

## **The Grose Valley Fire Forum**

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### **Abstract**

In response to community concerns about management strategies used for a fire in the Grose Valley in the upper Blue Mountains in November 2006, a one-day forum was held with representative community members and fire authorities. This paper outlines how the Grose Valley Fire Forum eventuated, describes the forum process and the resultant action plan, and highlights emerging issues in relation to knowledge transfer and adaptive governance for bushfire management.

### **Introduction**

A one-day forum was organised by the Blue Mountains World Heritage Institute (BMWHI) in the upper Blue Mountains in February 2007 with representatives from the local community and fire management authorities. The state Minister for the Environment initiated the forum with the purpose being to address concerns held by community members about management of a fire in the Grose Valley in late 2006. The aim of this paper is to describe process rather than content – that is, how community concerns are taken into account in the bushfire policy process, rather than focusing on the specifics of bushfire management.

### **Background**

The Grose Valley fire started on November 21<sup>st</sup>, 2006, from two original ignitions (from lightning strikes) near Blackheath in the upper Blue Mountains within the Greater Blue Mountains World Heritage Area (GBMWA). Two days later the fire was declared a “bushfire emergency “ under the jurisdiction of Section 44 of the Rural Fires Act, where the Commissioner takes charge of fire fighting operations and takes such measures necessary to control or suppress the fire. A multi-agency incident management team was established. Major back-burns rimmed the upper Grose Valley essentially from the townships of Medlow Bath to Mount Tomah. Eight days after the fires started, winds carried the fire further into the valley and across the iconic and highly valued Blue Gum forest. The fire was finally extinguished after burning approximately 14,000 hectares of the valley. Most fortunately, thanks to the firefighters, there was no loss of human life or property.

There were however community concerns about the extensive backburning undertaken to protect the townships from the fire and the impact of the backburning on the species within the World Heritage Area. Media coverage included a local resident speaking on Radio National’s AM program about concerns over backburning that got away and was the cause of the larger fire. This issue was central to the ensuing debate. The Sydney Morning Herald featured the story on its front page. The local Blue Mountains Gazette featured a one-page call from a large group of local residents for an independent review of the management of the fire, and raised broader concerns about fire management within the World Heritage Area.

The Minister invited the BMWHI, as an independent body, to organise a forum to address the concerns raised by the community. The Institute is a non-profit organisation that supports the conservation of the natural and cultural heritage of the GBMWA by focusing on the integration of science, management and policy in the region.

The brief to the Institute from the Minister was for a one-day forum involving community representatives and fire authorities to discuss community concerns and to prepare an action plan from the forum to address these concerns. The purpose of the forum was to:

- Brief the community on the management of the Grose Valley fire and the framework and context for the management of fire generally within the World Heritage Area.
- Identify any issues that relate specifically to the management of the Grose Valley fire, and that haven't already been captured and/or responded to within the section 44 debrief report.
- Identify longer term and landscape scale issues relating to the management of fire in the GBMWhA, particularly in this time of climate change.
- Develop an action plan, which responds to any unresolved issues identified above.

### **The forum**

In accordance with the Minister's brief, the following organisations were represented at the forum: NSW Dept of Environment and Conservation (DEC); NSW Rural Fire Service (RFS); Blue Mountains Conservation Society (BMCS); Nature Conservation Council of NSW (NCC); Blue Mountains City Council (BMCC); NSW National Parks & Wildlife Service (NPWS) Regional Advisory Committee and the GBMWhA Advisory Council. There were 20 people present, 8 of which were local community representatives, attending on behalf of the Conservation Society and advisory groups.

The community organisations (BMCS, NCC and advisory groups) were requested in advance of the forum to identify issues of community interest and concern to be discussed at the forum. The list of issues presented to the forum covered most aspects of bushfire management, and were summarised under 11 categories (Table 1). Clearly, these issues are generic, and relate to bushfire management in general.

Table 1. Issues addressed at the forum.

#	Issue
1	Concern about the lack of priority given to protection of the ecological values of the World Heritage Area, in the face of an over-riding priority for protection of human life and private property.
2	Biodiversity impacts of frequent fires in the Grose Valley.
3	Effectiveness of review processes in generating real improvements for the future.
4	Implications of climate change for increased fire frequency and intensity.
5	Inadequate funding for research, planning and risk mitigation.
6	Implementation of strategies for risk mitigation and fire suppression in large bushland areas.
7	Capacity of remote area fire-fighting teams (RAFT).
8	Efficiency of fire detection technologies.
9	Aerial attack efficiency and effectiveness.
10	The role of the media.
11	Funding for post-fire recovery.

For each of the issues, a goal statement was prepared at the forum. Each of these goals was then addressed in turn, using a five step problem orientation process to ask a series of questions about each issue, to reach consensus on the exact nature of the problem and finally to arrive at an agreed set of actions (Table 2). Given that what is a problem from one person or group's perspective may not be a problem from another perspective, it was important to use a process to reach consensus on what actually is perceived by the *range* of stakeholders as a real problem and to arrive at a point of common interest.

Table 2. Problem orientation and issue exploration process\*

\*Adapted from Clark, T.W. 2002. "The Policy Process: a practical guide for natural resource professionals." Yale University Press. U.S.

1. Clarify goals in relation to the issue	<p>What goals or ends do we want?</p> <p>Are people's values clear?</p> <p>(there may be an over-riding goal and then more specific goals to operationalise the over-riding goal)</p>
2. Describe trends	<p>Looking back at the history of the issue, what are the key trends?</p> <p>Have events moved toward or away from the specified goals?</p> <p>Describe both past and current trends.</p>
3. Analyse causes and conditions	<p>What factors, relationships, and conditions created these trends, including the complex interplay of factors that affected prior decisions? (e.g. environmental, social, political factors)</p> <p>i.e. what explanations are there for the trends?</p> <p>What management activities have affected the trends?</p> <p>What are the conflicts about different approaches to address the issue?</p>
4. Projection of developments (e.g. if no action is taken to address the issue)	<p>Based on trends and conditions, what is likely to happen in the future (e.g. if nothing is done differently).</p> <p>If past trends continue, what can we expect?</p> <p>Is the likely future the one that will achieve the goals?</p> <p>What future possible developments are there (e.g. politically, environmentally e.g. how will climate change affect the problem)?</p>
5. Decide on any actions to address the problem	<p>If trends are not moving toward the goal, then a problem exists and actions need to be considered.</p> <p>What other policies, institutional structures, and procedures might move toward the goal?</p> <p>What research, analysis, or public education may be needed?</p>

The final outcome of this process was a list of 11 goals with a total of 50 associated actions. Table 3 presents the example of how the issue relating to protection of ecological values was addressed, to derive a list of actions for that goal.

**Table 3.** Problem orientation process for determining actions to address lack of protection of ecological values during a bushfire event

<b>Issue</b>	Concern about the lack of priority given to protection of the ecological values during a bushfire in the Greater Blue Mountains World Heritage Area, in the face of an overriding priority for protection of human life and private property.
<b>Goal</b>	To protect natural and cultural heritage values, consistent with the protection of human life and property, by ensuring that bushfire management strategies: <ul style="list-style-type: none"> <li>- take a risk management approach toward protection of these values;</li> <li>- improve access to and interpretation of natural and cultural heritage values when deciding on fire suppression strategies and tactics;</li> <li>- ensure that these natural and cultural heritage guidelines for fire management are integrated throughout the entire planning framework for short, medium and long-term bushfire management and operational strategies.</li> </ul>
<b>Trends</b>	<ul style="list-style-type: none"> <li>• <u>Commitment to values</u>: the commitment to protection of ecological and cultural values is currently embedded within visions, plans and strategies, but there is sometimes a lack of transparent application and implementation during fire events; the community do not see the commitment taking place; there is an underestimation of the extent to which the community highly values the natural environment; there is sometimes a belief that the priority for protecting human life and property overrides any need to consider environmental values.</li> <li>• <u>Communication</u>: there appears to be a lack of dissemination of information identifying these values in efficiently applicable form to those on the fire ground undertaking fire suppression; a need to improve communications to certain fire suppression people (e.g. education of contractors).</li> <li>• <u>Risk management approach</u>: there is a need for a more risk management oriented approach to the protection of ecological and cultural values; for example strategies to protect threatened species and/or ecological communities and Aboriginal sites before, during and after a fire incident. The values need to be enhanced within existing operational plans (better use of existing registers/resources).</li> <li>• <u>Resource use</u>: improvements are needed in the efficiency of resource usage.</li> </ul>
<b>Conditions</b>	<ul style="list-style-type: none"> <li>• <u>Ecosystem complexity</u>: biodiversity values are complex therefore a whole-of-landscape approach is needed which includes addressing the needs of individual species i.e. species-specific conditions; lack of solid data to guide the protection of ecological (and World Heritage) values; due to the detail and complexity of biodiversity information, it gets overlooked; lack of capacity to respond so as to meet the adequate protection of the range of values.</li> <li>• <u>Fire regime approach</u>: Land managers tend to measure and respond to the impacts of fire on natural heritage values at much greater spatial and temporal scales than does the general community, which tends to focus more on the short-term impacts of individual fires, rather than the impacts of fire regimes.</li> <li>• <u>Data interpretation</u>: related to the lack of linkages between plans are the difficulties in translating ecological information and objectives (such as threatened species protection) into decision-making and on-ground actions; it is hard to interpret data; there is difficulty in making sense of the complexity of information; issues such as scale, priority, and practicality. There is often limited time and capacity during emergency events to access, interpret and apply information and guidelines.</li> <li>• <u>Linkages between plans</u>: a basis for the lack of communication about ecological and cultural values is a lack of clear and unambiguous linkages between the NPWS Reserve Fire Management Strategies and the local Bush Fire Risk Management Plan; and the linkages need more of a risk-based management</li> </ul>

	<p>approach; it was noted that although the NPWS Fire Strategies also use a zoning approach, the two planning processes need to be better integrated; management plans lack cross-referencing thus leading to lack of implementation of objectives across plans; the details are in the NPWS plan but a more effective link needs to be made with guidelines in the local Bush Fire Risk Management Plan i.e. there is a gap between the plans and this gap needs to be bridged.</p> <ul style="list-style-type: none"> <li>• <u>Strategy options</u>: there are four options for strategic attack (i) direct attack (e.g. close containment in remote areas), (ii) parallel attack (e.g. backburning from constructed tracks, trails and natural barriers), (iii) indirect attack (e.g. distance backburning from the Blue Mountains blackline) and (iv) no active suppression i.e. monitoring of fire behaviour and fire spread only.</li> <li>• <u>Values</u>: i.e. which values guide the plans, what are the different sets of values and how should they be integrated. This is a challenging and significant issue.</li> <li>• <u>World Heritage</u>: recent declaration of World Heritage status has significant implications in terms of international obligations to protect such values through appropriate fire management, but the methodology for addressing these values has not properly been met. There is a strong economic imperative (e.g. tourism for the Blue Mountains) to do this.</li> <li>• <u>Resourcing</u>: the funding and resources required to implement risk management approach; the need to remain realistic in identifying potential resourcing needs (whilst noting the very large costs of fires which are not rapidly contained) and to the need to prioritise such needs.</li> </ul>
<b>Projections</b>	<ul style="list-style-type: none"> <li>• BMCC is developing threatened species/ecological community maps, including dominant vegetation typing, and post-fire age mapping for dissemination to RFS brigades.</li> <li>• Further developments in environmental risk management planning are underway by the Bush Fire Coordinating Committee that will assist this issue. The BFCC are developing a revised model for environmental risk management, using an inclusive process of template review for fire risk management plans.</li> <li>• BMCC is working on the development of a strategic hazard reduction plan that considers risk and environment assets, to sit between the risk management plan and the operations plans.</li> <li>• Impacts of fires on ecological values, including the policy and adaptive management frameworks for bushfires, will be addressed within a new three year research project “Managing ecosystem change in the Greater Blue Mountains” (funded by an Australia Research Council Linkage Grant and involving the BM World Heritage Institute, DEC, BMCC, and universities). This project will include compiling new and existing ecological data relating to fire and climate change into a geographic information system.</li> <li>• Many Aboriginal heritage sites will degrade beyond recognition within the next few decades.</li> <li>• The NCC Hotspots Fire project has demonstrated a capacity to successfully engage communities and translate fire ecology into a management context including ecological messages and into the risk management planning framework.</li> </ul>
<b>Actions</b> <i>Note - actions are delegated to participant organisations</i>	<ul style="list-style-type: none"> <li>• Data collected within the “Managing ecosystem change in the GBMWH” project, including the new GIS, to be effectively interpreted into decision-making and practical fire-fighting terms.</li> <li>• Monitor impacts of fires on Aboriginal cultural heritage values, and undertake opportunistic mapping of these values post-fire. Translate findings into decision-making and practical fire fighting terms.</li> </ul>

	<ul style="list-style-type: none"> <li>○ As a priority, undertake an opportunistic survey of Aboriginal cultural heritage post-Grose fire.</li> <li>• Greater effort in general to be made in translating and interpreting research and other relevant information on the protection of ecological and cultural values to better inform decision-making and into practical fire-fighting terms wherever required.</li> <li>• Consider further developments in environmental risk management planning by the BFCC for inclusion in the Bush Fire Risk Management Plan model template.</li> <li>• Effectively integrate the strategic hazard reduction plan being developed by BMCC, into the risk management plan and the operations plans.</li> <li>• Translate the NPWS Fire Management Strategies objectives for protection of natural and cultural values into operational guidelines across the entire planning framework at all levels, using a risk management approach.</li> <li>• Continue to identify the best mix of treatments i.e. prevention, mitigation, suppression and recovery, to achieve both fire management and land management objectives.</li> <li>• Review risk management and operational plans to include relevant reserve fire management plan information, including aspects of mitigation and appropriate fire management guidelines from the RFS Environmental Code.</li> <li>• Develop a single map-based approach for inter-agency use that depicts all relevant information in a user-friendly way and enables optimal use and consideration of this information under operational conditions.</li> <li>• Provide the outcomes of this forum to the BFCC for consideration in developing and reviewing policies and procedures such as for the Bush Fire Risk Management Policy and Bush Fire Risk Management Plan Model template.</li> <li>• Develop a quantitative framework for risk management: undertake research to evaluate the effectiveness of current strategies to inform the resources and strategies required to achieve integrated life, property, cultural and natural value protection outcomes. The research should identify what is the return on current ‘investment’ and the results then linked back to budgeting systems.</li> <li>• Undertake and improve community liaison and surveys to better capture community values within fire management plans.</li> </ul>
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Responsibility for implementing the actions was assigned to the organisations present at the forum, as well as the Blue Mountains Bushfire Management Committee and the Bushfire Coordinating Committee. The full action plan is available at [www.bmwhi.org.au](http://www.bmwhi.org.au) and there will be an annual review of the actions and their implementation. DEC and RFS are addressing its implementation as a priority.

### **Matters arising from the forum**

*Transparent open inquiry?* It is important now to turn to the question of how successful the forum was in terms of addressing community concerns. The discussion at the forum was productive, friendly, open and willing, and from the perspective of the Rural Fire Service, the forum served as an effective circuit-breaker. However the community representatives were concerned and disappointed that copies of the section 44 debrief report were not available for the forum as anticipated. While this was partly overcome through verbal presentation and comment, it limited the ability to reach consensus on the factual basis of what happened on the fire ground and to move forward productively from this point of consensus. Community representatives expressed their dissatisfaction with this situation, and it must be noted that the forum was therefore not able to engage effectively on specific issues of the control strategies used on the Grose Valley fire. This left the community with a feeling that there was a lack of transparency and open inquiry. It is a reality that in these times of litigation and with a media all too willing to 'beat things up', the political machine goes into action and centralised bureaucratic control inhibits reflexivity and open inquiry.

*Implementing the action plan.* The one-day forum sought to achieve a lot. The action plan is long, with a total of 50 actions and it is important to caution against expectations that agencies can deliver on all of the actions; any plan of action must be practical and achievable. DEC and the RFS are commended for their early commitment to implementing this action plan.

*The whole is greater than the sum of the parts.* The long list of actions exists within a complex system of economic, social, and political realities. Focusing on each of the actions in turn without addressing the system of governance within which they are embedded, may fail to bring about lasting change that can avoid future conflict. The systemic issues of governance (eg centralised hierarchical structures of government which tend toward rigidity when they need to be adaptive) are often at the core of conflicts over bushfire management, and cannot be addressed in a fragmented way. They need explicit attention 'outside the heat of the fire'. Focusing on individual actions can overlook the questions about the organisational processes that are at the core of the issues eg why haven't we been assessing success of risk mitigation efforts? Why isn't research being translated into policy and management? How can we learn to cope with complexity and uncertainty? The trends and conditions mapped out during the forum provide a valuable reference point for beginning to work through these issues of process.

*Funding.* Government funds to support bushfire management are urgently needed, and this is reflected in the forum report by the number of actions focusing on procuring funds.

### **Concluding remarks**

This forum and the ensuing action plan, to be most effective, require an on-going process of inquiry into the broader context for bushfire policy and management. Three key aspects of this context that need attention are mentioned below.

#### *Community involvement in the policy making process*

A big challenge in bushfire management is how to better integrate valid and appropriate community interests with those of fire management agencies. Over recent years, the public

has come to demand and expect a greater say in decision-making processes that impact upon their local environment. This trend can only be considered to increase under the pressures of climate change which will 'up the ante' in terms of resource management and community engagement and concerns. The Grose Valley Fire Forum represented a step forward in this process of better integrating community knowledge and interests into local natural resource management. A key issue raised by concerned residents in the Blue Mountains was the need to better capture and utilise local knowledge. The same call is commonly heard from Indigenous communities. It is essential that fire fighters have the backing of communities, and to secure this the communities needs to feel empowered, not disempowered, in the decision making process. To date, disempowerment is common and new approaches are needed to overcome this. Some actions arising from the forum seek to address this problem.

#### *Integrating science with policy and management*

The forum highlighted the fact that we need to get better at meaningful transfer of knowledge between domains (scientific, indigenous, local community, land managers and politicians). The existing gaps in knowledge relating to bushfire management are substantial. Interpreting research into on-ground management outcomes is a major challenge, confounded by complexity of the data such as ecological impacts of fire regimes. Implementation of research and presentation of its outcomes needs to be done with careful consideration to its integration with policy and management - the habit is to neglect this part of the process, yet it needs to be given far more priority. An explicit adaptive management approach would be significant in addressing the knowledge gaps, with integrating scientific knowledge into planning being an important early step in an adaptive management process.

#### *Adaptive governance and management*

What sorts of policy processes and management regimes are needed to handle current and future demands in bushfire management? Uncertainty, complexity, increased community participation and emerging multiple interests – all of these elements demand new approaches. Adaptiveness across policy processes and across institutions and bushfire management regimes is urgently needed, yet present bureaucratic structures with a fragmented disciplinary, legislative, departmental approach to governance, are not designed to be adaptive and deal with complexity and uncertainty.

Issues discussed at the Grose Valley forum highlighted the urgent need to look explicitly at the institutional and human barriers to more adaptive bushfire management, and the need for more effective integration of science into decision-making. The first annual review of the action plan needs to focus attention on the broader policy and organisational processes, by considering what barriers there are to implementation of the action plan, and how effectively the actions address the broader issues identified at the forum (Table 1).

*For the full report and action plan go to [www.bmwhi.org.au](http://www.bmwhi.org.au)*

*Disclaimer: this paper reflects the views of the author rather than those of the Blue Mountains World Heritage Institute*