a monthly basis. This regular update will allow the Commissioner to better manage the hazard reduction programme, and identify and rectify underperformance at an early stage. It will also provide the Commissioner with important information to disseminate to the community about hazard reduction in individual locations.

Recommendation 6

That section 74 of the *Rural Fires Act 1997* be amended to require public authorities to report to the Commissioner of the NSW Rural Fire Service within one month of the end of the financial year on activities undertaken to reduce bush fire hazards on managed land during the preceding financial year.

Recommendation 7

That section 74 of the *Rural Fires Act 1997* be amended to require public authorities to report monthly to the Commissioner of the NSW Rural Fire Service on activities undertaken to reduce bush fire hazards on managed land during the preceding month and the reasons why any planned activities did not take place.

Section 100I of the *Rural Fires Act* provides that hazard reduction certificates be valid for a period of 12 months. Submissions suggested that in cases of annual low impact works this period was too short and required landowners to apply each year to conduct the same hazard reduction.

The Panel recommends that section 100I be amended to allow hazard reduction certificates to be valid for a period of three years for annual low impact work.

Recommendation 8

That section 100I of the *Rural Fires Act 1997* be amended to allow hazard reduction certificates to be issued for annual low impact work for a period of three years, where appropriate.

Submissions raised concerns that standards in development consents under section 76A of the *Environmental Planning and Assessment Act 1979* for bush fire risk were not maintained by landowners in bush fire prone areas. For example, some landowners remove metal fly screens for aesthetic reasons. Over time as the standards are eroded, the property may become more vulnerable to damage or destruction during a fire.

While it is currently possible to enforce the compliance of development consents, there are a number of challenges associated with this task.

The Panel recommends that the NSW Rural Fire Service hold discussions with the Department of Planning and Infrastructure and Local Government NSW on ways to improve compliance with development consents under section 76A of the *Environmental Planning and Assessment Act*.

Recommendation 9

That the NSW Rural Fire Service hold discussions with the Department of Planning and Infrastructure and Local Government NSW on ways to improve compliance with development consents under section 76A of the *Environmental Planning and Assessment Act 1979*.

Roadside environments are commonly the only remnant vegetation remaining in rural landscapes due to past extensive clearing. They contain significant biodiversity including threatened species and ecological communities that are not protected in national parks or other reserves. These linear features also provide connectivity between larger vegetation remnants enabling the movement of plants and animals across the landscape. Corridors are an important component of addressing climate change impacts by allowing species to move with changing climatic gradients.

Commonwealth approval for hazard reduction may be required under the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* (EPBC Act). The EPBC Act provides for the protection of Matters of National Environment Significance, which includes, a large list of threatened plant and animal species along with ecological communities. Any action that could have a significant impact requires referral to the Commonwealth.

The NSW Rural Fire Service has commenced discussions with the Commonwealth regarding utilising the NSW Bush Fire Environmental Assessment Code to meet EPBC Act requirements. The NSW Rural Fire Service will continue to promote the need for hazard reduction burning under the Code to meet the EPBC Act requirements.

However, it is important to note that councils are responsible for carrying out a range of activities (in addition to hazard reduction) along roadsides. These include 'line of sight' clearing, roadside maintenance and clearing for underground and above ground infrastructure. It can be difficult to separate the objectives of the actual work when it may serve a number of objectives. For example, clearing for hazard reduction may also address 'line of sight' issues. It would be desirable, from councils' perspective, if a single

approval process could be utilised for all these types of clearing, including the use of herbicides. Such an approach would provide councils with confidence under both State and Commonwealth legislation and ensure a single process of identifying significant roadside environmental issues. This would provide significant cost savings to councils and reduce delays in undertaking maintenance activities (including hazard reduction).

It is anticipated that the Commonwealth would expect a certain level of baseline information in order to provide for a streamlined approval for maintenance works along roadsides. The preferred course of action is for councils to progress the development of 'roadside management plans' to identify locations of significant biodiversity. A large number of councils have begun this process (using Commonwealth grant funding), however, these plans are currently variable in their scope and capacity. Nevertheless, it is expected the model plan could be used as a means for identifying both State issues and EPBC Act matters. If such plans were approved under the *Environmental Planning and Assessment Act 1979* (NSW) then bilateral approval could be sought to address EPBC Act requirements.

Recommendation 10

That the NSW Rural Fire Service hold discussions with the Commonwealth Department of Sustainability, Environment, Water, Population and Communities about hazard reduction and roadside vegetation, including potential changes to the NSW Bush Fire Environmental Assessment Code.

Bush Fire Environmental Assessment Code

In 2002, changes were made to the *Rural Fires Act* to provide for the *Bush Fire Environmental Assessment Code* (the Code). The Code provides a streamlined environmental assessment process for bush fire hazard reduction works that meet certain criteria, removing the need for those works to be subject to the full environmental assessment process.

The NSW Rural Fire Service, local government authorities and land managers use the Code's provisions to issue hazard reduction certificates to landowners in circumstances where bush fire hazard reduction work is to be carried out. This service is provided at no charge.

Most of the hazard reduction activity carried out falls within the scope of the Bush Fire Environmental Assessment Code, however, work falling outside the scope of the Code is subject to the normal environmental assessment process.

The Code is currently being reviewed and the NSW Rural Fire Service and Bush Fire Coordinating Committee members wish to expand its provisions to include more types of hazard reduction activities and further streamline environmental approvals. This review has been waiting for outcomes of the Panel prior to finalising its report.

The major issues being considered for amendment to the Code are:

- hazard reduction certificates are valid for 12 months. Works are often not completed within the 12 month period for a range of reasons. It can be time consuming to issue another certificate and, therefore, it has been suggested that the duration be extended

- there may be merit in providing for a hazard reduction certificate to be issued for burning and control lines construction in Wilderness areas
- where the vegetation is predominantly weeds, and constitutes a hazard, a Code modification may be undertaken where a plan of management describes intended approach and evidence for approach
- internal fences should be treated as assets. Internal fence Asset Protection Zones could act as fire breaks within a property thereby reducing the spread of fire
- remove the requirement for vegetation to be older than 10 years
- Industry Safety Steering Committee to produce guidelines that outline conditions for burning near high voltage powerlines. Electricity providers contacted when conditions cannot be met.

Issues raised during the Panel's deliberations about the Code have been referred to the review for consideration. For this reason, the Panel does not propose to make any recommendations in relation to the Code.

Committee structure and plans

The Bush Fire Coordinating Committee (BFCC) is a statutory body established under the provisions of the *Rural Fires Act*. It meets four times a year.

Under section 48 of the *Rural Fires Act*, the BFCC is responsible for:

- planning for bush fire prevention and coordinated bush fire fighting
- advising the NSW Rural Fire Service Commissioner on bush fire prevention, mitigation and coordinated bush fire suppression.

The BFCC:

- must report to the Minister on any matter referred by the Minister
- may report on any matter relating to the prevention and suppression of bush fires
- may enter into arrangements with the Minister for Primary Industries or any public authority with respect to the reduction of bush fire hazards.

The BFCC is required to establish Bush Fire Management Committees (BFMCs) for areas at risk of bush fires. BFMCs are multi-agency committees and take direction from the BFCC.

Section 52 of the *Rural Fires Act* requires each Bush Fire Management Committee to prepare a Bush Fire Risk Management Plan. The BFRMP is a bush fire mitigation planning tool that assists in determining where mechanical clearing or hazard reduction burns are to be conducted, which areas require specialised fire protection and which areas need to be targeted for community engagement. These plans are based on protecting human settlement, economic, environmental and cultural assets which are identified and treated according to their risk from bush fire.

The BFRMP treatment priorities are a primary consideration in the scheduling of hazard reduction works and the allocation of grant programme funding to support them.

The key elements of the plans are:

- identification of assets at risk of bush fire
- a tenure blind risk assessment that identifies and prioritises assets and assigns treatments to manage risks
- treatments are assigned to a land manager or other responsible agency for completion.

While every local area has a current local Bush Fire Risk Management Plan, some areas are implementing their plans with more success. Canobolas, Shoalhaven and Wyong are three areas that were highlighted as best practice models for implementing Bush Fire Risk Management Plans. In particular, these areas are able to engage the community and stakeholders in meaningful way in the implementation of their plans.

On the same note, the importance of community engagement was a strong theme that came through both the submissions to the discussion paper and the public consultation meetings.

Part of the community engagement process is to ensure that the hazard reduction programme is transparent and easily accessible to the community and other stakeholders.

The Panel notes that the NSW bush fire management system based on a multi-agency, tenure blind approach, locally focused Bush Fire Management Committees, Bush Fire Management Plans and the Bush Fire Environmental Assessment Code is considered to be best practice in Australia. It is also noted that this system is supported by some key programmes such as the Hotspots programme and State Mitigation Support Services programme.

Input from the community and stakeholders suggests, however, that the NSW Rural Fire Service could do more to better inform the community and NSW Rural Fire Service members about the NSW system.

Recommendation 11

The Panel notes and endorses the NSW bush fire management system based on a multi-agency, tenure blind approach using locally focused Bush Fire Management Committees, Bush Fire Management Plans and the Bush Fire Environmental Assessment Code as best practice.

Recommendation 12

That the NSW Rural Fire Service develop a strategy to better inform the community and NSW Rural Fire Service members about the NSW bush fire management system and its components.

Given Bush Fire Risk Management Plans are the blueprint for hazard reduction, the Panel recommends that the plans be available on the NSW Rural Fire Service website. Individual NSW Rural Fire Service brigades will be able to link their websites to the Bush

Fire Risk Management Plan page so that people are able to easily locate information about their local area.

Recommendation 13

That Bush Fire Risk Management Plans be posted on the NSW Rural Fire Service website.

It is a fundamental principle of emergency management that emergency response and recovery are conducted at the lowest level of effective coordination. At present Local Emergency Management Committees are able to comment on Bush Fire Risk Management Plans through the standard community engagement process. To ensure that the Local Emergency Management Committee are given the opportunity to comment, the Panel recommends that Bush Fire Risk Management Plans be tabled at Local Emergency Management Committees for comment as a matter of course.

Recommendation 14

That Bush Fire Risk Management Plans be tabled at Local Emergency Management Committees for comment.

Fire threshold analysis is used to identify areas that are a priority for burning, for fuel and ecological management. The analysis is based on vegetation data, fire history data and modelling of fuel accumulation. The fire thresholds set the recommended minimum and maximum fire intervals based on the ecology of species in the vegetation formation.

Above threshold areas are areas where the time since fire is greater than the recommended maximum. The areas below threshold are where the last fire is more recent than the recommended minimum. Fire in areas below threshold should be avoided until the minimum number of years has passed.

The NSW Rural Fire Service has been undertaking several projects for the last three years working towards obtaining a 'fire frequency threshold' map for the State. The data to generate this map has become available this financial year.

To assist Bush Fire Management Committees to strategically develop Bush Fire Risk Management Plans, the Panel recommends that Bush Fire Management Committees be required to take into account fuel age and fire frequency thresholds when developing Bush Fire Risk Management Plans.

Recommendation 15

That Bush Fire Management Committees be required to take into account fuel age and fire frequency thresholds when developing Bush Fire Risk Management Plans.

Using an assessment of risk as a basis for hazard reduction planning and implementation

The focus of most hazard reduction burning is to protect human life and property and a wide range of natural values. In the case of human life and property, the loss of houses in a bush fire is a readily measured impact. Therefore, the effect of hazard reduction burning, or any other risk mitigation factor, on reducing the probability of house loss under a reference set of fire weather conditions is a good measure of the effectiveness of a fuel reduction burning program.

In the case of environmental values, local extinction of a plant or animal species or significant soil erosion are critical potential impacts of bush fires. The change in the probability of local species extinction or soil erosion from a bush fire under a reference set of fire weather conditions is a good measure of the effectiveness of fuel reduction burning in environmental terms.

There are currently tools and methods available to quantify the level of bush fire risk to critical values and assets, for example the PHOENIX RapidFire fire spread simulator developed by Dr Kevin Tolhurst and colleagues at the University of Melbourne, and the Bayesian Network model developed by Professor Ross Bradstock's team at the University of Wollongong. These could be used to integrate all the mitigation factors, including fuel reduction burning, on the level of bush fire risk across a defined landscape. A couple of the advantages of such approaches would be a clear assessment of the residual level of bush fire risk in a particular area requiring alternative management, and the ability to assess the benefits of a range of bush fire risk mitigation measures including fuel reduction burning.

A risk-based approach to managing fuel reduction burning directly links any activity to the key objectives and outcomes of communities, land managers and emergency response agencies.

Recommendation 16

That the NSW Rural Fire Service investigate use of appropriate modelling, such as PHOENIX RapidFire and the Bayesian Network analysis, to quantify the level of bush fire risk to critical values and assets.

Funding

Since 1997, NSW and Australian Government funding for hazard reduction programmes has increased from approximately \$0.5 million to almost \$20 million in 2011/2012 financial year. In this same period there has also been an expectation that the amount of hazard reduction works will increase.

A key comment from stakeholders in submissions and the public consultations was that it is difficult to strategically plan hazard reduction on a one year funding cycle. In particular, the months between May and August normally have weather conditions that are suitable for hazard reduction. This peak period coincides with the transition of the financial year and budget allocation which impedes the programme.

Hazard reduction works, particularly by burning, are very sensitive to weather impacts. The hazard reduction programme can suffer significant disruption from excessively wet or dry climatic conditions which can lead to delays in works completion. Having the ability to carry over unspent allocated funds automatically between financial years would facilitate improved programme completion by allowing an acceleration of works in following years.

Initial discussions with the NSW Treasury on this issue indicate that steps can be taken to streamline the process of carrying over hazard reduction funding from one financial year to the next. Similarly, a seamless transition of hazard reduction funding should be able to be achieved to ensure the hazard reduction programme is not impacted during the transition between financial years. The Panel recommends that these discussions be continued.

Recommendation 17

That the NSW Rural Fire Service and NSW Treasury explore ways to ensure that unspent hazard reduction funds be carried over to the next financial year in a timely manner and to ensure that hazard reduction funding has a seamless transition from one financial year to the next.

Technology

Technology is a tool that can greatly assist governments engage with the community and stakeholders.

One suggestion to improve transparency is to develop a website that contains information on the hazard reduction programme, such as when the last burn was conducted in a particular area and when the next burn is planned. As this information would be spatially based it could be presented in a number of ways. For the community, it would be most useful if it was based on user location, and hazard reduction and fire history.

The website could also contain some useful information on hazard reduction including what it can realistically achieve, the challenges and risks.

The Bushfire Risk Information Management System (BRIMS) is used to record planned works and completed works. BRIMS is a multi-agency web-based reporting system provided by the NSW Rural Fire Service. Land management agencies, councils and utilities use the system, in addition to the NSW Rural Fire Service.

BRIMS also tracks the planning and progress of activities such as whether an environmental assessment has been obtained, a burn plan has been completed and whether the site has been prepared.

Data entry is carried out by the land owner or the agency carrying out the hazard reduction activity.

While BRIMS has served the NSW Rural Fire Service well, the overwhelming criticism of the system was that it needs to be updated to contain the functionality that is required for a modern interactive system. In particular, BRIMS or its replacement should have a component that allows the community and stakeholders to easily access information about hazard reduction. Ideally, members of the community should be able to interrogate the system to find out about hazard reduction works carried out in their local area.

Recommendation 18

That the NSW Rural Fire Service apply for funding from the NSW Treasury for the development of a multi-agency business case for a BRIMS replacement that includes internal management, risk communication, community engagement capability and publishing activities on websites.

State Mitigation Support Services

The State Mitigation Support Services programme is run by the NSW Rural Fire Service to support the volunteer brigades across the State in preparing hazard reduction burns. The programme facilitates an increased level of burning treatments and assists vulnerable community members under the Assist Infirm, Disabled & Elderly Residents (AIDER) programme which provides protection to the most vulnerable members of the community. The introduction of the State Mitigation Support Services has increased the capacity of volunteer brigades to undertake burns by assisting with these preparations.

Since 1 July 2009, State Mitigation Support Services crews have undertaken 5,328 hazard reduction activities State wide, which included the creation of 1,566 hectares of control lines and fire breaks for hazard reduction burns and undertaking 2,873 AIDER jobs. The NSW Rural Fire Service have advised that these activities have substantially contributed to the 61.4 per cent average annual increase in the level of completed hazard reduction burns by volunteer brigades since the State Mitigation Support Services crew program commenced.

State Mitigation Support Services provide assistance to volunteer brigades on request from the brigade. There is no requirement for brigades to use this service, if volunteers are able to prepare a hazard reduction burn themselves.

At the public consultations, support was expressed for the assistance State Mitigation Support Services provided to prepare hazard reduction burns. Submissions to the discussion paper also expressed support for State Mitigation Support Services.

The Volunteer Fire Fighters Association has a different view to the majority of the Panel on the value of State Mitigation Support Services. In summary, the Volunteer Fire Fighters Association believes that the creation of State Mitigation Support Services is the single most destructive and divisive action ever taken by the NSW Rural Fire Service. It argues that the State Mitigation Support Services has the potential to destroy the

volunteer ethos and change the face of fire fighting forever. A letter from the Vice President of the Volunteer Fire Fighters Association dated 7 January 2013 is at attachment G and sets out the Association's view in full.

Given the statistical evidence demonstrates an increase in productivity as a result of State Mitigation Support Services and the fact that the State Mitigation Support Services only assist a volunteer brigade at the brigade's request, the Panel does not support the Volunteer Fire Fighters Association's position.

Targets

Targets are used by governments to measure the performance of programmes and/or agencies against a number of set criteria.

Goal 28 of NSW 2021 sets out hazard reduction targets for NSW to:

- increase the number of properties protected by hazard reduction works across all bush fire prone land tenures by 20,000 per year by 2016
- increase the annual average level of area treated by hazard reduction activities by 45 per cent by 2016.

The Panel supports targets that are not solely based on the number of hectares treated.

Attachments

- A. Members of the Panel
- B. Terms of reference
- C. Members of the Advisory Group
- D. Summary of submissions to the discussion paper
- E. Summary of main themes from the public consultation meetings
- F. Volunteer Fire Fighters Association's letter dated 25 March 2013 to the Panel Chair
- G. Volunteer Fire Fighters Association's letter dated 7 January 2013 about State Mitigation Support Services

Attachment A - Independent Hazard Reduction Audit Panel Members

Mr Les Tree AM, Chief Executive Officer, Ministry for Police and Emergency Services (Chair)

Commissioner Shane Fitzsimmons AFSM, NSW Rural Fire Service

Professor Ross Bradstock, Director, Centre for Environmental Risk Management of Bushfires, University of Wollongong

Dr Kevin Tolhurst, Associate Professor, Fire Ecology and Management, Department of Forest Ecosystem Science, University of Melbourne

Mr Brian McKinlay AFSM, President, NSW Rural Fire Service Association

Mr Brian Williams, Vice President, Volunteer Fire Fighters Association

Attachment B – Terms of Reference – Independent Hazard Reduction Audit Panel

Aim

The aim of the Independent Hazard Reduction Audit Panel is to use an evidence-based approach to conduct a review of hazard reduction programmes across NSW and provide recommendations to the Minister for Police and Emergency Services in relation to potential enhancements.

Role

The Panel will:

1. audit current bushfire hazard reduction arrangements across NSW
2. make recommendations for achieving the hazard reduction targets outlined in *NSW 2021: A Plan to Make NSW Number One* ('NSW 2021')
3. identify any issues likely to impede effective hazard reduction and the achievement of the NSW 2021 targets
4. make any additional recommendations aimed at enhancing the conduct of bushfire hazard reduction in NSW as determined necessary
5. consider how hazard reduction fits in with the broader issue of community resilience and the protection of the community and other assets

In developing its proposals the Panel may seek outside advice from key stakeholders and recognised experts, as required.

Membership

The Panel will include senior representatives from relevant government agencies and recognised experts who can:

- make decisions on issues relating to bush fire hazard reduction on behalf of their organisation
- represent authoritatively the position of their organisation
- have access to technical and expert advice (if required).

The membership is:

- CEO, Ministry for Police and Emergency Services
- Commissioner, NSW Rural Fire Service
- NSW Rural Fire Service Association
- Volunteer Fire Fighters Association
- Two technical experts

Operation of the Panel

Meetings will initially be convened quarterly, over the twelve months commencing December 2011 to enable a report to be prepared for the Minister. Additional meetings may be convened where necessary and members may be asked to provide advice on particular matters between meetings.

The Panel may conduct public hearings or invite public submissions.

Secretariat support will be provided by the Ministry for Police and Emergency Services.

Support to the Panel

The Panel will have available the services of an Advisory Group. The Group may be tasked by the Panel to provide technical or other advice relevant to the terms of reference.

The Group comprises:

- Ministry for Police and Emergency Services (Chair)
- NSW Rural Fire Service
- Fire & Rescue NSW
- Aboriginal Land Council
- NSW Farmers Federation
- Nature Conservation Council
- Division of Local Government, Department of Premier and Cabinet
- Crown Land Division, Department of Primary Industries
- NSW Rural Fire Service Association
- Volunteer Fire Fighters Association
- Local Government and Shires Association
- Forests NSW, Department of Primary Industries
- National Parks and Wildlife Service, Department of Primary Industries

Reporting

The Panel will provide a report to the Minister for Police and Emergency Services within 12 months of the initial meeting.

Attachment C - Advisory Group Members

Mr Feargus O'Connor, Executive Director, Counter Terrorism and Disaster Resilience, Ministry for Police and Emergency Services (Chair)

Deputy Commissioner Rob Rogers AFSM, NSW Rural Fire Service

Superintendent Darryl Dunbar, Bushland Urban Interface Section, Fire & Rescue NSW

Dr Anne Miehs, Bushfire Project Manager, Nature Conservation Council of NSW

Mr Bob Conroy, Executive Director, Park Management, National Parks & Wildlife Service

Mr Tim McGuffog, State Fire Manager, Forests NSW

Mr Tim Wilkinson, State Bush Fire Coordinator, Catchment & Lands, Department of Primary Industries

Mr David Hoadley AFSM, NSW Rural Fire Service Association

Mr Brian Williams, Vice President, Volunteer Fire Fighters Association

Mr Angus Gidley-Baird, Senior Policy Manager, NSW Farmers' Association

Attachment D - Summary of submissions to the Discussion Paper

Responses to the Discussion Paper were received primarily from councils, State government agencies, nature conservation agencies and individuals, who were often either directly or indirectly affiliated with a NSW Rural Fire Service Brigade.

This summary of those responses will primarily look at the key themes and issues that emerged.

It should be noted that the views in this section are those expressed in the submissions and are not necessarily the views of the Panel.

Community understanding of hazard reduction

It was generally agreed that community understanding of hazard reduction is best among long-term rural landholders. Respondents considered that community understanding of hazard reduction was being diminished by the increasing trend of 'lifestyle' blocks or people moving out of town (State Forests, Canobolas Bush Fire Management Committee (BFMC), Port Macquarie Hastings Council). A problem with absentee and corporate entities as land holders were also identified as landholders having little understanding (Mr Graham Brown) of the risks posed by bush fire.

Identified misconceptions about hazard reduction that were identified as existing in the community are:

- flame attack is the main danger (Gosford Council)
- hazard reduction is more significant (in reducing the impact of bush fires) than it actually is (Port Macquarie Hastings Council)
- the community does not understand how long the effects of one hazard reduction burn lasts in reducing risk (Warringah Council). There is also less understanding about fuel treatments and the rapidly diminishing risk mitigation over time after a burn with increasingly severe fire behaviour (Colong Foundation for Wilderness).

It was recognised that getting people interested in hazard reduction outside disaster periods is very difficult (Colong Foundation for Wilderness). Education strategies that appear to have worked were engagement tailored to local community requirements through the Hotspots program (Dr Lambert), or early intervention through the Fire Wise Program (Mr Terry and Mrs Martha Turner). The experience of the Canobolas BFMC, who conducted over 80 meetings in 2003/2004 (and consulted with 2,500 people) provided strong local ownership and acceptance (Canobolas BFMC).

Responsibility of Landowners

The subdivision of land, change in use from traditional rural activities and the changing demographic in land ownership were all identified as contributing to land owners not being aware of their responsibilities (State Forests, Canobolas BFMC, Dr Judy Lambert).

Comments were also received that there is a belief among residents that compliance is voluntary, that the fire threat is minimal or they do not care to do protection works (Kiama Council). It was also thought that some residents relied on neighbouring land managers to clear bush, or were quick to point out the responsibilities of others in terms of land management, before identifying their own responsibilities (Shoalhaven Council).

There was broad acknowledgement that it would be ideal if private land owners were required to report hazard reduction works to the NSW Rural Fire Service, as it would assist in the combating of a bush fire (areas of reduced fuel load would assist in determining fire fighting strategies), as well as providing a comprehensive fire history (Crown Land, Campbelltown Council, Wollongong Council).

However, it was recognised that this would be onerous (Eurobodalla Council), and enforcement would be difficult to achieve. It was also considered that private landholders would be unlikely to report unless there was a positive outcome, or that it was a requirement of their insurance (Shoalhaven Council).

Community Engagement

Submissions noted it can be difficult to engage with the community effectively. It was noted that simple messages were not getting through. This was assessed by a lack of resident action to clean gutters and undertake property maintenance (Campbelltown Council, Shoalhaven Council).

Generally, it was agreed that the best form of information delivery is 'local boots on the ground' or small group discussions. This method is more likely to drive behavioural change, then any advertising (Wyang Council, Gosford Council).

Recommended methods of engaging with the community are those already being used by the NSW Rural Fire Service. These included, local media and newspapers (Warringah Council), web-based information (Tamworth Council), workshops, street meetings, AIDER, Bush Fire Survival Plans, leaflets and fact sheets (Nature Conservation Council). The Local Government and Shires Association did suggest partnership between Councils and the NSW Rural Fire Service as being a way to improve community engagement.

BRIMS

Bushfire Risk Information Management System (BRIMS) was identified as imposing a large administrative workload (Nature Conservation Council, Wyong Council). For example, Shoalhaven Council has 120 sites that are cyclically mown/slashed as part of the bush fire mitigation program. Each activity/service must be reported into BRIMS which imposes a significant administrative burden.

BRIMS could also be improved if local vegetation mapping was uploaded to BRIMS to ensure all agencies have access to the latest maps. Also added should be the fire trail maintenance vegetation management (Gosford Council).

It was also recommended that the hazard reduction environment would be improved if BRIMS, the Bush Fire Risk Management Plan, the Fire Trail Register, ICON, I-Zone, the National Parks and Wildlife Service database, the Crown Land Database could be combined and then digitally accessed via a remote log-in (Wyang Council, Campbelltown Council, Shoalhaven Council).

Submissions suggested that BRIMS could allow for environmental assessments to be valid for more than a year, particularly when the site does not contain a significant natural/cultural heritage issue (Gosford Council). Alternatively, BRIMS could be improved if a certificate could be reissued with only a change of date, check of Aboriginal Heritage Information Management System and the Wildlife Atlas (Crown Land).

Funding Cycle

A large number of respondents identified the funding cycle as being a key issue in conducting hazard reduction (Crown Land, State Forests, Kiama Council, Warringah

Council, Nature Conservation Council). Currently, councils are not advised of successful funding bids until September onwards in the financial year, which is leading into summer, thus missing out on the optimal hazard reduction periods (Wyong Council, Crown Land, Local Government and Shires Association, Campbelltown Council, Port Macquarie Hastings Council, Wollongong Council).

Respondents recommended allowing a carry over of State funding (Wyong Council), allowing funding to be on a two to three year cycle (Campbelltown Council), and allowing land managers to move work around within an overall hazard reduction program (Wyong Council).

The funding system was also considered inflexible, as it does not allow for variations in costs, weather conditions, or the need for managers to be able to transfer resources between sites if other activities are completed with cost savings (Gosford Council).

Hazard Reduction Certificates

As previously indicated, a number of respondents suggested the validity of Hazard Reduction Certificates should be extended to up to five years for low impact work in an APZ.

Bush Fire Risk Management Plans

A number of respondents recommended the Bush Fire Risk Management Plans (BFRMP) include fire (run) history (State Forests, Dr Lambert, Port Macquarie Hastings Council). Other data that should be included were critical infrastructure, utilities, environmental assets, Neighbourhood Safer Places, significant historical and cultural sites (Local Government and Shires Association) and access roads (Wollongong Council).

Interactivity of the BFRMP was another recommended improvement. For example, a Geographic Information System (GIS) data layer that could be turned on or off for clean mapping, an ability to amend documents (that is, for weather or wildfire) (Campbelltown Council), access to a number of layers identifying treatment strategies, nearest Neighbourhood Safer Place and a street address entrance portal to reveal individual property risk, would all be beneficial (Shoalhaven Council).

Other suggested inclusions were the incorporation of the Community Protection Plans (Nature Conservation, Mr Ian Barnes, Crown Land, Campbelltown Council) and the mapping of all Asset Protection Zones (APZs) and links to existing treatment strategies.

On the issue of a reporting model for public authorities, recommendations beyond residential assets included infrastructure (Wyong Council), rural and business assets (Canobolas BFMC), all assets, industrial, commercial, natural and cultural (Gosford), critical community infrastructure (Liverpool Council), communication towers, fire trails and roads that fall into the 'other fire access' group (Shoalhaven Council) and all other assets identified in the BFRMP (Warringah Council). Also included could be production crops (particularly those affected by smoke), pastures and sites of high conservation or Aboriginal cultural significance (Dr Lambert).

Bush Fire Risk Management Plan

It was noted by many respondents that the Plans are continually evolving and have substantially improved over time.

Further improvements could be achieved if the Plans were in more easily available formats that are useful to the public and to agencies. This could be through Geographic Information System (GIS) datasets being available on public websites and being able to

be combined with other datasets (Wyong Council, Gosford Council, Colong Foundation for Wilderness).

Recommended changes include being able to make minor amendments to the Bush Fire Risk Management Plan without the need to wait until the plan is up for review on a five-yearly basis (Crown Land).

It was also thought that the consultation process and consultation periods for the Plans are appropriate. However, getting the community to be interested and involved is more difficult (State Forests).

State Mitigation Support Services

When asked what aspects of the current hazard reduction programme are working well/not well, a number of respondents spoke positively of the State Mitigation Support Services (SMSS). It was recognised that they are useful, particularly in areas where contractors capable of doing the work are limited (Wyong Council).

Criticisms of the SMSS did not relate to the work performed, but that their availability was limited to NSW Rural Fire Service districts (Port Macquarie Hastings Council). Crown Land also identified scope for improvement through greater linkage of the SMSS team activities to the priorities of the Bush Fire Management Committee.

It was also recommended that the SMSS program could be expanded to encompass maintenance of APZs and vegetation along fire trails, as well as enabling them to undertake prescribed burning for non-combat agencies and landholders (Shoalhaven Council).

Noted criticisms of the SMSS was that it is now clearing lands without means testing or charging a fee, and it was also asserted that the SMSS was established without proper volunteer consultation (Kurrajong Heights Brigade).

Cross Tenure Hazard Reduction

There was widespread agreement that cross tenure hazard reduction works have been managed effectively, with the local Bush Fire Management Committees being recognised as coordinating these activities (Warringah Council, Port Macquarie Hastings Council, Wollongong Council). Crown Land thought that the ability to do cross tenure hazard reduction certificates would further help.

Respondents who thought it was not managed effectively advised that the hazard reduction process and BRIMS are misaligned, and hence difficult to implement (Liverpool Council). Other reasons for suggesting that cross tenure works were not working effectively was the need for concurrence from all neighbours (Dr Lambert).

The budget and grant process was also recognised as an impediment, as agencies have different budget processes, timeframes and political imperatives (Wyong Council, Local Government and Shires Association). The requirement of a hazard reduction certificate for each landholder was another area where further efficiencies could be obtained (Port Macquarie Hastings Council).

Attachment E - Summary of main themes from the public consultation meetings

Blue Mountains 27 September 2012

The meeting was attended by representatives from council, environmental groups and volunteers from the local NSW Rural Fire Service Brigades, as well as NSW Rural Fire Service Association members. Mrs Roza Sage MP, Member for Blue Mountains also attended.

Participants suggested that it is important to consider all the strategies in fire management, not just hazard reduction. For example, community engagement is an important strategy that needs to be considered in making communities safer and more resilient.

The issue of ridge top burning was discussed, and the group was informed by an academic that the treatment of ridge tops is likely to be good, though the risks will not be reduced to zero.

It was also pointed out that the State Mitigation Support Services have helped to get more hazard reduction completed. There was general support expressed for the work of the mitigation crews in their ability to conduct hazard reduction.

Members of the group thought that it was important to maintain fire trails (and it was acknowledged that land owners need to take responsibility for this). Upgrading buildings was identified as another method of risk mitigation that should be looked at, in addition to hazard reduction. Finally, it was noted that many assets are not identified in the risk profiles, such as utilities and environmental assets.

Tamworth 4 October 2012

The Tamworth consultation was one of the smaller groups, with attendees mainly coming from local NSW Rural Fire Service Brigades. The Hon Richard Torbay MP, Member for Northern Tablelands also attended.

The perception of past hazard reduction being more frequent than what is conducted currently was discussed, with the Commissioner noting that a historic review of the data and evidence indicates that the perception is a myth. However, there is now better means of capturing fire and hazard reduction activity, and the NSW Rural Fire Services is looking at how to record both types of information.

Mr Torbay noted that every Member of Parliament issues a newsletter to its constituency, and that this is a good medium to use to disseminate information about hazard reduction.

There was also discussion about some brigades having difficulty with the availability of volunteers during the week to conduct hazard reduction, and the use of the State Mitigation Support Service was discussed. It was noted that the Mitigation Crews can do preparatory work, and can also assist with the burn.

Batemans Bay 24 October 2012

The Batemans Bay meeting was well attended, with attendees from the local NSW Rural Fire Service, volunteers and staff, as well as, NSW Rural Fire Service Association

members and interested residents, council employees, ex-Forestry employees and one former NSW Member of Parliament.

General comments were made that grazing is also an important strategy to be used in hazard reduction. A view was also expressed that the NSW Rural Fire Service has become too centralised.

The perception that getting Asset Protection Zones (APZs) established is difficult, and it was recommended that Group Captains should be given documents stating where the APZs are.

The comment was made that it is difficult to get volunteers to conduct hazard reduction mid week. The Commissioner of the NSW Rural Fire Service noted that multiagency crews are being used, as it is recognised that it is difficult to get volunteers mid week. It was further noted that the State Mitigation Support Services are doing the preparatory work, which has not been traditionally performed by volunteers.

Local issues relating to valuable local knowledge of fire behaviour not being available and difficulties in getting approval for local hazard reduction were discussed.

The group also talked about the need for mapping to be available to councils about the planning of hazard reduction.

Orange 1 November 2012

Attendance at the Orange meeting was mixed, with attendees from the local NSW Rural Fire Service, volunteers, Volunteer Fire Fighters Association members and representatives from the Farmers' Association.

One of the first comments made from the floor was that the Canobolas model (explained as mosaic burning) should be implemented across the State. There was discussion about hectare-only targets being inappropriate. The risk that Land Management Zones (LMZs) will be burnt to meet targets was also discussed. It was recommended that the LMZs should only be burnt after the fire threshold period. It was also recommended that LMZs should be reclassified as protection zones and should only be burnt for ecological reasons.

It was recognised that the "Canobolas Model" is in use across NSW and has been developed into the current Bush Fire Coordinating Committee model Bush Fire Risk Management Plan.

A comment was made that agricultural, environmental and economic values should also be protected.

The Canobolas Bush Fire Management Committee was recognised as working well, and it was recommended that it should be used as a best practice model for other committees, particularly in relation to the bush fire risk management plan community consultation process.

It was acknowledged that the removal of vegetation along the road by some councils has reduced ignition points for fire.

It was recommended that refuges for animals should be utilised during hazard reductions, and that wildlife rescuers could assist in these periods.

Coffs Harbour 7 November 2012

Participants at the Coffs Harbour meeting were mainly local NSW Rural Fire Service employees and volunteers, as well as NSW Rural Fire Service Association members. Mr Andrew Fraser MP, Member for Coffs Harbour was also in attendance.

General comments were made that there is a high level of apathy in the community due to the high rainfall experienced in the area over the previous years. Comments were also made about difficulties relating to road access and maintenance of fire trails being a large issue – fire trails particularly had had work done on them, but were then subject to landslide a few months later after heavy rainfall.

It was recommended that there needed to be community education on the limited windows of opportunity to conduct hazard reduction. It was recommended that current messaging on preparing for the bush fire season should be extended, or that separate messaging about hazard reduction be used. This could include the limited windows of opportunity to actually conduct hazard reduction.

It was identified that the NSW Rural Fire Service and the Bush Fire Management Committee were working well together, and much work is occurring to ensure that hazard reduction plans are ready for action. However, there are some concerns that government departments with land management responsibilities are having their budgets cut.

There was also discussion around the use of coordinated, inter-brigade assistance and the use of mixed crews. This approach minimises the need to wait for weekends. The State Mitigation Support Services can also be used to increase productivity, and taking advantage of good mid-week conditions.

Attachment F - Volunteer Fire Fighters Association's letter dated 25 March 2013 to the Panel Chair

VFFA
P.O. Box 148,
Peak Hill. NSW 2869.



25th March, 2013.

Mr. Les Tree
Chairman
Independent Hazard Reduction Audit Panel
Level2, Quad 1 – 8 Parkview Drive,
Sydney Olympic Park. NSW 2127

Subject: VFFA Recommendations to the Final Report of the IHRAP.

Dear Sir,

The NSW Government is to be commended for the Goal 28 initiative, ensuring that agencies remain focused to place NSW in the best position to deal with major bushfires.

The targets of:

- Increase in the number of properties protected by Hazard Reduction works across all bush fire prone land tenures by 20,000 per year by 2016
- Increase the annual average level of area treated by Hazard Reduction activities by 45 per cent by 2016 is an excellent start. However even with these increases, there will still be less than 1% of bush fire prone land being treated by hazard reduction.

Research shows that:

- 1% of bush fire prone land treated per annum results in a 5% reduction in risk indicators.
- 5-10% of bush fire prone land treated per annum results in a 25-45% reduction in risk indicators.

The findings of the Victorian Royal Commission concluded that a minimum of 5% per annum of bush fire prone land should to be treated. This minimum figure is supported by many leading bush fire experts.

This 5% target should be employed in areas where it would achieve the greatest outcome.

Hazard reduction offers:

- A safer working environment for fire fighters.
- Superior environmental outcomes.
- Enhanced protection of the community and their assets.
- Enhanced protection of infrastructure.
- Superior financial outcomes.

The challenge for the State Government is increasing the area of hazard reduction whilst working within a budget.

The answer lies in better use of the RFS budget.

In the past 16 years the RFS has grown from around 150 paid employees to more than 900, and it is still growing despite State Government announced cut backs. Wage costs now account for 36.3% of the RFS budget & as wage costs continue to escalate, it leaves less money for front line services including Hazard Reduction.

Studies show that Hazard Reduction is 60 to 100 times more cost effective than reacting to wild fire events.

A wild fire event is not limited to financial costs, there are human and environmental costs associated that are impossible to measure.

It is the tax payer who ultimately pays so the more proactive and the less reactive the RFS becomes, the greater the outcome for all.

The **VFFA** recommends the following strategies to create a more cohesive workforce producing a far superior fire management system:

1. The creation of a State Board to oversee the strategic direction of the RFS.

It is envisaged that the State Board would have decision-making authority, voting authority and specific responsibilities, which in each case would be separate and distinct from the RFS Executive Management. It is envisaged that the State Board would exercise strategic control and management over the RFS with its primary responsibility to ensure that the RFS Management is performing and is accountable.

The Key to this reform is in having volunteer fire fighters making up a majority of the Board.

2. Legislate for an organization that only represents volunteers.

This would bring NSW in line with the other states.

A 100% volunteer voice would:

- Eliminate the conflict of interest
- Allow volunteers to raise concerns without fear of retribution
- Focus on volunteer issues

Volunteers make up the bulk of the RFS and deserve a greater voice.

3. Empower District Managers.

Before the formation of the RFS, District managers managed their own local area.

District Managers know their Staff, Volunteers, the Community, local capabilities, local fire behaviour and history. They are in the best position to develop the best fire management systems for their area.

It is local involvement that gives the volunteers and wider community a sense of ownership.

The Canobolas Model highlights the achievable outcomes at the local level.

A key role of the RFS is to protect the community from disastrous wild fire events.

The only part of the fire triangle which man can mitigate is fuel.

The VFFA fully supports the NSW State Governments' initiative to bring about an increase in Hazard Reduction and believe that the above initiatives would considerably aid in this goal.

For & On Behalf of the VFFA.

Mr. Brian Williams
Vice President – VFFA
IHRAP Member

Attachment G - Volunteer Fire Fighters Association's letter dated 7 January 2013 about State Mitigation Support Services

Correspondence to:

VFFA
PO Box 148,
Peak Hill. NSW 2869



7th January 2013.

Mr. Les Tree
Chairman
Independent Hazard Reduction Audit Committee
Level 2, Quad 1, 8 Parkview Drive,
Sydney Olympic Park. NSW 2127

Subject: VFFA Recommendations regarding the State Mitigation Support Services.

The VFFA (Volunteer Firefighters Association) is of the opinion that the SMSS is the single most destructive and divisive directive ever implemented by the RFS.

It has the potential to destroy the volunteer ethos and change the face of NSW Volunteer Fire Fighting forever.

Our opinion is based on the following points;

- Costly and represents very poor value for money.
- The exact cost of the SMSS is not clear on reading the RFS Annual Report.
- On best estimations it is believed that the SMSS costs the NSW tax payer over \$16 million per year. This includes the cost of wages, entitlements, leasing of buildings, and equipment costs.
- Much of the work done by the SMSS was already being done by Volunteer Members.
- Work that could not be carried out by Volunteers was previously done by private local contractors. Costs were generally kept to a minimum as they were part of the local community.
- The SMSS has created a bureaucracy within an already large bureaucracy.
- The RFS is carrying out Land Management activities when it is not a Land Manager.
- The RFS/SMSS receive no fee for service where as under the Rural Fires Act, the RFS can recover any monies spent on removing fire hazards from land owners.
- Land management is being done by the SMSS with no means testing or recovery of costs.

- The SMSS is breaking down the Volunteer ethos.
 - Paid SMSS staffs are now working alongside Volunteers doing exactly the same job. Many of our Volunteer Members have commented "There is a paid workforce now, let them do it."
 - The SMSS was set up without widespread Volunteer consultation. Most Volunteers only became aware of the SMSS after its establishment.
- Inefficient.
 - SMSS teams can spend up to 3 hours per day driving to and from their centralized locations.
- Lack of local knowledge.
 - SMSS crews are sent into unfamiliar areas, without the consultation of local brigades.
 - SMSS control lines have been established, but never used because they were considered too dangerous or placed inappropriately by local brigades.
- Community support of local Volunteer Brigades is less likely if work is being carried out by a paid out-of-area workforce.

Our serious concerns are that the NSW RFS is slowly changing into a paid workforce. This is having a detrimental effect on the Volunteer ethos and experienced Volunteers are leaving the service through disenchantment.

There is growing friction between Volunteers and SMSS staff.

The more Volunteers that leave the service, the more paid employees will need to be added to the bureaucracy. If the 70,000 volunteers were replaced by just 20,000 paid staff at an average of \$70,000 per year – the budget would blow out by **\$1.4 Billion Per Year**.

The NSW State, Local Government and the General Public simply cannot afford to go down this path.

For & on Behalf of the VFFA,

Mr. Brian Williams
VFFA - Vice President
I.H.R.A.C Member.