

[bnhcrc.com.au](http://bnhcrc.com.au)



bushfire&natural  
**HAZARDS**CRC

# INVESTIGATING THE ACTIVATION OF COMMUNITY FIRE UNITS IN THE BLUE MOUNTAINS DURING THE OCTOBER 2013 BUSHFIRES

Katharine Haynes and Deanne Bird  
Risk Frontiers, Macquarie University





# Investigating the activation of Community Fire Units in the Blue Mountains during the October 2013 bushfires



bushfire&natural  
**HAZARDS**CRC



**Fire & Rescue NSW**  
Community Fire Units



**MACQUARIE  
UNIVERSITY**  
SYDNEY ~ AUSTRALIA



**An Australian Government Initiative**



© Bushfire and Natural Hazards Cooperative Research Centre 2014

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form without prior written permission from the copyright owner, except under the conditions permitted under the Australian Copyright Act 1968 and subsequent amendments.

Publisher: Bushfire and Natural Hazards Cooperative Research Centre, East Melbourne, Victoria

# Investigating the activation of Community Fire Units in the Blue Mountains during the October 2013 bushfires

## Authors

Katharine Haynes and Deanne Bird  
Risk Frontiers, Macquarie University

### **Please cite this report as:**

Haynes, K. and Bird, D. 2014. Investigating the activation of Community Fire Units in the Blue Mountains during the October 2013 bushfires. Bushfire and Natural Hazards CRC, East Melbourne.

### **Acknowledgements:**

This work was carried out with financial support from Fire & Rescue NSW. The researchers sincerely thank all questionnaire and focus group respondents for taking the time to provide their invaluable knowledge, feedback and stories of their experiences. The Bushfire and Natural Hazards CRC is acknowledged for their coordination and support during the project.

**Cover images** document MHP049 during the October 2013 bushfires and research activities in February 2014, Blackheath. Photographs taken by members of MHP049 and the researchers.

### **For further information please contact:**

Katharine Haynes, Risk Frontiers, Macquarie University, North Ryde, Sydney 2109.  
[katharine.haynes@mq.edu.au](mailto:katharine.haynes@mq.edu.au)



*It's really interesting, some of the things you learn that you don't do in training. Like, that was the very first time that we've ever even faced a fire. Even in training we got shown how to use the equipment, but we never got once told how to face a fire... In a sense, we're quite a different CFU now because more than half the team have actually fought fires.*

*We come here because we want others to benefit from what we've benefitted from, really. You know, when it happens you really realise "Wow, I'm so glad that we actually went through the trouble of preparing for this." Because you know, having the stuff at hand, thinking about things beforehand, you really feel prepared.*

*We have good neighbours but the greater majority of people want to keep to themselves and feel that they don't need help and don't want to invest the time. I think this is a social issue that exists beyond anything CFUs or the fire brigade can do. People don't want to be involved. Those that do want to be involved will be. That said the corner of our neighbourhood where we have the CFU all the houses and their occupants are involved and it goes a long way to breeding a caring nature outside of the CFU involvement. So there are many flow on benefits from a social, cultural, caring standpoint that can't be fully identified or articulated. The benefits I feel are wide reaching outside just fire security. There is a big social benefit and cost saving that government should be aware of. The fire brigade should be congratulated for this initiative and its maintenance in tight fiscal conditions.*

*So it was virtually going for almost a week, six days that we were valued, that when they did turn up in the streets, I'm talking about the bushfire brigades and the NSW Fire Brigade, when they came in, they seemed to value us and expected us to help out, which was great, because I was expecting that when this is all on they would just say, "Well you guys bugger off."*





## Contents

Executive summary.....	1
Introduction.....	3
Background.....	3
Methods.....	5
The questionnaire.....	6
Questionnaire topics.....	6
Questionnaire data analysis.....	7
Focus groups and interview .....	7
Topics covered by focus group discussions and interview .....	8
Focus group and interview data analysis .....	8
Results – Questionnaire .....	10
Demographics .....	10
Community Fire Unit membership .....	12
Previous bushfire experience and preparation .....	13
Preparedness and communication.....	14
Activities undertaken during the 17–23 October 2013 bushfires .....	17
Activation.....	17
Activities undertaken .....	18
Fire conditions .....	20
Number of homes lost and opinions why .....	21
Active defence of homes and challenges faced .....	23
Challenges and lessons learnt .....	26
Challenges faced.....	26
Lessons learnt.....	27
Things to do differently .....	30
Community Fire Unit training .....	31
Community Fire Unit equipment.....	34
Results – Focus groups .....	37
Joining and sense of community.....	37
Communication in regards to the fires.....	38
Official alerts .....	38
Official sources .....	38

Via the media .....	39
Informal communication.....	39
Unclear and conflicting information .....	40
Getting the group together to activate.....	40
Interactions with the police .....	41
Activities undertaken and related issues .....	42
Length of time of activation.....	45
Problems with the activation phone line.....	46
Communication between group members during the activation .....	46
Working outside ‘the rules’ .....	48
Challenges and lessons learnt .....	53
Stretched personnel and split responsibilities.....	53
Training.....	53
Equipment.....	57
Leadership – maintaining CFU roles .....	59
Success and preparation.....	60
Survival plans – evacuate or shelter.....	61
The preparedness of and communication with non-CFU members.....	63
CFU profile in the media and community .....	66
Conclusions and findings .....	67
Membership and team cohesion.....	67
Activities during the fires.....	67
Activation.....	67
Communication.....	67
Activities undertaken .....	68
Impact and success of the CFUs .....	68
Challenges.....	69
Personnel.....	69
Following the rules .....	69
Communication.....	70
Training and preparation.....	70
Preparedness of and communication with non-CFU members.....	72
Equipment.....	72

Survival plans.....	73
References.....	74
Appendix.....	76
A. Questionnaire cover letter .....	76
B. Questionnaire .....	77
C. Lessons learnt with respect to preparedness, training and communication .....	99
D. Things that CFU members would do differently during a future bushfire or activation .....	101
E. Problems encountered with CFU equipment during the October 2013 bushfires.....	103

## Figures

Figure 1: Residential addresses across the Blue Mountains, from Blackheath to Lapstone, with associated distance ranges from nearby bushland. ....	4
Figure 2: Length of time respondents have been CFU members.....	13
Figure 3: Bushfire experience prior to the October 2013 Blue Mountains bushfires.....	14
Figure 4: Perceived preparedness. ....	15
Figure 5: Level of risk reduction communication between CFU members and non-CFU members in their area prior to the October 2013 bushfires. ....	16
Figure 6: How respondents first heard about the fires/activation. ....	18
Figure 7: Activities undertaken by CFUs during the October 2013 bushfires. ....	18
Figure 8: Word cloud where the largest word represents the most frequently written word in response to activities undertaken to assist other fire services.....	20
Figure 9: Fire conditions experienced at respondents' homes. ....	21
Figure 10: Respondents' actions during the October 2013 bushfires .....	21
Figure 11: Word cloud where the largest word represents the most frequently written word in response to activities undertaken to defend homes.....	23
Figure 12: Respondents' perception of whether or not their actions reduced fire impacts in their community. ....	26
Figure 13: Word cloud where the largest word represents the most frequently written word in response to lessons learnt.....	28
Figure 14: Length of time since last training sessions. ....	31
Figure 15: Respondents' perception in relation to the adequacy of CFU training in preparation for the October 2013 bushfires. ....	32
Figure 16: Word cloud where the largest word represents the most frequently written word with respect to beneficial aspects of training.....	33
Figure 17: Word cloud where the largest word represents the most frequently written word in relation to extra CFU equipment needed. ....	35

## Tables

Table 1: Respondent demographics and gender and age demographics of all CFU volunteers. ....	10
Table 2: Statistical comparison between the questionnaire sample and the total population of CFU volunteers. ....	12

## Text Boxes

Text Box 1: One respondents' detailed list of lessons learnt. ....	29
Text Box 2: Notes from an "Activation Planning Workshop" held on 24 November 2013 by one CFU following the fires. ....	29
Text Box 3: Activities undertaken by a unit that was severely impacted. ....	52

## Executive summary

Fire & Rescue NSW (FRNSW) and the Bushfire and Natural Hazards Cooperative Research Centre (BNHCRC) engaged Risk Frontiers to examine the effectiveness of Community Fire Units (CFUs) activated in the Blue Mountains, NSW during the period of heightened bushfire activity from 17 to 23 October 2013.

Four focus groups, one interview and an online survey were utilised in order to explore 1) the activities undertaken and their impact on damage reduction and 2) the effectiveness of the equipment and training provided to CFU members.

Fieldwork was conducted between December 2013 and February 2014. The questionnaire was completed by 328 CFU members, giving a response rate of 32.5%. The predominant respondents were men, aged 55–64 years, working full-time, living in their own home as a couple without dependents and working more than 20 km from their home. A total of six CFUs were included in the focus groups and interview, with a total of 22 men and three women in attendance. All four focus groups and the interview were digitally recorded and professionally transcribed. Salient themes in the qualitative data were coded according to the specific aims of the research. Quotes are provided where possible in order for the respondent's voices to be heard.

The conclusions and findings section summarises the most salient points emerging from the quantitative and qualitative results in relation to the aims and objectives of the research. These findings are provided for FRNSW to consider in the context of their CFU program.

The main findings include:

- Overall the majority of respondents are happy with their CFU and in addition to reduced bushfire risk their involvement has improved the sense of community and social capital in their local area.
- Official activation was a problem either because four members were not present or there were significant problems when using the activation phone line.
- The majority of questionnaire respondents heard first about the fires from official sources such as the RFS and media, followed by FRNSW notification and physical signs in the environment.
- The majority of respondents detailed how they undertook activities to prepare properties and equipment, provide advice, assistance, and communication, and in some cases training to non-CFU members, clear vegetation and keep a lookout. Assisting fire services with the provision of local information and with back burning operations were important activities undertaken as was monitoring for flare ups in areas which had been burnt. A total of 14% of the questionnaire respondents undertook active defence of their properties.

- A total of 27% of questionnaire respondents believe that the actions undertaken by their CFU reduced impacts in their community (this percentage is high given that 61% had no fire threat). Many respondents cited adequate training, equipment and preparedness as to why they were able to successfully defend homes and properties. In some cases it was noted that their presence enabled professional agencies to focus their attention in other areas.
- The data highlights that working within the very black and white rules that govern CFU operations is extremely difficult when a unit finds themselves actually defending their homes and street. The data indicates that respondents 1) considered that useful defence can occur with less than four members present and 2) often found themselves working just outside their area of operations when assisting other fire services with hazard reduction activities. Moreover, one CFU stated that as they were missing members the best way to utilise their equipment and cover the area at risk was to allow non CFU members, who were present, to assist them under the strict supervision of the fully trained unit members.
- Communication during activation between unit members is extremely challenging. Mobile phone coverage is poor and UHF radios purchased by units themselves were the most effective means identified.
- The majority felt that the basic training they had received was adequate. However, gaps were noted in terms of specific training on the likely fire behaviour in their local area and the best strategies for protection. This point also included the need for advice on the high risk spots where members may get into difficulties. The need for experience working with and extinguishing real fires was highlighted and members felt that this could be provided through assisting fire authorities with hazard reduction burns or fire simulation exercises.
- CFU members communicated a considerable amount with their non-CFU neighbours during the period of the fires around the status of the fires, the dangers posed and what people should do to reduce their risks and prepare their homes. A number noted that they would be willing to do more to communicate and assist in their neighbour's preparations if supported by FRNSW to do so.
- Few respondents reported problems while using or testing CFU equipment. However, many of the respondents declared that extra equipment is needed by their CFU so that they can defend homes and properties effectively during a future activation.
- The focus groups revealed that many CFU members do not have a clear idea about 1) their plans and triggers if a situation to stay and defend becomes untenable or 2) the safest fall back options and evacuation points in their home and area. There is a need to inform members that they should not rely on official warnings, as they may not be readily available in every situation. FRNSW need to develop guidelines to inform CFU members on the pros and cons around the use of safe rooms within their homes.

Please note that the above is a significantly reduced summary of the findings. The reader is directed to the 'Conclusion' section for the complete version and the detailed list of potential improvements for FRNSW to consider.

## Introduction

This report details an investigation of the effectiveness of Community Fire Units (CFUs) activated in the Blue Mountains area during the period of heightened bushfire activity from 17 to 23 October 2013.

Specifically the research examined:

- The activities undertaken by unit members;
- The impacts their activities had on damage reduction;
- The effectiveness of training provided to CFU members; and,
- The effectiveness of equipment provided to CFU members.

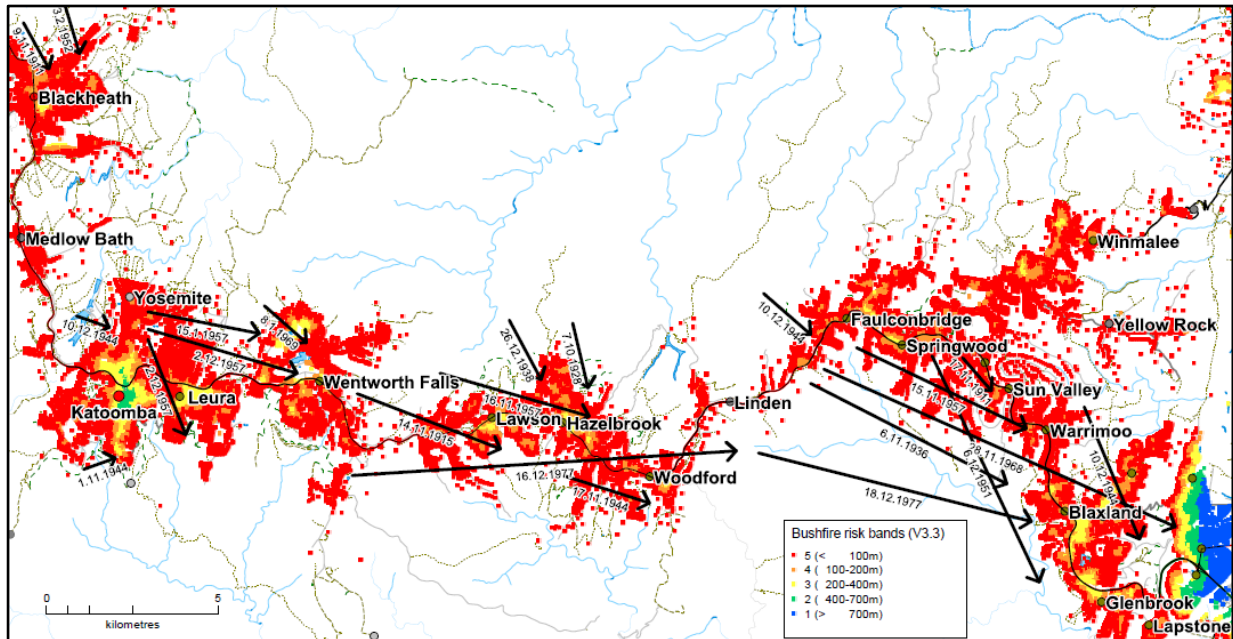
## Background

The Blue Mountains, located approximately 50–100 km west of Sydney, were impacted by bushfires in October 2013. The State Mine Fire, which began on 16 October, occurred between Lithgow in the west and Bilpin to the northeast. The Mt Victoria fire started 17 October threatening homes in Mt Victoria and Blackheath. The Linksvie Rd fire also began on 17 October and devastated neighbourhoods in the communities of Springwood, Yellow Rock and Winmalee (Blue Mountains RFS, 2013). Overall, more than 200 homes were lost.

Recognising that the fire season runs from October to February, where November and December are the most critical months, Cunningham (1984) found that all townships from Blackheath in the west to Emu Plains in the east have been impacted by destructive bushfire (Figure 1). For example, bushfires in 1957 killed four boys in the Grose Valley and destroyed a hospital, factories, shops and over 150 homes in the Leura and Wentworth Falls region (MacDougall, 2003; BMWHI, 2014). Three deaths occurred and 125 homes were lost in the 1968 bushfires in Falconbridge, Springwood, Valley Heights, Warrimoo, Blaxland, Mt Riverview, Glenbrook and Wentworth Falls (Cunningham, 1984; PerilAus, 2014). In 1977, one person was killed and 49 homes were lost to fires (Blaxland Brigade History, 2014; NSW Rural Fire Service, 2014) and further destruction was experienced in 1994 with six homes lost in Hawkesbury Heights and one person killed in the Lithgow area (NSW Rural Fire Service, 1998). In the 2001/02 Black Christmas fires that ravaged NSW and the ACT from the mountains to the coast, a fire in the Glenbrook-Warrimoo area destroyed 20 homes and a National Parks and Wildlife depot (NSW Parliamentary Library Research Service, 2002).

That the most recent fires (October 2013) occurred early in the bushfire season prompted media discussion about a possible link to climate change (Haynes, Bird and McAneney, 2013). McAneney (2013) argues, however, that such assertions remain controversial and ignore the high vulnerability to bushfire of many homes in the Blue Mountains.

**Figure 1: Residential addresses across the Blue Mountains, from Blackheath to Lapstone, with associated distance ranges from nearby bushland. The directions of historical fires, extracted from Cunningham (1984), are shown. Map produced by Keping Chen, Risk Frontiers.**



Recognising the high vulnerability of homes in the Blue Mountains, Fire & Rescue New South Wales (FRNSW) established Community Fire Units (CFUs) in 1994, comprising of small groups of local residents living within close proximity to bushland. CFU members volunteer their time to learn how to adequately prepare their homes for bushfire risk, make informed decisions about evacuation strategies (i.e. leave early or stay and defend) and protect their properties when threatened by bushfire. CFU training and equipment is provided FRNSW. Today, there are over 600 units and 7000 members across metropolitan and regional NSW (CFU, 2014).



## Methods

To gather the most rigorous and comprehensive data, a mixed qualitative and quantitative methodology was employed. This follows the same methodology utilised in the previous Bushfire CRC study of CFUs for FRNSW (Lowe, Haynes and Byrne, 2008).

The methodology utilised:

- Four focus groups and one face-to-face interview with units who were activated during the recent fires; and,
- An online questionnaire distributed with a covering letter via CFU emailing lists, held by FRNSW.

The benefit of a focus group is that the dynamic of the discussion leads to answers that are more developed than that produced with only one or two people present in a standard structured/unstructured interview process. Focus groups allow for open and frank discussions that produce extremely useful data. The rich qualitative data provided in a focus group assists in understanding *why* people feel and behave as they do but it does not provide a statistical understanding of *how* people feel and behave. It is therefore common to use a quantitative survey and a focus group together in order to provide statistically viable data alongside the depth and richness of the sort of material which can only come from a qualitative and open discussion such as a focus group. Focus groups were considered important for this research in order to capture in-depth data concerning the stories, challenges and lessons from the October activations.

Initially the focus groups and questionnaire were planned for November and December. However, following correspondence with FRNSW the researchers were asked to delay the research until early 2014. It was therefore decided that it would be prudent to firstly send out the questionnaire and then follow up with the focus groups. One focus group was conducted in mid December 2013 in order to pre-test the questionnaire. Delaying the other three focus groups provided an opportunity for respondents who had completed the questionnaire to specify their interest in participating in a focus group discussion. It also allowed the researchers to choose groups from respondents who had been exposed to fire threats and had undertaken a significant amount of activities.

Originally, five focus groups were scheduled but only four were conducted. The fifth was cancelled following advice from FRNSW that they had already undertaken a debriefing with its leader. However, there remained one member from this group, who hadn't spoken to FRNSW, who was eager to share their story. Therefore, a one-on-one face-to-face interview was arranged. It is the researchers' understanding that FRNSW will incorporate information from the FRNSW debriefings with the research presented in this report.

The ethical aspects of this study were considered and reviewed in relation to the National Statement on Ethical Conduct in Human Research (Commonwealth of Australia, 2007). As such, potential participants were informed that their participation was voluntary and that they

could withdraw from the research at any time, without having to give a reason and without consequence. Moreover, they were advised that they would not be identified in any publication of the results and that Risk Frontiers and the Bushfire & Natural Hazards CRC (BNHCRC), not FRNSW, would securely store all data. Participants were also made aware that they could request access to reports arising from this research.

## The questionnaire

The questionnaire was developed in December 2013 and constructed in collaboration with FRNSW who provided feedback and assistance on an early draft. Complicated, leading and ambiguous questions were avoided and a clear layout was produced with a similar structure throughout.

The questionnaire was pre-tested with one CFU unit who had already been involved in a focus group and had agreed to assist. The group provided feedback via email and bar a few minor changes were happy that the survey covered the most salient issues and was straightforward to complete. FRNSW personnel also reviewed the questionnaire to ensure that it would produce information useful to them.

The questionnaire was developed and hosted online by SurveyMonkey. The web link was distributed via email to all CFUs in the Blue Mountains area on 2 January 2014. The email was sent by the FRNSW CFU communications officer with a cover letter signed by the researchers. The cover letter detailed the aims of the research, stressed that individual respondents would remain anonymous and provided the contact details of the researchers if more information was needed. The email was sent to 1085 CFU members. 156 emails bounced back giving a distribution rate of 929. Reminder emails were sent out on 29 January and 18 February 2014. The survey was completed by 328 respondents giving a response rate of 32.5%.

## Questionnaire topics

- Basic demographics;
- CFU membership information;
- Previous bushfire experience;
- Preparedness and communication;
- Activities undertaken in October 2013 – whether activated or not;
- Challenges and lessons learnt – whether activated or not; and,
- Opinions on training and equipment.

A copy of the questionnaire is presented in the Appendix.

## Questionnaire data analysis

Quantitative data was analysed using the online tools provided by SurveyMonkey and datasets exported to Microsoft Excel. Qualitative data (open response data collected via questionnaires) was imported into the qualitative data analysis program QSR NVivo 10 to identify patterning of responses. The section entitled 'Results – Questionnaires' combines both the quantitative and qualitative data derived from the questionnaires. Written responses have been included verbatim so that respondents' voices can be heard. Please note, however, minor corrections were made in relation to spelling and grammar.

Word clouds, produced using QSR NVivo software, were generated from open response text of certain questions. The word clouds provide a visual representation of the words most frequently used by all respondents for that particular question by enlarging those words within the figure (i.e. the largest word equals the most frequently used). Each word cloud was produced by running a word frequency query on the 200 most frequently used words, including stemmed words as well as exact. For example, hose, hosed and hoses are represented in the word cloud as hoses.

## Focus groups and interview

The unit who participated in the first focus group conducted in December 2013 was recommended by FRNSW. The final three focus groups were organised for mid to late February, by which time it was expected that the majority of the questionnaire responses would be returned. The scheduling of each focus group was organised in discussion with each individual CFU coordinator. This discussion included email and phone correspondence in order to lock in the most appropriate time for the majority of their unit. A range of dates and times were provided that included over the weekend, during the day and evening.

All but one of the focus groups was held at the home of one of the members. The fourth group was held in a local hotel as the unit coordinator considered that it would be the easiest location for members to drop into on their way home from work. The interview was held at a cafe convenient to the member. All the groups lasted for approximately two hours and the interview an hour.

All participants were provided with a brief background to the researchers and the research aims. Discussions were informal and relaxed; participants were encouraged to be open and frank. The aim was to ensure that the discussions took place in a non-evaluative environment where participants felt free to express themselves and without concern for what others in the group might think (Stewart, Shamdasani and Rook, 2007). An FRNSW personnel member attended two of the focus groups. However, the members of one group stated in private following the discussion that they did not think this had impacted on the honesty of the discussion.

One of the unit coordinators noted that their group conducted their training together with a bordering CFU and during the October fires they had worked together and shared equipment. It was therefore considered appropriate that a selection of members from both units attend the focus group together. Consequently, a total of six CFUs were included in this part of the investigation – five in four focus groups and one by interview. Overall, three women and 22 men were in attendance. The individual focus group sizes of nine, six, four and five reflected each particular unit's membership numbers. For example, the smallest focus group size of four people represented a CFU with a total number of seven members – one of whom was leaving the group. The minimum number of people needed to form a CFU is six.

The following topics were discussed in each focus group and the interview. The order of the topics varied and relevant digressions were encouraged making the data collected from each group unique.

### **Topics covered by focus group discussions and interview:**

- Activities undertaken immediately prior to and during the October 2013 fires (including preparations, active defence, assisting fire agencies);
- How they first became aware of the fires, official messages received and how they communicated with each other;
- How efforts undertaken by CFU members reduced the number of homes that were lost or damaged during the fires;
- The challenges faced during the activation and lessons learnt;
- The training provided to CFU members, how they utilised it during the fires and any gaps that were recognised;
- The effectiveness of the equipment provided to CFU members, how it was utilised and any problems or other equipment needed;
- Preparation activities undertaken at own and / or neighbours properties prior to the fires;
- Why they joined the CFU and how long they have been members;
- Interactions with non-CFU neighbours;
- Any lessons applied this time from past activations; and,
- CFU plans for ensuring safety, what are the plans for the arrival of a fire front? Which homes make the safest refuges? Triggers for active shelter or evacuation? How do family and CFU plans correspond and work together.

### **Focus group and interview data analysis**

All four focus groups and the interview were digitally recorded. All recordings were transcribed by the professional company 'The Transcription People' and double-checked for accuracy by the researchers. The analysis began with the researchers working together to read through the interviews and discuss themes emerging from the data. Salient themes in the

qualitative data were coded according to the specific aims of the research. The qualitative data analysis software program QSR NVivo 10 was used to aid analysis and management of the data. The section entitled “Results – Focus groups and interview” provides detailed information on the various issues and ‘themes’ that emerged from the qualitative data. Where possible, quotes have been used so that respondents’ voices can be heard.

## Results – Questionnaire

### Demographics

A variety of demographics responded to the questionnaire (Table 1). The predominant respondents were men, aged 55–64 years, working full-time, living in their own home as a couple without dependents, working more than 20 km from their home and rated themselves in good physical health. Nearly all respondents had home and contents insurance. Just under a third of respondents were not working or retired.

**Table 1: Respondent demographics and gender and age demographics of all CFU volunteers.**

Characteristic	Percentage of all CFU volunteers	Percentage of questionnaire respondents
Gender:		
• Male	69.0	62.0
• Female	31.0	38.0
Age group:		
• <35 years	8.2	4.0
• 35-44 years	11.7	9.2
• 45-54 years	21.5	26.2
• 55-64 years	23.7	34.7
• 65-74 years	16.6	23.7
• 75+ years	4.6	2.2
• Unknown	13.7	-
English <u>not</u> main language spoken at home:		0.3
Working status:		
• Full-time (30+ hrs/wk)		46.7
• Part-time (9-29 hrs/wk)		15.5
• Unemployed		0.9
• Not working - retired		30.3
• Looking after house / children / other dependants		2.5
• Other		6.8
Distance of main place of work from home:		
• Not working/retired		33.0
• Work from home		7.2
• 0-3km		3.7
• 3-5km		2.5
• 5-10km		7.5
• 10-20km		11.8
• More than 20km		29.3
• Other		5.0

Housing status:	
• Renting	3.2
• Home owner	94.2
• Neither	2.6
Level of insurance:	
• None	2.0
• Home only	0.3
• Contents only	1.3
• Home and contents insurance	96.4
Composition of household:	
• Couple with children or other dependents	29.5
• One adult with children or other dependents	2.3
• Couple without children or other dependents	46.4
• One person household	8.4
• Shared house with other adults	8.8
• Other	4.5
Respondents who themselves, or someone within their household, require assistance due to disability or long-term injury/illness:	3.9
Physical health:	
• Very good	18.7
• Good	41.3
• Average	34.8
• Poor	3.9
• Very poor	0.3
• Other	1.0

The questionnaire sample was compared to the demographic data on all CFU volunteers held by FRNSW. The data held by FRNSW contained unknown age data on 13.7% of the volunteers. Therefore, the age data held by FRNSW had to be adjusted, and the percentage of unknown age data was distributed among the other age groups in proportion to the known population proportions (Table 2). There is no way of knowing if this is appropriate, and it may impact the final results.

There is a statistically significant difference between the population and the sample in terms of gender ( $p < 1\%$ ), with more women than men completing the questionnaire than would be expected based on the population. In terms of age, the questionnaire was completed by slightly fewer people in the  $< 44$  years range (statistically significant;  $p < 5\%$  in both age categories) and those 75 years or older (significant;  $p < 5\%$ ). However, it was completed by more than expected in the 55–74 age range (significant;  $p < 5\%$  in both age categories). No statistically significant difference is seen between the sample and population proportions in the 45–54 age range. In terms of numbers of respondents, the differences are small. As a large response to the questionnaire was received, with significant numbers within the gender

and each age category, any disparity between the sample and population will have had a negligible influence on the results.

**Table 2: Statistical comparison between the questionnaire sample and the total population of CFU volunteers.**

Category	Population %	Population % (adjusted)	Sample %	s	z	Observed p
Male	0.69	0.69	0.62	0.026	-2.741	1%
<35	0.082	0.095	0.04	0.016	-3.398	1%
35-44	0.117	0.136	0.092	0.019	-2.305	5%
45-54	0.215	0.249	0.262	0.024	0.539	> 40%
55-64	0.237	0.275	0.347	0.025	2.937	1%
65-74	0.166	0.192	0.237	0.022	2.052	5%
75+	0.046	0.053	0.022	0.012	-2.524	5%
Unknown	0.137					

$s = \text{standard error of the estimate} = \sqrt{(p(1 - p_0)/n)}$

$z = \text{test statistic} = (p - p_0)/s \sim N(0,1)$

## Community Fire Unit membership

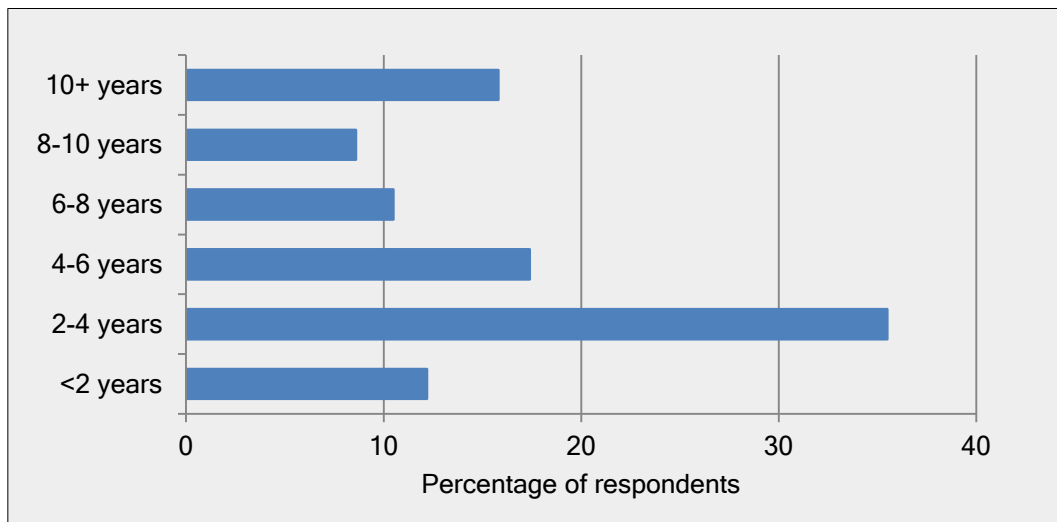
The greatest percentage of respondents (35.5%) has been with the CFU for 2 to 4 years (Figure 2). The top three reasons for respondents to join the CFU are:

- I know that I live in a bushfire prone area so I wanted to be able to protect myself/property/family in the future (39.7%);
- Bushfires affected my local area in the past so I wanted to be able to protect myself/property/family in the future (19.7%); and
- If I and my neighbours are trained and equipped to defend our homes it gives us the greatest chance of saving them (14.8%).

The majority of respondents intend to keep their CFU membership current. However, 9.6% stated that they were not sure and a further 3.0% confirmed that they would no longer remain a CFU member. Of the 35 explanations given as to why people answered 'no' or 'not sure', health/age was cited as the main reason (43%) for leaving or possibly leaving the CFU. However, dissatisfaction/lack of motivation among members (31%) was also a significant factor affecting members' desire to remain with the CFU.



**Figure 2: Length of time respondents have been CFU members.**



*“There does not seem to be any point in remaining a member as I have had no communication from the person who was put in charge of our unit. I have a uniform, bag and boots which have never been worn and never likely to be. There was a bushfire through near where I live in October last year but I had no word from our leader as to what I should do and was not allowed to go near the fire unit.”*

*“Our unit is not active & has effectively fallen apart.”*

*“A lot of taxpayer money goes into equipping these units, a lot of effort on the part of members to train and be prepared. But for the October Blue Mts bushfires we were notified that under no circumstances would the CFUs be permitted to activate. I recognise that the weather conditions were extreme but I see no point in having the units if this will be the response to fires from now on.”*

*“Other members took the unit away to defend their own houses this fire and in 2001 leaving us to fight the fires alone with only garden hoses.”*

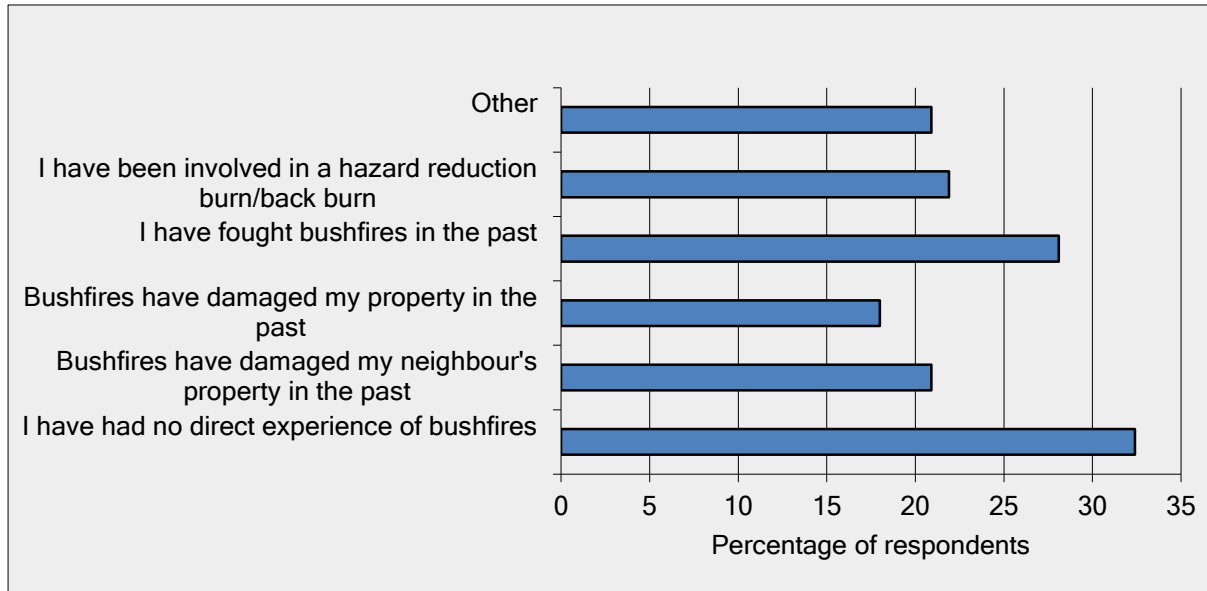
*“Our training and rehearsal protocols have been very poor and I don't have a lot of confidence in my preparedness to be of benefit to my immediate neighbours. I have therefore installed my own tanks and pumps and hoses to take responsibility more directly. As we are on a battle-axe block our Unit Captain indicated that the Unit would be unlikely to do anything to help us.”*

### **Previous bushfire experience and preparation**

32.4% of respondents indicated that they had no direct experience of bushfires but all had seen and heard about them from various sources including in the distance, on the news, on

training videos and/or, from family and friends (Figure 3). In contrast 28.1% had fought bushfires in the past.

**Figure 3: Bushfire experience prior to the October 2013 Blue Mountains bushfires. Please note that respondents were able to provide more than one response. Therefore, variables do not total 100%.**



A total of 70.8% of the respondents had not activated with their CFU in the past. Of those that had, the main reasons for activation were due to bushfires in 1998, 2000, 2001, 2002, 2005, 2006, 2009, 2011, 2012 and September 2013. One member stated that they had activated for “*safety duties*” to clear a tree that had fallen across powerlines and several respondents acknowledged that their unit activated to defend a neighbour’s house from a house fire. In this context one respondent commented:

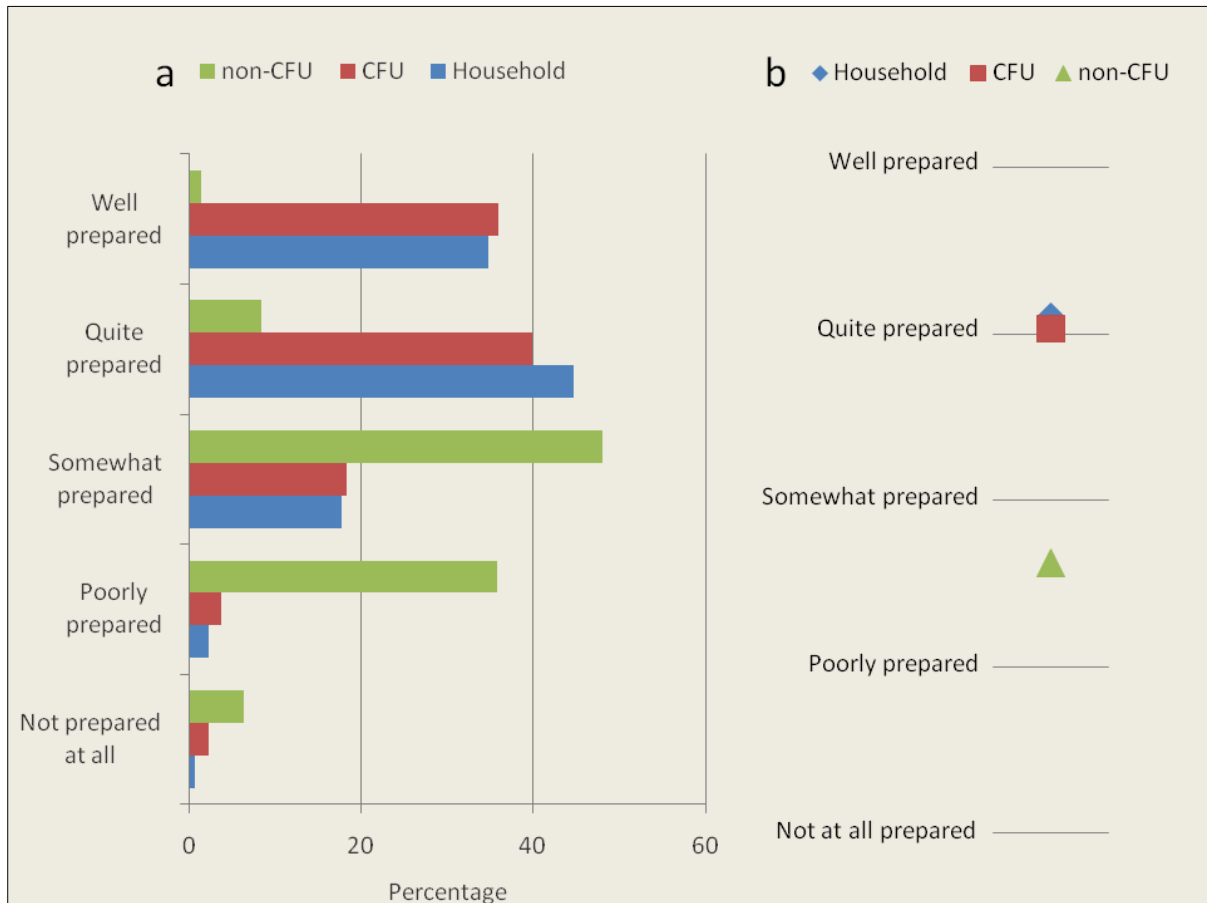
*“We were advised after the event this was inappropriate action (from FRNSW; however as it occurred at 2.00 am and the first brigade took nearly 30 minutes to arrive we believe we saved the neighbour's house from significant damage with no risk to ourselves and so I would do it again.”*

### Preparedness and communication

Most respondents felt that their household (79.0%) and CFU (75.8%) were quite or well prepared to deal with the October 2013 bushfires (Figure 4). However, CFU members ranked non-CFU members in their area as somewhat (48.0%) and poorly (35.8%) prepared. Reasons given for lack of preparedness among non-CFU members largely focused on lack of knowledge and experience, uncertainty on what do to, complacency, views that they would simply evacuate rather than stay and defend and, a lack of responsibility. Some respondents also acknowledged that preparedness was dependent upon the presence of a property owner

and was therefore lacking in their neighbourhood as it contains several rental and/or holiday houses

**Figure 4: Perceived preparedness of “people in your area who are NOT Community Fire Unit members” (non-CFU); perceived preparedness of respondents’ “Community Fire Unit” (CFU); and, perceived preparedness of respondents’ “household” (Household). a) shows the total percentage per category per question and b) shows the weighted response for each question.**



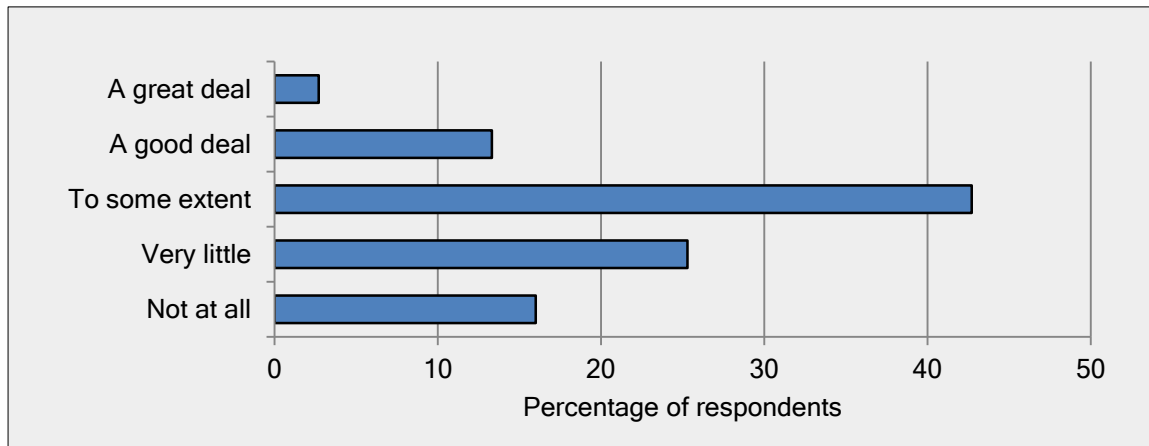
*“Home owners who experienced the 2001/2002 fires were well prepared. Arrivals since those fires were not well prepared and a couple were on their roof clearing gutters on the day of the Winmale /Yellow Rock fires. People renting were the worst prepared.”*

*“Other properties were not cleared. They have no sprinkler systems. They would evacuate rather than defend. Some did not expect a fire would ever occur here as it hadn't in the last 30 years.”*

*“Some of our neighbours who were not CFU members were very prepared. Those on the bush interface were more prepared than others. They came and let us know they had done their house preparation and they were leaving the mountains. Others, closer to the highway who are not in our area of operation, were more complacent. One home had a large pile of garden mulch stacked up against a timber fence.”*

Communication about bushfire risk reduction between CFU members and non-CFU members prior to the October 2013 bushfires had been minimal (Figure 5). Of those that had communicated, 44.6% believed that the transfer of information was moderately successful while 33.9% thought that it was not at all or not very successful.

**Figure 5: Level of risk reduction communication between CFU members and non-CFU members in their area prior to the October 2013 bushfires.**



Respondents believed that the successful transfer of information was dependent upon how well members know their neighbours and the level of interest and/or willingness of non-CFU neighbours in risk reduction (particularly among rental tenants and the elderly). It was also noted that CFU members lack any kind of formal communication strategies or guidance to communicate with their neighbours.

*“Those who have not participated in the CFU seem to keep themselves distant making opportunities to communicate or educate awkward. Similarly, the CFU does not have any communication plan to promote further dissemination of the education provided to CFU.”*

*“We have good neighbours but the greater majority of people want to keep to themselves and feel that they don't need help and don't want to invest the time. I think this is a social issue that exists beyond anything CFUs or the fire brigade can do. People don't want to be involved. Those that do want to be involved will be. That said the corner of our neighbourhood where we have the CFU all the houses and their occupants are involved and it goes a long way to breeding a caring nature outside of the CFU involvement. So there are many flow on benefits from a social, cultural, caring standpoint that can't be fully identified or articulated. The benefits I feel are wide reaching outside just fire security. There is a big social benefit and cost saving that government should be aware of. The fire brigade should be congratulated for this initiative and its maintenance in tight fiscal conditions.”*

*“We have tried to encourage others to join our unit or start their own however the interest is not there. However, one neighbour expected to be able to access our trailer and equipment during the October fires.”*

*“I am not aware that this is part of the modus operandi for our, or any, CFU: as far as I know we have not been encouraged (or precluded) from proselytising for members.”*

*“We have involved most of the people in the street in the CFU (as active or associate members) but those that aren't were neglected from our information sharing. We talked about how to look out for them in the event of a fire, but I didn't directly talk to them about this.”*

In contrast some respondents noted that their CFU was very proactive in disseminating information and assisting non-CFU members with preparedness measures.

*“Our CFU leader has spent time talking to most neighbours about preparation and their plans if the fire came to us. For example, we all knew, for each person in our area, whether they planned to stay or leave.”*

## **Activities undertaken during the 17–23 October 2013 bushfires**

### **Activation**

A total of 41.7% of respondents declared that their unit activated during the October 2013 bushfires and 49.3% of respondents indicated that they activated during the October 2013 bushfires. The length of activation was variable among all respondents that did activate. It appears that the discrepancy between unit and individual members activating is related to members indicating that they activated their own bushfire plan but were not activated as a unit. The main reason for not activating was due to no fire threat. In this instance, many respondents noted that they had undertaken preparedness activities and checked personal and CFU equipment.

*“We did not activate but our unit met and canvassed our area to apprise our neighbours the need to keep checking the RFS [Rural Fire Service] web site and listen to the ABC for updates. We also asked if they had a survival plan completed. Those who had not we advised how to obtain and complete one.”*

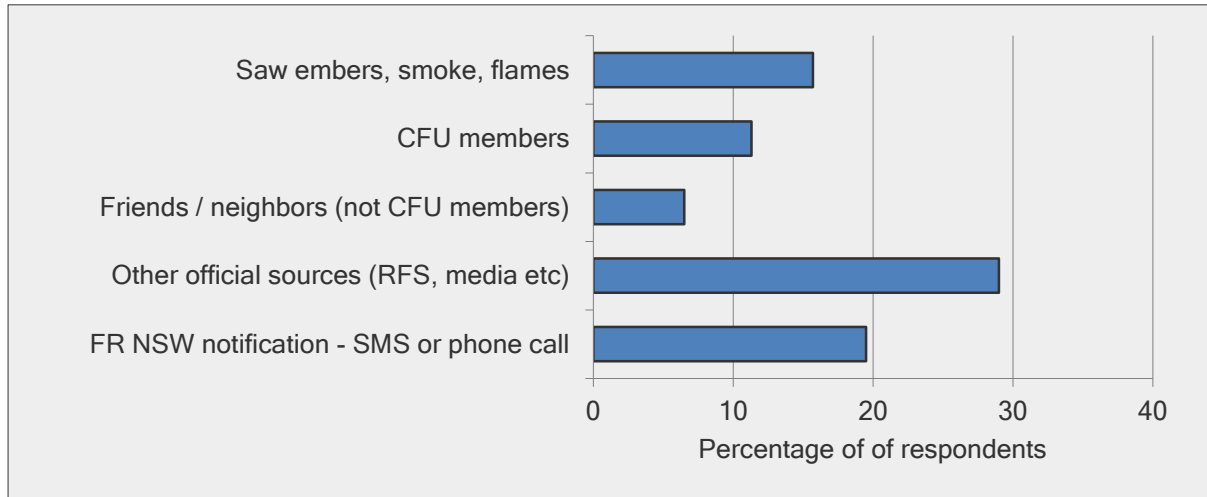
*“No official activation but I prepared as though the unit would be activated.”*

A few respondents stated that they did not have time to activate as the fire had taken them by surprise or that they were away from their local area due to work. Other units were unable to activate as less than four members were present. For some it appears that there was confusion about who was supposed to give the order to activate (see next comment) or when they were supposed to declare that they had activated.

*“Our unit was not called to activate, only to be on standby. We did however support the RFS in the back burn behind our houses by setting up our hoses and putting out the back burn.”*

Members mostly (29.0%) heard about the fires from official sources such as the RFS and media (Figure 6), with some commenting: “702 ABC were fantastic, this was my main source of information.”

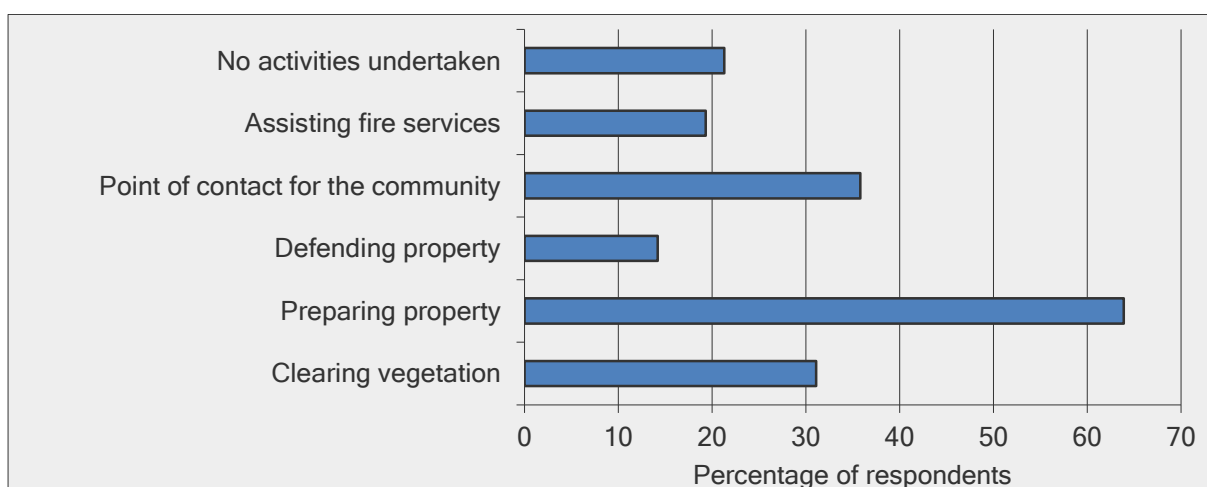
**Figure 6: How respondents first heard about the fires/activation.**



### Activities undertaken

Although half the respondents indicated that they did not activate, the majority reported that their CFU had undertaken activities during the October 2013 bushfires (Figure 7). These included preparing own properties on an individual basis and assisting others in the community in terms of providing advice, update hazard information and implementing preparedness measures. 14.2% of respondents reported that they had defended property.

**Figure 7: Activities undertaken by CFUs during the October 2013 bushfires. Please note that respondents were able to provide more than one response. Therefore, variables do not total 100%.**



*“At the request of NSW Fire we worked outside of our area of operations extinguishing logs in burnt out areas. I did believe that was required. The following day we again worked outside our area of activity, putting out grass fires.”*

*“We door-knocked and passed on the information we had been given by Commissioner Greg Mullins and other FRNSW Officers...on the evening of Monday the 21st. We were given a State Emergency Services hot line phone number to assist people who couldn't clear their yards.”*

*“Informally checked empty houses for hazards.”*

*“Looking after pets, helping people evacuate, activating private pumps, calming and directing people, resourcing and mini-training for neighbours to better defend from embers, blacking out, days of putting out fences and stumps without having to bother RFS and Brigade. Helping people understand risk of returning ember attack and how to prepare.”*

*“Checking if people were home or evacuated, discussing options with elderly and disabled residences around early evacuation, checking properties for residents who were away or had evacuated.”*

*“Actively sharing and ensuring neighbours and locals knew what we knew. Via Facebook my local friends kept up to date with the information that we had and also other friends in the rest of the Blue Mountains. I found some of my updates for friends were then shared to a wider audience, which could have been due to the extra information I received from [identifies member] in our CFU in his area of expertise.”*

A total of 19.3% reported that they engaged in activities to assist other fire services during the October 2013 fires with several stating that their assistance was: *“accepted with great enthusiasm.”* By working alongside RFS and FRNSW members, many respondents believed that they *“gained invaluable knowledge in protecting property, running hoses and learned of many of the traps – e.g. hoses getting stuck under rocks – a hazard in the Blue Mountains.”*

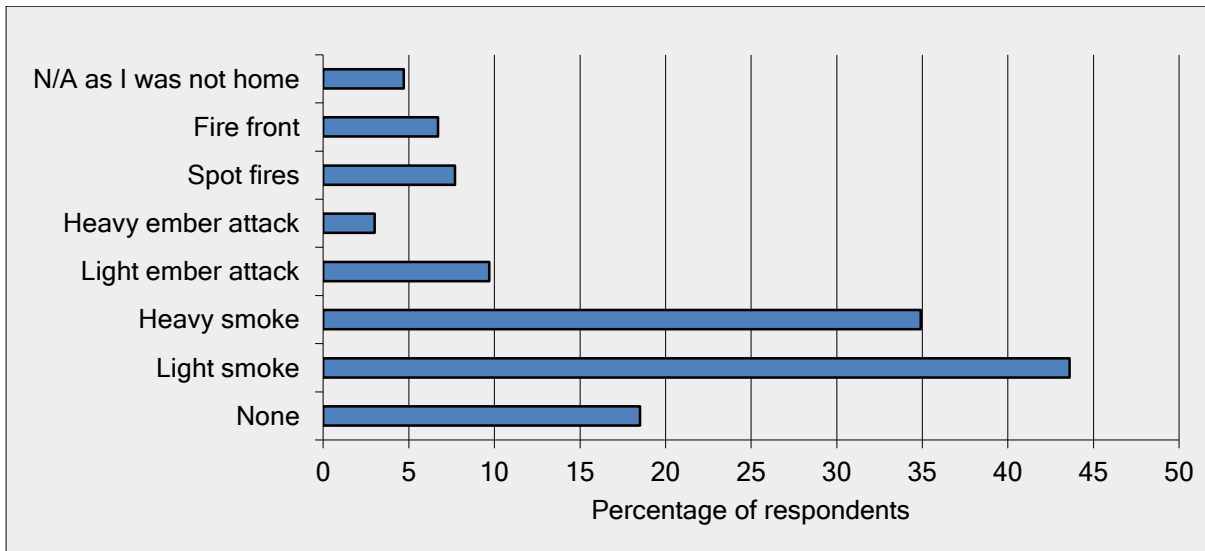
Back burning operations was undertaken by a large percentage of those who helped other agencies while some assisted with extinguishing spot fires and clearing vegetation (Figure 8). Many respondents also indicated that they provided invaluable localised information in terms of showing non-local crews the location of hydrants and describing the local topography.

*“There were Fire and Rescue people from the south of the state who had no real knowledge of our area. CFU members talked to the officers and answered any questions they had, such as explaining the our street is in practice a dead-end street even though maps show the road going through to adjacent streets. On a recent training day a week or so before the October fires, we had made sure all the water hydrants in the street were clearly visible and were in a working condition and this made it easy for the Fire and Rescue officers to locate the water hydrants and have a reasonable expectation that they would be functional.”*

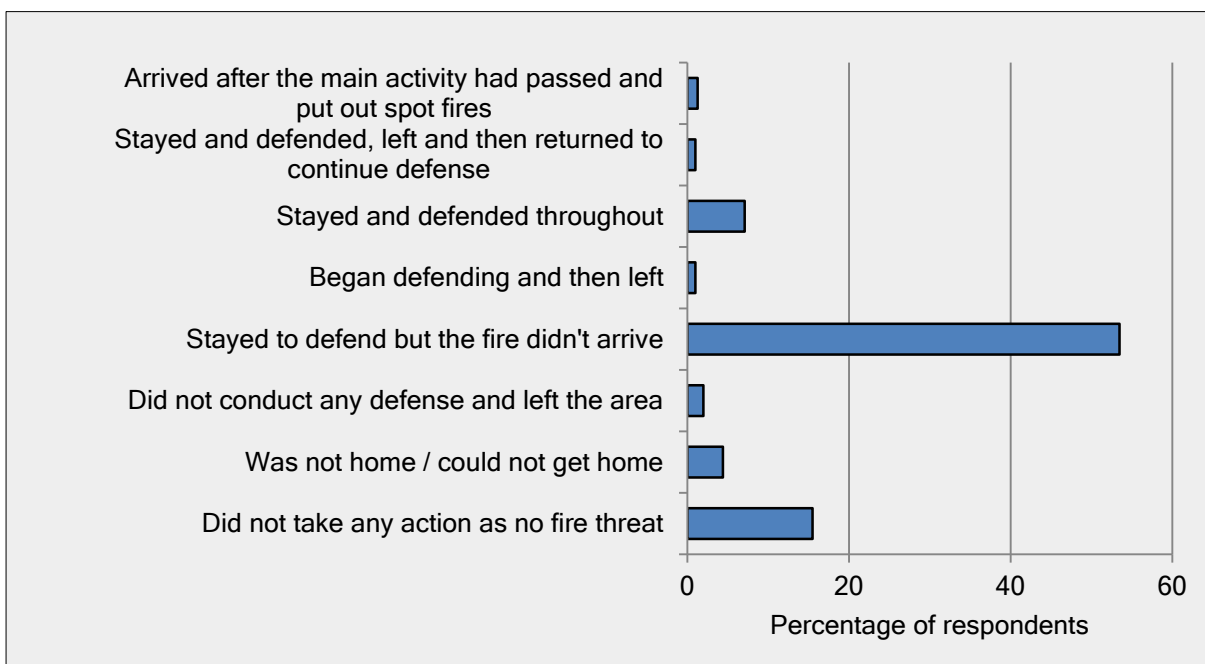




**Figure 9: Fire conditions experienced at respondents' homes. Please note that respondents were able to provide more than one response. Therefore, variables do not total 100%.**



**Figure 10: Respondents' actions during the October 2013 bushfires**



### Number of homes lost and opinions why

A total of 5.4% of respondents reported that homes were lost within their CFU area of activity during the October 2013 bushfires with 6 respondents losing more than 15 homes, one respondent losing 13 homes and nine respondents losing 6–8 homes. The majority of respondents opined that the main reason these homes were lost was due to the conditions on the day in terms of the fires' *“speed and ferocity”* and *“extreme wind conditions”*.

*“The homes were then lost because the winds and force of the fire was very intense. There were also simply not enough fire units or water supply to actually save the houses. No house that was actually under the attack of the major part of the fire was actually saved.”*

Many others also noted that building location and characteristics placed these homes at risk with some members stating residents were simply not prepared.

*“Most homes were at the top of ridges and direct for attack. But several went by embers on treated pine decks and leaves in gutters. Many of these homeowners did not believe they were at serious risk. Some homes were timber waiting for the day to come.”*

Respondents recognised that homes might have been saved if residents or fire units were available to defend the properties.

*“No homes lost in our CFU area. But 3 homes lost at the end of the street and a further 10 homes in the next street. Homes were lost as there were no fire services available as they were busy elsewhere. I feel if the CFU were authorised to help in our immediate area I think we could of saved some of these homes.”*

*“We had a standing water supply that was never used as did others - perhaps more pumps and more hoses would have made the difference as might local units with local knowledge.”*

Other respondents expressed their beliefs on how fires could be prevented in the long-term in terms of land use planning and the implementation of risk reduction strategies to protect critical infrastructure.

*“...many homes destroyed in the Winmalee area were zoned Bushland Conservation with Environment Protection zoning on accompanying steep bushland. They were sitting ducks in an extreme bushfire.”*

*“Although the Winmalee fire was not in My Units area, this fire was caused by a tree falling on above ground powerlines starting the fire as eye-witnessed by people who saw the start of the fire. This source of fire is controllable by placing power lines underground in fire prone areas. This option has been considered...with no action.”*

Overall, most respondents gave multiple reasons as to why these homes were lost recognising that many factors contributed to the outcome on the day.

*“Seven destroyed, one damaged, difficult to ascertain why. Lost houses made of brick, hardiplank, timber, Hebel block, unaffected houses include brick, hardiplank, timber, rammed earth. Both burnt and unburnt are a mixture of lots of clear space around and very little, ie no apparent reason either way. Some of the unaffected houses were right next door to burnt ones. Fire was fast and fickle, broken windows or air vents seem to be a common cause where fire entered in at least three of them. You can build in all sorts of materials, and*



*shelter). Later the unit was used further down the street to actively defend houses as the flanks of the fire made its way along the street.”*

*“Three pumps were in full use. Several private pumps were lost, with their homes in the initial fire front. Some houses had burning decks, fences or walls that were easily put out. The edge of the fire was burning slowly to other homes and easily put out. Embers caused spot fires we could deal with while the fire services fought to contain several larger house fires. We were able to keep pumps going and stop the spread to adjoining property. Members helped neighbours reluctant to follow formal evacuation instructions. They moved cars and helped neighbours set up pumps and hoses. The next day was a full on race to put out fences etc as we feared winds would blow embers into unburnt bushland nearby. We risked ember attack for days afterwards and helped neighbours prepare against. Our CFU members also coordinated neighbours, contributing hundreds of hours into the fight, sparing the fire services to fight the big action elsewhere. I am very proud of our community's efforts.”*

*“Blocked gutters, filled these with water, hosed down roofing, removed combustible materials from decks, prepared to operate Water Pump, back-pack pumps, McLeod hoes, 4 hoses from trailer run out and made ready for use, one or two smoke masks used. RFS made use of some of the connectors and nozzles from the trailer.”*

Many respondents cited adequate training, equipment and preparedness as to why they were able to successfully defend homes and properties.

*“For the short time we were activated (two hours at the most) it was mostly waiting for the fire and embers to arrive. As far as I can tell no-one panicked, and I put that down to our regular training which gave us knowledge about fire behaviour, what we might expect, how to react etc, and gave all of us confidence in our actions. Being part of the CFU also allowed us back in earlier to mop up and prevent further losses than otherwise would have occurred if we weren't in uniform. Our training days though the year also included some clearing and raking along the back boundaries of members' properties which helped to some extent. It also enabled us to get an idea of the terrain and conditions 50 m from the street on either side.”*

*“I think the training we had received had given us the skills to defend our properties and the mental preparation of knowing what to do and what could occur without panic.”*

*“It was like a war zone. Everybody was stretched to the max and had to prioritise. CFU members and neighbours were able to stop the spread of spot fires and along the property boundaries. The fire services were needed elsewhere and comfortable that we could finish blacking out. I have no doubt more homes would have been lost if we didn't have our Davey pumps to stop the spread.”*

*“I was able to advise and command on many decisions because of my training. I was able to communicate to other members not at home. Phone tree was vital and successful. After the fire front the pumps and hoses were used for mopping up. Personal Protection ...specs, mask,*

*helmet and uniform made evacuation safe and prolonged my usefulness to the community. [I] was able to retrieve a lady...in shock...who went back into a burning home.”*

In general, many units worked well as a team with everyone working *“together to reduce risk and keep secure.”* Some respondents recognised that their presence enabled professional agencies to focus their attention in other areas.

*“This allowed the RFS to throw more resources at the back burn and left us to defend - however they did keep an eye on us and were contactable at all times had things got out of hand. I think they appreciated our assistance.”*

Extra assistance was recognised as providing a significant benefit in other areas. In addition to assistance provided by professional units such as the RFS and FRNSW, ex-CFU members as well as neighbours volunteered their services.

*“...approx 4 homes were saved by ex members...”*

*“...local semi-trained 'ex' CFU members with uniforms and local non-CFU friends with level heads and good level of fitness were successful in defending properties.”*

However, not all members reported smooth operations: *“The unit members and volunteers worked well together but there was some disagreement with the co-ordinator mainly working outside of operational area.”*

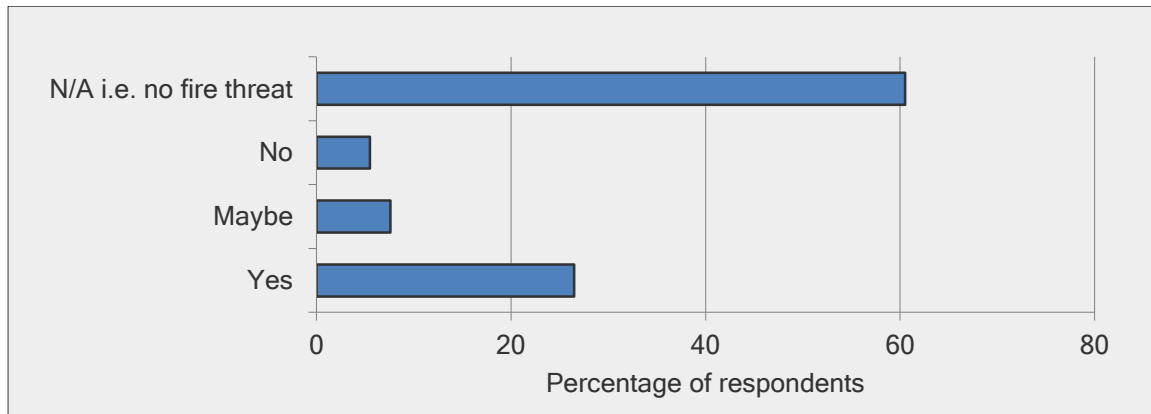
*“I don't feel that their actions were very successful at all, as I said before they just looked after themselves, I only managed to get a standpipe, hose and branch the next day.”*

While others believed that their safety was compromised during activation.

*“I feel that the idea of putting out spot fires as the fire approached in this instance was of little benefit and just put our members in unnecessary risk as it meant that they were not able to use their homes for shelter due to the speed of the fire and needed to be out in the street as a group.”*

Overall, 26.5% of respondents believe that the actions undertaken by their CFU reduced impacts in their community (Figure 12).

**Figure 12: Respondents' perception of whether or not their actions reduced fire impacts in their community.**



## Challenges and lessons learnt

### Challenges faced

A quarter of respondents provided feedback in relation to major challenges that their CFU faced during the October 2013 bushfires with the majority of responses relating to the availability of CFU members and the units ability to activate. Many members were not present as they had been at work when the fires started and were unable to gain access to the area due to road blocks. Other issues arose with some members wanting to evacuate when others were prepared to stay and defend. “*Apprehension*”, “*motivation*”, “*nervousness*”, “*stress*” and “*tiredness*” were also cited as factors contributing to members’ ability to activate or to remain activated.

Several respondents disagreed with the rule that a unit can only activate if four or more members are present. “*I take the view that even if one person is present then some action can be taken to get the unit ready for activation if fire in the area eventuates. Obviously this should only be done if the person is confident in their actions.*”

Issues with communication and lack of awareness of the situation at-hand also posed major challenges to many CFU members. Many relayed issues of communicating with other members in the street during activation and communicating with members who were not at home and/or stuck behind roadblocks. Communication with FRNSW was also an issue with one respondent stating that it took over 10 minutes to call to activate and report the fire using the CFU 1300 number and 000. One respondent revealed that there was no contact from the local fire station and another respondent declared that they had no direct contact from FRNSW during the October 2013 fires.

CFU members also reported that they received conflicting advice from official agencies in terms of the position of the fire front and: “*community meetings that spoke of evacuation*

*were followed within hours by stay and defend advice. Hard to know what the official line was although everyone understands the vagaries of weather changes.”*

A lack of awareness of fire behaviour and information contributed to members’ frustration in relation to watching, waiting, assessing the risk and deciding whether or not to activate or evacuate. One respondent noted that *“trusting that the fire would continue to be contained”* was a challenge to the CFU and this impeded the available time to *“implement bush fire survival plans once word got to them that the fire had broken containment lines.”* The same respondent also acknowledged that they did not have a clear idea about *“staying or evacuating and leaving evacuating too late.”* This CFU was caught unaware while patrolling their street. *“Many people were outside when this came [the fire front] and not close enough to shelter! Luckily for them, they were rescued by fire trucks who took them inside and evacuated.”*

While others reported that the speed of the fire took them by surprise, some were critical about the lack of warning.

*“Obtaining information early enough to be able to leave work and arrive home before fire risk makes this unsafe. I also believe in this instance that the highly risk averse nature of the Police/RFS, whilst of course completely understandable, was overly cautious and infuriating to residents who understand the risk. Whilst it is of course incredibly difficult to provide effective advance warning of fire impact, I feel that the [National Parks and Wildlife Service] and RFS downplayed the risk of this fire until it was far too late for many residents to do anything about it.”*

Many stated that they did not encounter any challenges, as they were *“prepared, ready to activate, well trained and equipped.”* However, others believed that they lacked preparedness in terms of knowing when to activate and deactivate and that their equipment was insufficient for them to effectively defend their area. While the majority of respondents did not activate during the fires, some believed that they should have been *“utilized in some way to gain experience in fighting bush fires.”*

## **Lessons learnt**

One-third of responses in relation to lessons learnt during the October 2013 bushfires focused on the importance of preparedness (represented as ‘prepared’ and ‘preparation’ in Figure 13). Some respondents realised the importance of further and timelier preparation.

*“Further home preparation was needed as we have an old home built before the current regulations.”*

*“...nothing can be left to the last minute as everything took a lot longer than anticipated.”*

“We need to focus more on preparation of houses, not use of the equipment.”

In contrast to the last quote, others realised the value of their training as it enabled them to confidently operate CFU equipment effectively and safely in stressful situation. Some respondents stated that their experiences showed them the importance of training in terms of “familiarity with the equipment and the neighbourhood properties” and in particular, the use of walkie-talkies.

Lessons in relation to communication also featured as extremely important to many CFU members. Notably, respondents learnt the difficulties of communicating within the group when activated and prior to being activated as some found it difficult to contact members who were at work. A more detailed summary of responses in relation to preparedness, training and equipment, and, communication is provided in Appendix C.

Figure 13: Word cloud where the largest word represents the most frequently written word in response to lessons learnt.



Some noted that the Blue Mountains bushfires provided them with invaluable experience as they had an opportunity to test their equipment and skills. Several respondents stated realising the importance of getting back in as early as possible after evacuation was an important lesson as they were able to prevent further loss of homes and property by attending to spot fires.



*“We learnt that we are not there to actively fight fires, as we are not equipped to do that. It was reinforced that we stay and activate our own emergency bushfire survival plan. When the front has passed we then activate to mop up and assist where we can. That is what we are trained for.”*

*“We require additional hoses, branches, breaches, reducers, standpipe, & Davey pump as we could only defend approximately half of the homes in our area.”*

Two respondents provided detailed lists of the lessons they learnt during the October bushfires (Text Box 1 and 2).

**Text Box 1: One respondents’ detailed list of lessons learnt.**

- We saw how bush fires can behave, how unprepared we were, how much mopping up there is to do after the front has passed, how hard it is to get back into the street once the fire has passed to protect our houses (so prevention is a better method to protection).
- We need to reassess our activation plan and not be too far from shelter while waiting for the fire front to approach.
- We need to re-evaluate our activation plan to make sure people can attend to their own needs first - and that this will inevitably be the way it happens anyway, given human nature to protect one's self.
- We need to more fully prepare our homes in terms of vegetation (design and maintenance), keeping flammable materials away from the house.
- I need to have my survival kit more ready and in the car which is on the street ready to go.
- We need to be more honest about our views on our neighbours' preparations, to help them prepare better.
- Park the trailer where it has that least chance of being burnt.

**Text Box 2: Notes from an “Activation Planning Workshop” held on 24 November 2013 by one CFU following the fires. Please note, this list was prepared by one group and is not necessarily a required approach endorsed by FRNSW.**

The purpose of the planning meeting was to develop an activation plan, identifying actions and activities to be undertaken by the team in the event of activation of the unit (either internal local activation or notification of activation by NSW Fire).

Points of Clarification:

The group clarified a number of principles that guide all unit activity for all unit members:

- Activation occurs when there are a minimum of 4 members available to activate the unit
- Membership is voluntary and members may choose not to remain in the area in the event of an impacting fire event
- The maintenance and safety of unit members own properties is acknowledged as overriding their ability to remain with the unit in the event of activation
- Acknowledging points 1-3, there is in principle agreement to activate in extreme conditions

Activation Team Rules:

- A minimum of 4 team members are required to enable activation of the unit
- Activation can occur via two main mechanisms:
  - Self activation as a result of an event identified locally, the unit will then notify FRNSW
  - Instruction to activate from NSW Fire & Rescue (Lawson Fire Station)

- When activated and undertaking spotting and/or mop up activities, team members will maintain line of sight to other team members
- The minimum operating team deployed once activated will consist of 2 members operating hoses/standpipes and or the pump
- One team member will maintain sight to pump or standpipe/hydrant and line of sight to their colleague when operating with a 2 person team
- When there are 3 team members or more, one team members will be allocated to maintain the standpipe t the hydrant or pump
- Whenever possible and practicable one member will be allocate responsibility to maintain traffic safety when the unit is operating

Activation Team Plan:

- 4 members are required to activate the unit,
- When activated and engaged in operational activity team members will maintain line of sight for safety & communication purposes.,
- When activated team members are required to be in uniform for safety and ease of identification
- When officially engaged in unit activity, please ensure your ID is with you.

Once activated:

- Team will marshal at the unit
- Roll call will be attended
- Assessment will be undertaken with team members for the need to place equipment pre-emptively

## Things to do differently

Most respondents, when asked is there anything you would do differently during a future bushfire or activation stated ‘nothing’ - “*we did all we could*”. Those that felt things could be done differently gave varied responses. Again, preparedness stood out as one thing members thought could be done better.

*“I will prepare the property further in advance - at the start of spring and maintain it throughout the fire season.”*

*“Now have a better structured plan for preparation - also helped by the bushfire survival plan app giving more prompts and being easily adapted to individual circumstances.”*

*“We decided to do more about helping each other prepare properties in advance.”*

Issues surrounding evacuation also featured highly with some suggesting that they plan to evacuate earlier while others declaring that they would stay and defend.

*“Be better prepared to leave!”*

*“Ensure that we were better/earlier prepared to stay and defend.”*

*“I would remain home (until advised to do otherwise) as I feel I am now better equipped to prepare.”*

To a lesser extent but just as significant, members discussed issues of coordination, leadership and member engagement with other members, other agencies and the public.

*“Much more coordinated effort amongst the unit members based upon our internally developed action plan.”*

*“We have three units in our street and at times they felt a little disconnected, possibly need a single coordinator.”*

*“Ensure we all have each other mobile numbers. Not just members, but neighbours too. Especially the elderly and stay at home people who can get the call out.”*

Various aspects of CFU protocol and equipment were also raised, in particular, the issue of working outside of the area of operation and setting protocols within the individual CFU to know who would stay and defend and who would evacuate.

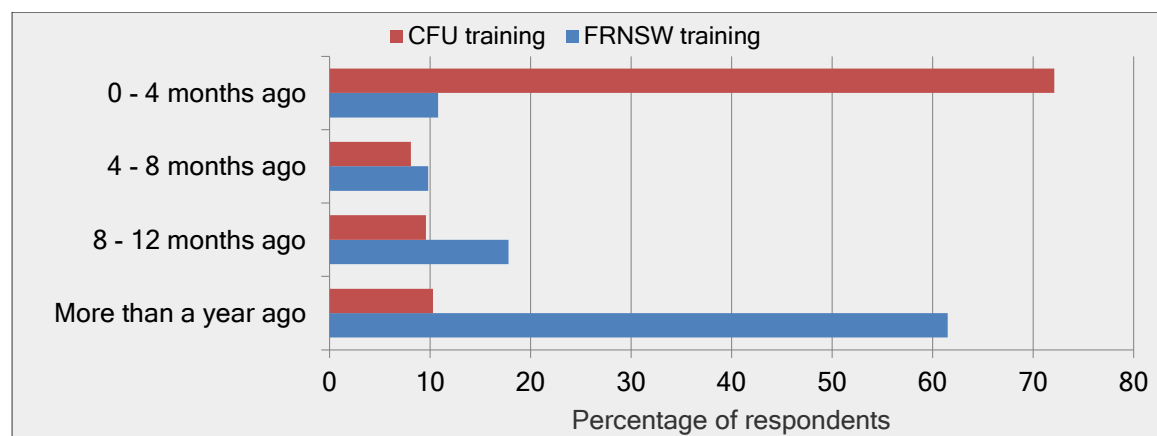
*“We would have had a CFU meeting to discuss who would stay, who would go, etc.”*

See Appendix D for a more detailed summary of responses in relation to evacuation, coordination, preparation, leadership, engagement, protocols and equipment.

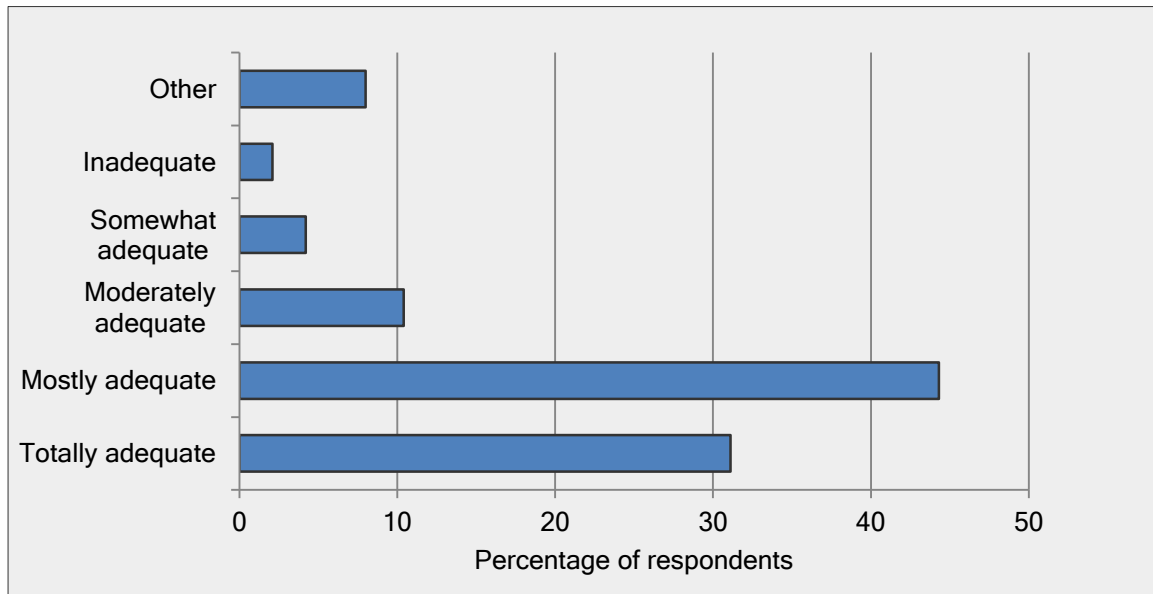
## Community Fire Unit training

Training was most recently undertaken within CFUs rather than with FRNSW (Figure 14). Overall, 75.4% of respondents felt that their CFU training adequately (mostly: 44.3% and totally: 31.1%) prepared them for activation (or potential activation) during the October 2013 bushfires (Figure 15).

**Figure 14: Length of time since last training sessions.**



**Figure 15: Respondents' perception in relation to the adequacy of CFU training in preparation for the October 2013 bushfires.**



Those respondents who stated 'other' gave mixed responses:

*“Training on use of equipment and property preparation was good at initial induction training (many years ago). Being left to do our own training over the last couple of years has not been adequate. It would be good to have a professional with local area knowledge attend some training sessions to give advice on how we should respond and what we should focus on in our particular situation and for different fire scenarios as I am sure that different streets should respond differently due to geography, street layout, demographic and ability of members within the unit.”*

*“Training to Join the CFU was good, however there has been none over the past 12 months and without training we all get 'rusty'.”*

*“Mostly adequate, but I still think that more localised training with FRNSW would benefit new members and potential members as travelling 20 kms for induction is a turn off.”*

*“Totally adequate, except only two of our members have actually experienced a fire. All members would like to be involved in some hazard reduction to gain and maintain experience.”*

*“We have been training for 10 years - we are a cohesive unit with great leaders.”*

Particular aspects of training that members found beneficial predominantly focused on the use of equipment creating familiarity and knowing exactly what needed to be done and how

(Figure 16). Respondents opined that their training enabled them to feel calm and confident. It also created familiarity among members instilling teamwork and dedication.

Figure 16: Word cloud where the largest word represents the most frequently written word with respect to beneficial aspects of training.



*“The team work and knowing what each member was capable of. Also knowing where the water sources are within our street.”*

*“Familiarity with the equipment (it's become more or less a routine you don't have to think too hard about, it's an almost automatic response), familiarity with other CFU members' properties. And a sense of the street as a community.”*

*“A sense of community, very strong and we felt we could rely on each other.”*

*“I know the training has chopped and changed, but i hope it continues full strength. No lives were lost and the property damage could have been far worse. The training helped me confidently direct neighbours out of harm’s way and to best fire fighting effect. The investment in training paid off big time in my book!”*

A quarter of respondents (26.2%) believe that their CFU training was not adequate in preparing them for the October 2013 bushfires. Many of these respondents felt that official training with FRNSW was lacking and needed to be more regular. Some suggested that training should include aspects of fire behaviour and how to deal with the public. The

majority of responses, however, called for more specific training on extinguishing fires and being exposed to fire behaviour with many suggesting that this could be done when FRNSW and/or RFS undertake back burning operations.

*“I think that learning more about the potential speed of a fire, signs of the front approaching, how much time we have to get to shelter etc would have helped us.”*

*“Training is great however the penny pinching is ridiculous, and training with NSW Fire Service is getting less. We should approach all the major insurance companies and get them to sponsor more hazard reduction and CFU training.”*

*“Would have liked an exercise in training where we actively fought a fire. This could be done as part of hazard reduction in the winter months.”*

*“An opportunity to participate in hazard reduction would have given all of us personal experience of brushfire conditions. Despite several requests this was not offered. There seems to be reluctance within the RFS to include CFU members in these exercises for reasons I do not understand.”*

However, one respondent acknowledged that *“preparing for real threat requires constant training”* and that most members *“are not in a position to devote this level of commitment.”* In spite of their training, some members had no intention on staying to defend. Others noted that there was confusion and that perhaps more site specific training would help in future activations.

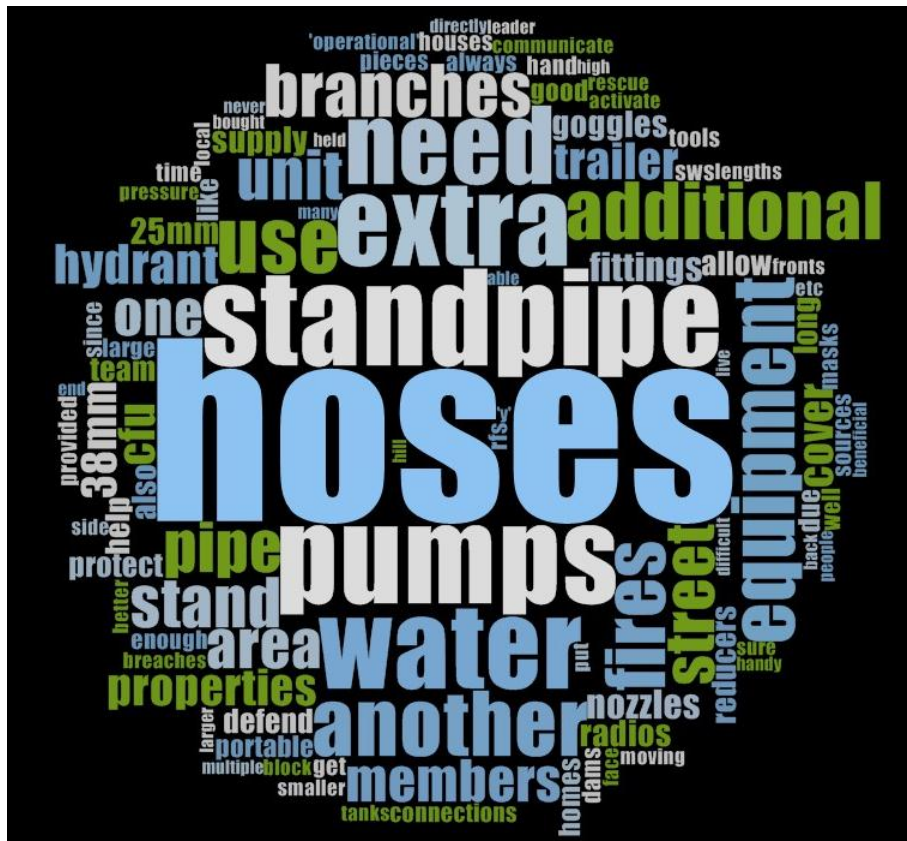
*“There was confusion over our role prior to the front arriving. During training over the last couple of years (self directed) we had discussed different scenarios and how we thought we should act. It was decided that our general role was to decide whether to stay or go, if enough to activate we deal with spot fires prior to the front arriving and then seek shelter as the front passed to then return and mop up afterwards. I now feel that this idea we had come up with put many of our members at unnecessary personal risk as they were caught out in the front. I would like the training to include street by street discussions with local professionals to discuss how the individual units should respond to a variety of scenarios appropriate to their street.”*

## **Community Fire Unit equipment**

11.6% of respondents reported problems while using or testing CFU equipment. All of the issues noted by respondents are provided in Appendix E under the headings of ‘hydrants and stand pipes’, ‘pumps’, ‘hoses branches and nozzles’, ‘PPE’ (personal protective equipment) and ‘other’.

Over half the respondents (52.6%) declared that extra equipment is needed by their CFU so that they can defend homes and properties effectively during a future activation. The most common responses called for more hoses, pumps and stand pipes (Figure 17). Many also requested handheld or UHF radios. A few comments related to the provision of “a portable dam”, “boots” (had been waiting 6 years), “fume masks that cut out the smell of the smoke” and “head torches” for use in heavy smoke.

**Figure 17: Word cloud where the largest word represents the most frequently written word in relation to extra CFU equipment needed.**



Other respondents requested more site-specific equipment.

*“More reducers, we typically ran more 25s than 38s due to lack of water pressure. With long yards we need to run 38s round back then split off multiple 25s but we didn't have enough reducers to allow maximum use of pumps. Optimal layout of equipment needs consideration and advice from fire dept.”*

*“A section of 65 mm hose would extend the reach of our hoses. Some properties take 3 hoses to get to. An additional benefit would be that any FRNSW or RFS units could directly connect their pumper units to this of a branch without the need for the CFU unit to remove any equipment off the hydrant. This would save time and increase inter-operability as all units have some larger diameter hose.”*

*“Sun Valley oval is locked to the residents of Sun Valley. We have to wait for someone who does not live in the area to open the gates. Each fire unit should be equipped with a key to the oval so that those who wish can assemble there if necessary.”*

*“It would be nice if Sydney Water acknowledged our letters and also if “they” re-inserted more hydrants to reduce the length of hoses needed to more easily access all properties in our street.”*



## Results – Focus groups

### Joining and sense of community

All members discussed the fire risk in their neighbourhoods as the motivation for forming or joining a CFU unit. They wanted to become more informed, reduce their risks and feel more in control. However, one member stated that their main motivation was that they were new to the area and had joined because they wanted to get to know people in their street. Many people also discussed the community spirit which had developed after the formation of their CFU through training together and particularly following any period of activation. This sense of community, increased social capital and local knowledge and was also noted as an important factor in reducing risks to bushfire. One couple who were both members of the CFU were on holiday in northern NSW when the fires started. However, because of the familiarity, other members were able to prepare their property and turn their sprinklers on for them.

*“We just wanted to meet other people in the street and figured that was the best way to do it. Well, no, it was about fire protection, but we ... yeah, we’re community spirited.”*

*“We live in a pretty vulnerable area, we were here for the last fires in ’94, ’95 and nothing like this existed then. So we just felt like it was a good way to be a little more prepared for the onslaught.”*

*“We got a pump and a tank and that sort of thing, but only had basic knowledge. And we thought, well, this is community... to learn and also participate and help others around here.”*

*“It was started by [names member] next door, really, who got the idea after the big bushfires down in Victoria, when we all got a bit fearful... you’re just not aware until you read these dreadful stories about Victoria; and then get involved in this thing, the CFU, and suddenly they show you all these films about how quick it can all happen, how suddenly it can happen, and all the risks that are around your place; and you become much more alerted to the dangers you live amongst.”*

*“My main reason for wanting to do it was knowledge, just to have knowledge about what to do in this situation. So I felt very prepared this time.”*

*“Well, mine was definitely more about realising that we lived in a dangerous area as far as bushfire goes, and wanting to know more about, well, just feeling more in control, I guess, if something did happen.”*

## Communication in regards to the fires

### Official alerts

One group noted that their unit coordinator received a direct phone call from CFU headquarters alerting them to the fires and asking if their unit could activate. Other CFU members received official text message alerts while some did not. Some respondents that did not receive any messages explained that they were located in an area that does not receive mobile coverage whereas others were not sure why they had not received a message. Those who predominantly use their work mobile as their main phone during the day did not receive text messages. In this instance, their work phone is not registered to their home address. CFU members were also not sure if team leaders were required to resend text messages to all group members. Units noted that the text alerts were not particularly useful as they were sent to the general community and did not provide information specifically for CFU members and were not received by all.

*“I mean there was always that issue at the time, about the ... all the text messages coming to people’s phones and ... telling people to evacuate certain areas. And quite often that was way off the mark.”*

*“What few [text messages] I got were confusing.”*

*“Some people got these texts, some got them late, some were getting them on time, some people like me didn’t get any at all... Nothing from CFU, nothing from RFS.”*

### Official sources

The majority of members discussed using the RFS website and the ‘fires near me app’. At least half the groups also discussed face-to-face and phone contact with CFU management staff from FRNSW. All the groups, overall, had contact and communicated with emergency management staff from FRNSW, RFS, the police and the SES at some point.

*“I thought from [FRNSW] side it was really good. I felt, yeah, I always had someone if I wanted to talk to.”*

*“Communication was one of the main things. We were talking to the firies, we were talking to RFS, we were talking to anybody that came around that could give us information. And they were doing the same thing to us.”*

*“The Rural Fire Service were marvellous. They kept coming around and telling us what they were doing and what was happening. Got good updates from them.”*

*“The SES were driving around to see if anybody needed any help, and [names member] was trying to figure out how to block the gutter over here on the very high side of the house. So they had a big ladder, and they hopped up and did that.”*

*“Part of our communication with the fire brigade and the bushfire units were that at least we had a bit more of an understanding of where things really were up to.”*

## **Via the media**

All the units discussed receiving information in relation to the location and danger posed by the fires from media sources such as ABC Radio 702, ABC News 24 and SKY News. ABC 702 was the most listened to and considered the best overall. While some felt that this was adequate to their needs and better than that provided through direct emergency management channels others felt that the media had exaggerated the danger posed by the fires and they needed better official information. A few of the units lost power during the fires which made accessing information more difficult. However, one unit noted that online information continued to be accessible which meant that they could always obtain information from the RFS website and other online news broadcasters. This unit had access to a generator so they could charge up their phones and computer devices.

*“Okay, well, local ABC 702 is absolutely essential. And also the RFS website is useful, but quite often I think out of date a little bit. It’ll say that a fire’s out of control when you’re hearing on the radio that it’s under control.”*

## **Informal communication**

Members discussed informal communications from friends, family and neighbours and signs in the environment. The majority of the units also had at least one member who was a volunteer, or in one case a paid employee, of an emergency service organisation and received informal communications from them in regards to the fires.

*“People of [names town] particularly, because of our fire history in this town, are very much aware of what’s coming at them. And you know, they see the signs, they watch it; there’s a very, very high involvement in this town. And so word of mouth is a wonderful thing. And you know, you see it coming, and we watch.”*

*“That afternoon ... I think it was [names unit coordinator] called us and said, “There’s a fire up in Springwood”. She’s actually in the SES as well. And so she tends to pick up info from SES.”*

*“We were just watching it ourselves because it was moving around a bit, wasn’t it? And we were able to tell by the direction of the smoke what was going on”*

## Unclear and conflicting information

A significant amount of conflicting official information was noted, in particular that between the fire authorities and the police, who were often justifying evacuations. One group also noted that they came across advice on Facebook to evacuate. However, in the absence of other official information they ignored it. It was also appreciated that the process of getting real time and up-to-date official information is extremely difficult due to the dynamic nature of bushfires.

*“We had a situation the following Wednesday when we did have the fires in Faulconbridge, and we had one set of the street being told, “The fire’s crowning, it’s coming your way, you’ve got to evacuate” and I was starting to go around the street, and I got halfway around the street and they said, “Oh, the Fire Brigade said it’s fine, there’s no crowning fire, there’s nothing of danger.”*

One group noted how although their area was impacted it was not severe and no homes were lost. However, because the fire which went on to destroy homes in Yellow Rock and Springwood was named after their area, Linksvie - where it started, it was initially confusing and worrying when it was mentioned in the media and picked up by friends and family. Respondents also commented this meant that many ‘disaster tourists’ visited their area creating havoc on the roads.

## Getting the group together to activate

The majority of the members spoken to work full-time and therefore were not home when they first became aware of the fires and the possible need to activate their units. This made it difficult to contact people as landlines went unanswered and some were out of mobile phone range. The few members from these groups who were at home were able to make preparations while the others made their way back. One group were comprised of predominantly retirees and for them it was easier to make contact with each other and activate quickly. For one group the story was very different, only one member was home at the time and the fire conditions were rapid and severe. Although the member began getting the equipment ready, they had to evacuate and could not wait for further members to arrive home.

*“I did ring around everyone, and no one was home... so we could not activate. I rang all the home phones, yeah, and there was no answer anywhere”*

*“But then [names neighbour], next door to me, he wasn’t there, and the people on the corner, they weren’t there, and virtually there was no one home. And I was just prepping and getting ready and getting hoses, and just into it as much as I could. And then it was a while later and*

*I saw [names member] come 'round the corner in the car, [names another member] came up not long after I was running around, and I yelled to get the CFU going."*

*"I was on the road for work. I was at Pennant Hills and [unit coordinator] rang and said, "We've got a bushfire", and I thought, "Oh", you know, "Really". And she said, "No, like, really. It's headed this way. I can see it from here. Can you please come home?" It probably took me about 35 by the time I got home... you could see the plume of smoke. I must have just run straight inside and got my gear on and we were into it."*

The areas of operation for two of the groups run next to each other. As such, they had an advantage in terms of being able to share personnel, making it relatively easy for them to activate at least one group.

*"We're lucky in that sense in we've got two units which are close by. It's not a big stretch to activate one of them, and that's what we had to do on one of the days. We had two from one unit and two from the other. So we said, "We have enough people to activate one, and let's just call that one activated."*

A few members also discussed the conflict between the family fire plan and their duties with the CFU. It was noted that while the family plan was to evacuate early, as long as conditions allowed, they would probably stay with the CFU and until the October fires the practicalities of this arrangement had not been ironed out.

*"We had a sort of a family plan prior to that, but then on that Thursday realised that, "Well, hang on a minute, I'm not going I'm doing a CFU thing, so you guys continue on with the plan", which was a little bit confronting and then I said, "And I'm staying", and then my wife says, "No, no, I don't want you to stay."*

*"I think it is a bit of an issue...do you stay at home and help your family get packed or do you activate and go down with the team?"*

## **Interactions with the police**

Some noted difficulty in gaining access to their property. Police allowed a few members with CFU identification to pass but others did not. Local contacts with the SES enabled some members to get through police roadblocks.

*"People couldn't get through – the blockades, police would stop them, and that's an issue. I think that's something that's got to be addressed. Our Captain couldn't get through and we've got a guy that's in the State Emergency Services, he went up and got him and brought him back, so that got him here but by then it was too late."*

Another unit discussed how they were ordered to evacuate by the police, even though they felt the danger at the time was low and they were equipped and prepared to stay and defend their homes. This also relates to conflicting communications, as the unit were receiving information directly from the RFS, through a member who is both in their CFU and the RFS, stating their area was in no imminent danger. This was inconsistent to what the police were saying. Another group also described how one of their members is also a fire fighter for the National Parks and Wildlife Service and was able to provide them with: *“the real information.”* *“He was texting us back and saying, “This is what’s really happening.”*

One member described wanting to ensure their property was as prepared as possible before evacuating and turning the sprinkler system on to the consternation of the police who were overseeing the evacuation: *“he was saying, “You’re wasting my time here,” you know, “You’re holding up resources,” I said, “Just go, we’ll get out.” Because I wanted to get the sprinkler system going, I wanted to get our pets out and at four o’clock in the morning in the dark, it doesn’t happen quickly.”*

The group discussed how on another occasion the police ordered half their unit to evacuate but allowed others to stay.

*“There’s got to be something done about the Police. They need to be pulled back and they need to get information from somebody, because they came and they got [names unit member] and they had [names unit coordinator], and they said you’ve all got to go. But then the same couple of Policemen they came down and looked us and said, “What are you doing here?” And we said, “Oh, we’ve got these hoses here, this hose there, and we’re waiting, there’s fire coming up here, we’re all set up ready to go,” and he said, “Okay,” and walked off.”*

It was discussed that a solution would be better information provided to the police concerning the CFUs in terms of the training they have received, the equipment they have and their abilities to stay and defend.

## **Activities undertaken and related issues**

The units described a range of activities undertaken over the fire period from communicating to neighbours about the fires and preparation activities, preparing their and their neighbour’s properties, checking who was staying in the community and who was vulnerable, getting the equipment ready, keeping a lookout, putting out embers and spot fires, defending from large fires and assisting the fire services with clearing a fire-break, controlled burns and providing local knowledge. The majority of the units recounted how they had to continually monitor and put out flare-ups as areas which had been burnt in a controlled burn, or fires which had been extinguished, continually reignited.

Units noted how they initially got their equipment ready, filling their tanks and backpacks with water and keeping watch.

*“So then we decided that the threat would come if there was a northerly wind or a north-westerly wind during the night, so we decided to do an all-night vigil, each person in the unit had to do an hour on. And that worked extremely well and I’d recommend that we do it again, because that meant that the other people could go and actually sleep a bit more soundly, knowing that if the thing did come over the hill they’d get a phone call.”*

*“Anyway, it was getting pretty scary. So we were just ready more than anything, getting all our tanks all filled, our backpacks filled with water... But it was also a good training experience for us, to sort of operate the thing, and fill everything up, and get the pumps working... and ready to go.”*

One unit noted how they filled a number of wheelie bins in the street with water and put signs up at every house where there was a static water supply (SWS).

*“There was a bunch of us, we went around and filled up the big bins around the neighbourhood. I went around and put out signs around all the houses where I identified standing water, because a lot of people hadn’t identified that they had swimming pools and things. So I could put the signs up, so if anything did happen we’d have some standing water in all the bins, and that all the standing water was identified.”*

An important role noted by some of the units was checking the area to see if people were staying or evacuating, keeping an eye on neighbour’s properties and looking out for the vulnerable. One member discussed how they stopped their neighbour going near a burnt tree that was dangerous and later fell.

*“I know it’s probably not our role, but it is part of the thing about looking after...your neighbours – keep an eye on people’s properties and seeing who’s staying, the elderly people that need help, that’s the sort of stuff that we did as well.”*

All the units interviewed discussed assisting the official emergency services with a range of activities.

*“With all of the people kicking around here in their various trucks, the word went out that they were going to do a back-burn. And if, I thought, “If there’s going to be fire out the front there, it wouldn’t be a bad idea if our unit was activated and at least standing by.”*

*“I suppose it would have been about eight o’clock, they [RFS] said, “Okay, can you guys now come down and start defending the back of this house... So we didn’t actually go past property lines. We stayed within boundaries of homes as the back burn moved very slowly. But there was definitely embers coming off that looked as if they were dripping onto the houses. And we were taking care of them, so it felt like we were really participating in it,*

*didn't it? And I think we performed a useful role which enabled them to concentrate on the back burning."*

*"After the back burn, there were several flare-ups. The wind started, and everybody was gone by then, and that was a bit of a worry. Because at the bottom of my place...it's a wet area, and you wouldn't expect anything to really burn much. But it suddenly started flaring up, and it was really huge, and going up into the trees at the bottom of my garden...another time, the wind started blowing again, and just out in the bush, we suddenly saw great huge flare-ups again... also you get your embers blowing then, too... That's why you remain on edge always. Because we did have some windy days."*

*"The fire was coming towards us so we got some buckets and that and we put a bit out, but it started going up the trees, and we only had buckets so we couldn't do anything about it. So I sent my son down to get [names unit coordinator] and he had one look and there's 50 yards of grass on fire and he said, "Oh, I'll go and activate the team," so he went and got everybody."*

*"The interesting thing was that they'd even get the bombers, bomb us all day long, flying over. Anyway, they put it out, and then everybody disappears. And two hours later sure enough, the whole thing had flared up again...so we stayed active...we were active Saturday, Sunday, Monday, I think we deactivated Tuesday."*

*"A couple of RFS did turn up in a ute and I remember saying to them, "Is this like a pointless thing to be doing at this stage?" And they said, "No, it's the time to be doing it". So, that's when I realised we're not just sort of keeping the grass damp and all the rest of it; we're actually...protecting this house. And that was the time where they said, "You're on your own". I said, "Is anybody coming down here?" and he said, "Nuh, you're it".*

Assisting other fire and emergency services with ember protection and watching for flare ups/mopping up following controlled burns was a common activity. However, the provision of local information and advice in terms of the local geography, high risk areas and likely hot spots, the location of vulnerable members of the community and current fire conditions was also a dominant theme.

*"One thing that our unit is good for is we know the lay of the land, we had Fire Brigade units from Sydney come in, and at least you could tell them what the lay of the land is. We had maps...I would actually go down in the morning and walk to the fire fronts...there's trails all through here and we know them pretty well."*

One member discussed how they directed an out-of-town fire brigade to set up and defend around their home as it was one of the most fire prone locations, they had a good SWS and other areas were already being well defended by the unit.

*"They were from [names station], so they had no idea. And I said, "Come up to my place, set up here, I've got a standpipe out the front, and a pool down the back" ..., I fed them, they*



*watched TV... but that's how I protected my end of the street, and these guys have the equipment all spread up around here. So we actually protected both ends of the street. There was no point in having a fire engine up in the corner, which was going to do nothing."*

Although the provision of local knowledge was considered an important role, some noted that they didn't think this was recognised by all the emergency service who visited their area: *"it's the local knowledge that we provide...we shouldn't be brushed off like we're morons."*

The majority of units discussed how official fire services checked the groups equipment, set up and in some cases techniques, which CFU members acknowledged was extremely reassuring.

*"Once the thing had happened on the Thursday and we'd mopped up and everything, the Canberra guys were here, and they actually started to help us. They taught us techniques and things like that. They said, "We see you rolling out your hoses. Try this little trick... It was really good. We appreciated it they didn't treat us like...Dad's Army... We were doing one part of a job, they had another, and they treated us like that, and we respected what they were doing."*

### **Length of time of activation**

All the units were on alert for the whole period of heightened activity. Some remained activated while others activated and deactivated when needed.

*"We all stayed present... I didn't go to work for nine days."*

*"All over those three or four days, or about a week actually, it was quite stressful...Because you really didn't know what it was going to do, and what the weather was going to do... And you knew it wasn't far away."*

*"We activated on the Thursday afternoon. We certainly deactivated and then reactivated for the Friday night when we were assisting the Warrimoo RFS, and we were active until four o'clock in the morning, when I rang in and deactivated...And then the Sunday we reactivated as well. So we reactivated and deactivated a few times during it."*

One group stated that official communication from FRNSW was limited in relation to the location and danger posed by the fires. CFU members suggested that it would be valuable for FRNSW to provide advice on when CFUs should stand down to rest i.e. when fire conditions were safer or more settled. The group said that training and information in relation to activation was clear but not in terms of deactivation, standing down and resting.

*"We had no rest. We weren't told "look, you can stand down for 3 or 4 hours, we don't expect anything to happen, so we were just wired by the end of it. And that was the biggest problem,*

*I thought....give us a call and tell us “How are you guys going? Ok. Right we don’t expect any activity in your area or it’s very slow. Stand down; we’ll give you a call if we think something is going.”*

*“I think most of us had 3 hours sleep in 72 hours.”*

Another unit noted that they could have just been activated all week as they were constantly out and about checking and doing things and as they understood the rules they thought they should continually activate and deactivate. However, this group noted that it was sometimes unclear to the whole team when their coordinator had actually officially activated and deactivated them.

### **Problems with the activation phone line**

Most of the groups noted difficulties in activating their units over the phone. In particular, two units stated that when they rang in, the operator they spoke to was not helpful and appeared to not want any information about why the group was activating and the fire conditions they were experiencing. Two units were able to activate successfully. However, one reported problems deactivating. It was also noted that in a rapidly escalating situation it is difficult to activate when also trying to get the group together and set up the equipment.

*“The first one was fine. I rang through and said that the unit had activated, and within ten minutes, the phone call came back just to double check we were activated; they’d got the message clearly... And then when we deactivated, same – I rang through, and he asked me great questions about winds and directions, and did we have people on the ground, and ...Did we have personnel? Yes, I counted three trucks...They were great...They rang back after deactivation just to make sure everything was okay. The first day I thought the system worked really, really well. That was the Wednesday. Then the Thursday, I rang through the activation – he didn’t have a clue what I was talking about... And it was really strange. And I thought, “I’ve called the wrong number.” So I said, “Oh, okay,” and I hung up, and I rang it again. Same thing; didn’t have a clue. And I said, “Well you need to tell somebody that this unit in [names location] has activated.”*

*“Just to put it on the record, I’m not sure if it was then or the Friday night that [unit coordinator] had difficulty activating because the line was engaged or not answering.”*

### **Communication between group members during the activation**

Communication between group members during their activation was also challenging again due to a lack of mobile phone coverage in many areas. Two of the groups noted that their mobile phone coverage was adequate but they found using phones difficult when they were fully dressed in their PPE.

*“I mean everyone was trying to do the right thing and in essence they were sort of DOING the right thing, but we just didn’t know what they were doing...we didn’t know where equipment were, where people were half the time...so if it had turned bad, it was hard to sort of pull everyone together.”*

*“It applies here, because there’s parts around the upper mountains that are absolute dead spots for mobile phones, and this is one of them... it doesn’t work. And my phone’s with Telstra, and this is the only place in Australia that I’ve been where I can’t get a phone message or can’t use my phone.”*

Three of the groups had their own radios prior to the October fires but the others did not and this posed a major problem as they were at times unaware where other members were located and what they were doing.

*“Whether...you had an emergency situation or just to say, “What are we doing now?” or “How about we deactivate”... I think we spent a lot of time sort of wandering, looking for the other people... So, yeah, I was thinking of maybe radios.”*

In addition, power was cut for at least a few days for the majority of the groups, and if their mobiles were working then they quickly lost charge. Although UHF radios are a solution, they also require batteries which must be changed or recharged after prolonged use. One group also noted that it was unclear when their radios ran out of charge and at times they thought they were transmitting when in actual fact the batteries were dead. Only one group had access to a generator.

Following the activation, all the groups discussed better systems for within-group communication. They all discussed the need for one person to remain as a point of contact or a runner with one group detailing a full plan where one member will act as a runner checking on all members and reporting their locations, actions and messages back to the group leader. One group has devised a system of flags on their letterboxes so that it is clear if they are at home or had left the area. They ran this system for a full two weeks and if they entered a period of increased risk knew immediately who was home and for those who weren’t whose property might need extra attention.

*“So one of the good things that [names CFU member] came up with which I think should be a compulsory kit in all CFUs is little flags that say who’s at home and who’s not at home. So I’ve got flags in my mailbox... And what we would do is when we were at home we would stick them out...to let people know who’s at home and who isn’t...it worked very well.”*

Another group is planning to have a white board in their trailer to detail the location of the equipment. Of the three groups without radios, two are in discussions about purchasing radios. However, one group were under the impression that the use of radios were against FRNSW policy as they interfere with official emergency management communications.

*“I was thinking maybe in the future about whether you put a ... some sort of a notice board in the trailer, or something, you know, where you write on it, “The standpipe’s been taken around to Number 57” or something, just so when the person goes there and it’s not there, they know that they can run around to Number 57 and say, “I need that around here.”*

*“We now have purchased, at our own expense, two-way radios. Because one of the things was, if there’s somebody down here holding a hose and there’s somebody up there trying to control the fire hydrant, and we’ve got a hose ... 60 metres, 70 metres long, how do you communicate?”*

The importance of maintaining close communication between members was highlighted by one group who described how at one point the police told half the group to evacuate immediately but allowed the other half of the group to stay and defend. Without radios, the group would not have been able to inform each other what was happening, who was present and who was responsible for protecting different areas, possibly leading to increased personal risk.

### **Working outside ‘the rules’**

On occasion, during the course of the fires, the majority of the units interviewed undertook activities that were slightly outside the rules. This included actively defending an area without four members being present, not officially activating, allowing non-CFU members to use the equipment and working outside their designated area of operations. The groups all noted some confusion around the issues of legality and insurance and that many of the black and white rules became very grey during an actual fire. Members noted that at times, it was impractical to wait until there were four members present and described cases where action was immediately required to deal with a small fire that otherwise would have become a serious issue.

*“When I went around the corner, [names neighbour] was standing there with this little garden hose and a backyard that was ablaze. It was only [names fellow CFU member] and I at the time, and so we didn’t activate, we just came, got the kit, basically went back...started fighting...for the next two to three hours...we kept on pushing it back and back and back away from the property...There were various people, but we were the only ones from the unit.”*

*“That Thursday afternoon when I saw [names member] walk up the road there, and I was up at the top, and I yelled, “Get that thing open and get it going,” [names member] said to me, “I can’t activate, there’s not enough people,”... that’s a load of shit, you know, I understand the legality of it...but...I was talking about getting water to [names neighbour] fence to put it out... My idea that afternoon was there’s a standpipe directly opposite the corner of [names neighbour] place, and I, know...I get the standpipe, engage in that corner, one length would kill it [the fire].”*

*“Basically four days after the back burn, a fire suddenly flared up again and we just in that case...put it on the record – we don’t mind; better to be honest but we just went and opened the trailer, loaded up a couple of backpacks with the pumps and went down...I just went down in my light overalls and we just sort of put that out. We didn’t activate, and I guess we could get into trouble for that. Shit happens. Put that on the record as well. But the reality is it was a lot simpler – we knew what we were doing, we were able to go down, put the bloody thing out.”*

One member recounted how the RFS were back burning right below his property very early one morning and he rushed out to extinguish embers with his garden hose. He didn’t activate and was working alone with his own equipment but was wearing his CFU PPE. He was seen by one of the senior FRNSW managers who happened to be visiting: *“one of the bosses came around and said, “Are you activated?” I said, “No, but that’s my house, and I have a right to be here to look after my house” So I just thought, “Is anything going to come back on me or our unit, the fact that I was there but I wasn’t activated?” And I would say, well, I’ve still got a right to defend my property”*. As the member had donned his CFU PPE, the group noted that although the boundary was grey, he was probably working outside the rules even though he didn’t use any of the other equipment from the trailer.

One group debated if they would ever consider defending a home that was nearby but outside their area of operations. Although initially they said no, they then decided that if that was the only threat and all homes in their area were safe then they would probably find it very difficult not to provide assistance. However, they understood that if someone was injured then they would not be covered by their insurance.

*“[If embers] landed on a house that was outside the area, we would probably go around and defend it and do the right thing.”*

Overall, the majority of units noted that they would likely defend homes just outside their area of operations if the need arose. This was particularly the case if these homes, left unattended, posed risk to homes within their area of operation. It was noted that some of the CFU boundaries needed to be amended to better reflect fire danger and the capacities of the units. One member noted that in areas where there are multiple units, management should ensure boundaries join up so small sections are not left out. Otherwise areas just outside may cause a significant fire risk to homes within the boundaries.

*“Either way, if we’re going to protect this side of the street we’ve got to protect the houses there which are facing the bush, because if they go up I’ve got to tell you it’s going to race this way, we’ve raised this but, you know, “our insurance says we can only go this far.” That’s the silly thing the bureaucracy doesn’t seem to quite get to terms with, the reality of what’s happening in the area.”*

One group described how some people who were not trained CFU members assisted in the defence and used the CFU equipment. This was described as extremely beneficial in saving a property as the unit had felt stretched in terms of personnel and the members described confidence in being able to direct people to do what was needed very effectively. Although the group knew that this was against the rules they stated that it was extremely difficult to say no to neighbours who wanted to help and wanted to protect their homes. This was especially the case when extra assistance was obviously needed.

The abovementioned group discussed how, with the inclusion of non-CFU members, their group became too big and communications became difficult. They decided that the best way to manage the situation was to split into four smaller groups who managed distinct areas. Each group had at least two fully trained and signed up CFU members in charge of up to three non-members.

*“But you don’t need to be a member to hold a hose and point it to the thing, as long as you’ve got people there who know what they’re doing, it doesn’t really matter...every crew had a key member...who was organising it. They were in charge of the group...how they wanted to set their equipment up, who was manning what pump, who was manning what hydrants, and all that sort of thing.”*

*“You’ve got a limited size team...Suddenly people come up and want to help and they want to get involved and all the rest of it, and that’s fair enough, you know, and we did our best to accommodate...You know you can’t brush them off.”*

One activity that the group considered well suited to non-members was manning the standpipe as this was considered a low risk activity that would then free up a trained CFU member to undertake more important actions: *“When you’re activated for so long it gets really, really boring when you get standpipe duty.”*

The member from the unit who had been severely impacted also noted that this would be a very good idea and may have made all the difference in their area as initially when the fire started spotting. They noted that units should be able to train non-members the basics as most people don’t want to officially join but some would be interested in learning the fundamentals. They stated that as the most likely scenario is that there will be a mix of members and non-members when a fire arrives they should be able to work together to utilise the equipment under the supervision of fully trained members.

*“I know the CFU, for legal reasons and insurance reasons and all these reasons, unless you join you can’t touch a hose. But that’s stupid. In the middle of a fire that’s crazy. The guy there who had the garden hose who first saw the spotting, he was on his own. If he had a key to the cabinet and he’d rolled out a hose and put it in a standpipe and had water, proper water pressure, who knows what might have happened? So in the best of all possible worlds I’d have everybody in the street on one day standing there and going, “This is how you put*

*the hose there, this is...” That basic training we get, you give to them. And more specific training...it has to be increased, so that the CFU can then guide these people.”*

However, another group, when asked if they would consider allowing non-CFU members to assist them and use their equipment they said no as the risk of someone hurting themselves was too great. Although they did acknowledge that they had not been in a situation where they required assistance and as yet no one from their neighbourhood had offered to assist them.

*“Even though I do live on the edge a bit, that’s one thing I wouldn’t do. And I think it’s been drummed into us...you’ve only got to get somebody not link a hose onto a fitting properly and the thing blows off in somebody’s face. You’ve now not only got a fire; you’ve got to worry about somebody’s bleeding to death or a broken nose. So, no; if you’re not trained to use the equipment, you don’t touch it.”*

Groups also discussed assisting FRNSW and also RFS with activities which on occasion meant that they were working outside of their guidelines and outside their area of operations. One group assisted with the construction of a fire break and felt that this was something very useful and worthwhile that they had been able to contribute to. They stated that although this was outside their area of operations, it was a useful skill that should be covered in their training.

*“Containment lines, that’s something we learnt, we hadn’t been taught that. And we’d been to that many training sessions, all of us and that was something we’d never learnt...It IS outside of our operations...if we’re aware of that and we’d been trained in that, we could actually do that when we were standing around...and waiting for hours and hours.”*

*“I had a Fire and Rescue Instructor come around and ask if I could get the CFU to do some mopping up, he said, “It will save me a unit.” I said, “Look, it’s outside of our area of operations.” He said, “Well if you have a problem with it, I won’t push it.” But he says, “If you don’t have a problem with it, can you help us because it will free up a unit.” And so I got [names unit member], it was just him and me, wasn’t it? And we got the hoses, and we went in there and we started mopping up. And we were outside our area of operations...What’s the legality of that...because it’s a very grey area.”*

On the whole none of the groups regretted any of the activities they had undertaken and felt that given the circumstances they were justified. However, they felt that there are a lot of gray areas and it was very difficult to navigate the rules faithfully when activated (Text box 3). One group debated the issue of one member from four leaving to go to the toilet or to quickly check on their property, and were unsure if this meant they were no longer covered or not.

*“But in the circumstances like those fires that were occurring –I don’t think too many people were worried about the rules and regulations... [we were] doing what you have to do to defend properties and lives.”*

*“The whole purpose is getting the water to the fire quickly. So a tree explodes at two o’clock in the afternoon. If [names member] then goes up and sees [names member] and says, “can you ring and activate and get three more people out so that we can go and turn a hydrant on so that I can go down and we can point some water at that thing”, you might as well not have a CFU.”*

**Text Box 3: Activities undertaken by a unit that was severely impacted.**

Only two members from the unit that was severely impacted and lost homes carried out any risk reduction and defence activities. Only one member was initially present when the fire spread to their area. Although they managed to set up the equipment they then only had time to check on immediate neighbours, advise everyone to evacuate and then evacuate themselves.

*“He got out as many hoses as he could and then basically realised – it was the ember attack first but then the front came through so quickly and it just took off. I mean, the conditions were extraordinary. He just raced around, knocked on doors and told people to get out.”*

It was noted that even if there had been four members present there was little time to activate and all the phone lines were busy. Once the fire front had passed another member managed to return to the area and, while official fire agencies were putting out the larger fires, he concentrated on putting small fires out in backyards or fires beginning to take hold in the eaves of homes. This member’s home had burnt down and therefore he concentrated on saving the homes of others. This was carried out alone and there were no other members present at the time.

*“I was basically looking after the smaller fires in backyards or watering down different parts of the houses, one with some smoke coming out of the eaves, so I smashed in the eaves and just poured water in.”*

The interviewee explained that the rules of needing four members present before activating became irrelevant to him when balanced against the need to put out the small fires and save homes.

*“I understand why you could create those rules, but those rules are pointless really. If there’s one guy there and there’s a bushfire, what, he’s going to stand there and say “I can’t activate ‘cause there’s not three. I’m not going to open the truck. I’m not going to put out the hose.” Of course you’re going to do it.”*

However, it was noted that the groups didn’t want the legal matters to become a problem that might threaten the viability of the CFU program and therefore, noted that what was needed was clearer documented advice.



## Challenges and lessons learnt

### Stretched personnel and split responsibilities

The units discussed that during their activation there were periods where they were stretched in terms of personnel. This was either due to the fire needing attention at multiple points or because people were busy checking their own homes. Although they considered that you only need four people to activate and the theory and training behind this is solid with the aim that the four people will be relatively close by. However, the reality is quite different and the group are often quite spread out. This is also discussed below in terms of lessons learnt in a real fire experience. This point relates to the need for four members to activate and working outside the rules and the difficulty of maintaining communication between members.

*“When you’re talking about the distances that we’re talking, and like how, we were really thin on the ground, but you’ve got to have someone at the hydrant, you know like they talk about in the training, which is good, it’s good to have four people, you know, one on the hydrant, two at the hoses, and one watching over, the safety person; but the reality is you have one at the hydrant, you have two people on branched hoses in the middle of nowhere, and you have the third person running around trying to coordinate stuff, and you know, so all protecting their own homes, but whatever the situation is. So you’re always going to be thin on the grounds no matter what. That’s the reality of it.”*

*“I think one of the interesting things to consider is what you do with regard to your split responsibilities. So if there’s a fire going on over here, I found myself still, you know, slipping back to my place, just to make sure that things were kosher...check that my pump was working, hooked up...then I’d go back and join the other guys. Now, that’s something that in an emergency...I haven’t yet lived through - Armageddon, I don’t know how I’m going to react in that case.”*

*“I think, even though everything worked okay this time, I do think that there is a conflict between yourself being in the unit and yourself being there to protect your house...Are you going to put [the hoses] closer to your house or are you going to put them closer to somebody up the street?”*

### Training

All noted that the basic training was adequate and all could set up and use the equipment provided. All the units involved in the focus groups and interview meet once a month and run drills and therefore felt very comfortable with the equipment. However, it was stated that using it in an actual fire is very different to the practices they had done. Even one of the units that did not actually end up actively defending noted that they felt under pressure for the first time and: *“It was a bloody good training exercise. It really was. Because we got everything out of the trailer; we’ve worked everything. And we even taught ourselves some things.”*

The units discussed one of the key learnings was in terms of how the fire behaves in their local area and strategies for defence. One group recalled a Coordinators' meeting they had attended where a fire behaviour expert provided education about fire specifically targeted to getting them thinking about their local areas.

*“It was like an hour of just full on, this is how fire works...and he got us all to go away and do a strategy... So after that, we had a meeting here, we did the strategies, and that’s what we basically, you know, fought the fires on in October. It was that simple... I remember going away and thinking, ‘That’s what I needed to know. I needed to know enough about how to assess our area’. It was just simple diagrams and simple maps, but it was just really insightful, and it was enough for us to go away and come up with a good strategy.”*

*“One of the things is that your stress levels are so high, and your adrenaline’s pumping. [Our plan worked] because we were organised. “It’s coming from the north, okay, north strategy.” And you know, we knew what to do. It was all just automated in a way, because we’d thought about it beforehand. You know, you don’t think very clearly under those situations. And you really have to have thought about it before to actually be able to execute well on the night or on the day.”*

Another group noted how they have been asking FRNSW to provide on the ground advice as to the likely fire behaviour in their local area of operation, the best strategies for protection, which homes would provide the best refuge and further work they can do to prepare their properties and reduce risks. However, this did not occur prior to the October fires. Although, during the fires, FRNSW visited them and explained on one property, the incline would increase the intensity and speed of the fire, making the decking area highly vulnerable and dangerous.

*“Well I didn’t know that. If we’d had the fire the night before on the Thursday, I’d have been out on that deck. And he said “you don’t stand on that deck – you’ll die...He said “you get up behind your house, hide underneath it and wait ‘til the fire goes out at the top and THEN come out. That’s stuff that we should have been taught in my opinion.”*

*“We need to take the next step...the Fire Brigade...showing us... for our houses, each individual house [the best methods to protect them based on the landscape]. That’s their jobs. You need someone with a bit of inside knowledge.”*

In particular, there was a need to defend from multiple directions at the same time. However, members understood that this not only required additional equipment but also personnel.

*“Well we never expected to be attacked from all sides at once...we could have been in a situation where we were fighting all flanks.”*

This point also came up with one group when discussing if they felt they needed extra equipment. They further stressed the need for learning about fire behaviour in terms of

knowing the best place to set up their equipment: *“You can’t place them at everybody’s houses or in every location; you’ve got to find your critical point.”*

*“The fire people know where they traditionally go, and know which parts of those streets and things that normally get hit. It’d be nice if we had that information, I suppose, so when we are making an assessment like we had to do on that night, where’s the best place.”*

One group noted that they realised during their activation that they hadn’t learnt the most effective method for hosing down a building and put out embers. Related to this, other groups noted how they were unsure about what to do if a house had solar panels on the roof that were generating during daylight hours. The issue of gas bottle safety was also raised.

*“I think maybe next time we’ll have a bit of a session on, “Okay, so maybe what if a house is under ember attack. Is there a certain place we should be pointing water at, for instance, or is there something to not point the water at or for instance, if you’ve got solar panels on the roof because they can cause problems with electrocution.”*

*“When you’ve got gas bottles - I’ve put a sprinkler over the top of them and wet towels, which is what we’ve been trained. When they’re exploding what do we do?”*

This issue was also raised strongly in the interview with the member from the severely impacted unit who stated that his number one lessons was that their unit had not received site specific training in terms of the best tactics to fight the most likely fire scenarios. They also noted that although their unit had been around for approximately 10 years they had never really considered the location of danger spots in their area of operations. It was imperative for the high risk spots and homes to be mapped so that members knew which areas to avoid and locations where they may get trapped.

*“And the training with the CFU is you roll out the hoses, you put in a standpipe, put it up and get the snake up, “Yep, right, that looks pretty good, you know what you are doing.” But there’s no real coordination about attack on a particular fire. But, for me, the whole thing was, was the lack of training, the lack of specific training.”*

### ***Learning to face a fire – real experience***

The majority of the units discussed learnings from actually working and defending in a fire environment which had not been covered in training. They noted that activities that they had been engaged in many times in training were quite different when actually activated. It was also discussed how fire behaviour was different to what they expected.

*“It’s really interesting, some of the things you learn that you don’t do in training. Like, that was the very first time that we’ve ever even faced a fire. Even in training, in training we got*

*shown how to use the equipment, but we never got once told how to face a fire. In a sense, we're quite a different CFU now because more than half the team have actually fought fires."*

*"For me, the whole thing of it being...like a storm of embers was different to what I was expecting... you think it's going to be a fire racing along the ground, sort of gradually maybe climbing up a couple of trees...but the fact that it was so much more of an ember attack. But whether that was peculiar to that particular fire or not and then the wind on that Thursday meant that it was embers that you had to be careful of... You realised that you might be looking at the fire over there in the distance, but then something could happen behind you."*

*"We learnt one magical trick about fighting fires in the Blue Mountains, and that is if you drag your hose under a rock and then fill it full of water you won't ever get it out."*

*"I'll tell you two things I found: I found one, the hose was a lot heavier... you're going through the bush, and you're hitting snags and things like that... It was heavy, I was wet, I was absolutely drenched...it's a real experience, actually to use it in an active situation."*

During training the simulations are run with the four members close together who are able to assist with the hose. However, the reality of the situation identified by the members was that they are left to carry and look after longer sections of hose.

*"The thing is you don't have your number two five metres behind you, you have your number two at the next junction because he's trying keep you fed with the hose, but he's worried about it further up the way. We had six lengths of hose and we had four people."*

The majority stated that given the amount that they learnt from their activation, particularly their experience in providing assistance with back burns and working with the official fire services, there was a clear need for actual fire simulation training. It was suggested by a few of the units that joining forces with the RFS to conduct training where they were engaged in back burns would be beneficial as they would gain more practical experiences of fires, working in the heat and smoke and actually using their equipment on a real fire.

*"I think we learned, too, not to panic...especially 'cause the back burn was obviously deliberately lit, but to see something on fire and not think, "This is going to get out of control. The whole thing's going to go"; to realise that, "Yes, it's on fire, but it is manageable", rather than think, "Run!""*

It was also felt that problems and challenges, such as those the group suffered in terms of communicating with each other, would be unknown until a real activation unfolded. This demonstrates that learnings and first hand experiences from groups who have been activated must be shared with those who are yet to activate.

## Equipment

All the groups noted that they could use the equipment effectively and there were little problems in terms of the equipment working. Minor problems encountered included, a punctured hose, ineffective torches, leaking water backpacks, boots that were uncomfortable and the fogging up of glasses when wearing the breathing mask. The group who noted the latter issue suggested that this wouldn't be a problem when also wearing the supplied goggles. The majority of the time they were activated, however, they were not actively defending but were working in a smoky environment. In this instance, they did not need the goggles, only the masks. It was noted that this is likely to be a large issue as a number of CFU members are older and probably wear glasses.

One group considered how all their training was conducted in the day time but their main activities over the October fires occurred during the night. They discussed how the Dolphin torches provided: *"in the units are very, very old Dolphin torches, which don't shine very well, particularly when you compare them to the new generation lights"*. The batteries ran out quickly in the heat of the trailer and the torches were difficult to carry when using the equipment.

One group felt that the maintenance crew who were supposed to service the equipment had not been checking the working order of everything in their trailer. In comparison, another member noted how they felt the maintenance of the equipment was excellent. The majority of the groups discussed the need for more equipment particularly hoses, standpipes and additional pumps. A couple of units discussed how a number of members and neighbours had their own pumps but without more hoses, these were considered of little use.

One unit described how they were trying to stop a fire taking hold near a neighbour's property, however, they didn't quite have enough hose line to reach it and put it out effectively. Unfortunately the fire went on to destroy a shed.

Two adjoining units decided to work together and were therefore able to share their equipment effectively. However, they felt they were lucky that the fire conditions allowed them to work together in the one area and that they didn't need the equipment spread over a larger area.

One unit discussed the need for equipment supply to meet each individual community area. Some CFUs cover larger areas of property than others and therefore the equipment must be supplied to match areas that will need defending because: *"Each area is unique"*. This group suggested that each CFU develops their own strategy and that FRNSW issues equipment to fit their needs.

*"The properties are so big... the average house down [names location], which backs onto another house, probably doesn't require two lengths. But because we're all on 800-plus blocks that are all narrow and long, and then we've got a bush frontage we need the length."*

Another suggestion as a possible solution to the equipment shortfall was a sharing system, where trailers from units who were not at risk could be provided to those in need. This would allow a maximisation of use without having to purchase additional equipment which may be redundant a lot of the time.

One unit who had a member who was also in the RFS was able to source a significant amount of additional equipment through his contacts. However, the equipment took a couple of days to arrive and be certified and the unit considered themselves lucky that they could make do in the meantime.

The majority discussed the need for more pumps to make use of all the available static water supply because *“only a very small number of people that had a water supply and a pump.”*

*“It wouldn’t be a bad thing to have a secondary pump. Also, it would stand by in case your primary pump didn’t work, for some reason.”*

Three of the units spoken to had purchased a number of their own pumps. In one group, all the members had their own pump: *“But that’s because we’re very fire-conscious, that’s why we’re in the group in the first place!”* However, this was not the norm and although one or two members from each unit had their own equipment the majority relied on the equipment supplied.

The majority of the groups had SWS to varying degrees of coverage. However, it was discussed that utilising this was often challenging. One group noted that their SWS would not have enabled them to carry out mopping up duties or defend one of their member’s homes as successfully as they did *“because you just need a mains [supply].”*

However, one group had a particularly unique problem in that their area was not covered well with water hydrants and were dependent on tank water. They had one personal electric pump but otherwise relied on their CFU pump to access their SWS in the event of an electricity blackout. Alternatively, they would have to arrange their hoses to access the distant hydrants.

*“If our static water supplies aren’t available here for any reason; either they’re empty, or whatever. We have to put up lines and hose and pump and relay down from the next street right up the back... But it takes two hose lengths, at least, to get... from a hydrant even down to the front of the street. So we’re a little bit undersupplied in that respect. But it’s more about bringing some pressure to bear on Sydney Water, ’cause as more of these blocks get developed, it’s going to become much more of an impact zone than it is at the present time.”*

All but one group had good water pressure. However, one group noted that as the wider area around them was not impacted there was not a lot of competition for water resources. The unit that was severely impacted did not have good main water pressure.

## Leadership – maintaining CFU roles

A few challenges were noted in terms of leadership and disagreement over the use of equipment or tactics during the fires.

*“I think the hardest thing is the fact that each person, you know, like our group’s not a cohesive group by a long shot, we’ve got members of the group who kind of are in the group, but they kind of have different attitudes about the way it should be run...I’m used to just ordering people around. You can’t do that in this, people just walk away from you...you become very diplomatic and then you try to work on consensus, and you work as a group, and you hope that it kind of, you know, pans out when the situation occurs.”*

However, on the whole the groups felt that they had managed very well as a team. It was discussed that their activation and actions over the October fires had brought them closer together which was important as they now understood each other’s capacities.

*“Since that fire the camaraderie amongst us is really nice. As a group we’re quite a cohesive ... and we all get on well.”*

*“We’re starting to know everyone’s different either levels of ability or levels of willingness or ability to do more. You know, like [names member] is older and so you sort of keep an eye out.”*

It was noted that two kinds of leadership roles were required for a successful CFU: in terms of informing and coordinating people and in terms of leadership and tactics during a fire. Some people could do both while others were best at one or the other. There was some discussion about whether the group coordinator would also be the leader in the event of a fire. As it was noted by one group that their coordinator was ill during the fires and although they did a great job of keeping the group informed about what was happening they were not able to lead the response. Another group noted that it was important to have a good deputy to assist if the leader was away.

*“Well I’m really glad that I’ve got [names assistant coordinator]. You’ve got to have a number two, someone who’s just as committed as you are who can step in when you’re not around.”*

Overall, however, it was felt that a typical group would always be made up of a few very dedicated individuals who get things running and then additional members who dropped in and out.

*“You really need...a core group, you need a couple who...see the value of it...and then you have the people who come in, two or three times a year to keep their skills up, and that’s pretty much the nature of the CFU.”*

A few groups noted the need for a good associate member who is happy to man the phones, be responsible for the activations and deactivations and/or is happy to be a runner between members if other forms of communication fail.

## Success and preparation

Other than the unit that was severely impacted, the units interviewed felt prepared for what they undertook during the October fires and evaluated their actions as extremely successful. However, views on success are very much related to the conditions experienced and what each unit and individual thinks the overall aims of their unit are. It is important to stress that the groups involved in the focus groups noted that they were facing very different fire conditions to those where significant numbers of homes were destroyed. They also had the time to set their equipment up, wait for enough members to return home and access additional equipment.

It was recognised that the underlying aim of the CFUs are: *“putting out embers, we’re not there to fight fires. We’re there to protect property.”* Therefore, it was noted that in very severe conditions, it has to be recognised that they have not failed in any way if they have to fall back on official fire brigades for help.

Members recognised that it imperative to have time to prepare and activate. One unit discussed their successes with the fires and felt that had they not been there with their equipment then a number of homes would definitely have been destroyed in their street.

*“The Fire Brigade was out the front of my house at two o’clock in the afternoon. Then they left, then the fire came back. But they [the fire brigade] weren’t coming back because they were down at Yellow Rock losing 200 other houses. And they weren’t coming back to save my patch of grass. And if we didn’t have those hoses, that house would have gone, my house would have gone... So if mine went, the next one would have gone because he was old and drunk, and then the next one, and the next one.”*

One very new member discussed how he hadn’t been aware of the CFU and was trying to fight the fire at his property with a garden hose. However, this was not working and luckily the local CFU came to his assistance and saved his home and shed.

All the units apart from the one that was severely impacted had significant presence of the official fire authorities in their areas during the fires. In addition, they discussed the constant presence of the water bombing helicopters. This was noted as extremely reassuring. In many cases, the fire authorities provided feedback and positive reinforcement to the units on their activities. One member discussed how, without this presence, they would not have been as confident.



*“We would see smoke; within minutes, the spotter chopper was there, and within a few more minutes, there was a helicopter dumping water. I mean, that response was fabulous, because they were coming in over the house all the time.”*

The units also discussed their preparations as individual property owners which they all ranked as good given the bushfires occurred fairly early in the season.

One unit discussed that they had felt, prior to the fires, that the restrictions and rules precluded them from properly activating and that because of insurance issues the emergency services would rather they evacuate if there was a fire in the area. However, their experience during the October fires changed their minds and they felt useful and respected by the official fire organisations and realised they had an important role to play.

*“Prior to it, with our training, with a few other instances that happened before, there seemed to be a real concern about us actually activating to do anything, there’s obviously a concern about insurance. The attitude seemed to be that if there was a fire on, we’d basically get out... when the fire did occur on the Thursday and we activated, we were pretty much left alone... so it was virtually going for almost a week, six days – that we were valued, that when they did turn up in the streets – I’m talking about the bushfire brigades and the NSW Fire Brigade, when they came in, they seemed to value us and expected us to help out, which was great, because I was expecting that when this is all on they would just say, “Well you guys bugger off.”*

### **Survival plans – evacuate or shelter**

Discussions on the whole were inconclusive about what would happen with the arrival of a fire front, what would be the triggers to evacuate or shelter and whose homes would provide the safest refuge. It was clear that the majority were planning on last minute evacuations in cars if things became untenable. The majority were also relying on official warnings in terms of direct orders to evacuate or catastrophic fire danger ratings to alert them to the need to evacuate. One member discussed how they had an evacuation box packed with the basics and then they would add to it if fires started nearby. However, they noted that these fires have taught them how quickly a situation can develop and as a result they now plan to have their evacuation kit fully packed at the beginning of every fire season.

Only two groups discussed having a known fallback point to evacuate to: *“The oval on the school, I think is formally where we’re supposed to go, but I think that day we decided the first fallback point was actually the car park at the shops.”*

One member discussed how it was extremely important that community safe areas were better publicised particularly to CFU members as a number were involved in alerting members of the public to evacuate and were unsure where to advise people to go. They were also unsure which roads people should take as they were not receiving regular updates on the

status of the fires. As CFU members are seen in uniform, the public turn to them for information.

*“So that was incredibly traumatic. People were saying “Where do I go? Where do I go?” You know, you’re in a uniform, [people were asking] “What do I do?””*

Relying on triggers in the environment was something three of the groups had discussed: *“if there’s wildfire on that ridge, we get in the car and go.”*

*“The worst fire’s going to come from down there; it’s going to come up the hill. And although there are a lot of trees there, it’s not really heavily wooded. And the fire would roar through in two or three minutes; it would be gone. And I think in terms of saving the house and in terms of saving yourself, your best bet is to stay put, let it go over the top.”*

Three of the groups discussed how one member in their unit had a safe room under their home where, if necessary, they could retreat and wait out the passage of a fire front. These rooms were not visited and therefore it is unknown if they would provide good visibility of the passage of the fire front and the status of the surrounding homes. The tenability of these rooms in terms of fire attack and oxygen, the need to be vigilant while sheltering, and a safe egress strategy was not specifically asked and was not discussed by respondents.

One group discussed their survival plans when they were alerted by the RFS that they would be on their own for the evening and it looked like the fire was approaching. They decided that they would stop defence if the fire came over a certain ridge. They noted that it was important that they had discussed this to ensure that they were all doing the same and acted together in order there was not disagreement as the unit would have to deactivate if less than four remained.

*“We did have a quick conversation on that Thursday afternoon at the worst moment, when...we were told we were on our own and it looked like it was coming over that ridge, we did have a quick, “So what do we do here if it comes over?” And I think there was sort of an agreement that if it came over at a rapid rate, then, yeah, we’d just be dropping everything and exit. I think we needed to be all on the same page in case that did come over. We needed to not be running around, saying, “Oh, hang on, are we going? Are we staying? What are you doing? Where are you going now?””*

Level of prior warning and time for preparation was considered extremely important and why it was difficult to have a hard and fast rule about fire plans in extreme situation. It was noted that a plan to stay or go would also depend on the presence of other fire and emergency services, mains pressure and the choices of other unit members.

Many of the units discussed how the recent controlled burns bordering their areas of operation had significantly reduced their fire risk: *“After a back burn, we’ve got a couple of years where you can relax in this particular area a little bit, can’t we?”* However, it was also

noted that in some cases the burn had not covered much ground and had only burnt the very bottom layer and therefore the lowered risk perceptions of some unit members was not sound.

### **The preparedness of and communication with non-CFU members**

There was a considerable amount of communication with non-CFU neighbours during the period of the fires. One group stated that they were continually being asked questions from their neighbours and people who had driven from outside the immediate community. Questions were in relation to the status of the fires, the dangers posed and what people should do to reduce their risks and prepare their homes. One group felt that the CFU trailers should contain short fact sheets that could be handed out to people at this highly opportune time.

*“People would come up and say “what do you do?” “What shall we do?” and all that type of stuff. So they were looking for information. You get heaps of brochures handed out all the summer and all that. But people just lose them. It’s when it’s on that people want to know what to do.”*

*“Whole afternoon and evening, just people asking questions. So you put a uniform on you suddenly know what you’re doing. It was hard to explain to people that, “We don’t know anything more than you do, really” I think people thought we were not telling them something that we knew.”*

Problems were also identified with people coming from outside the community to take a look at the fires and damage. Groups were worried that this not only slowed them down but also posed a potential security risk. One group set up their witches hats across the road in order to deter ‘disaster tourists’. Another two groups stated that they wanted to do this but were unsure of the legalities of doing so.

*“Whether we’ve got the authority to stick some detour signs up or emergency vehicles only signs or something like that - but the authority to block off the street from rubber neckers would probably not be a bad thing. The number of cars that came cruising around while we were trying to set up, doing little more than just seeing if they could see something.”*

The dominant advice provided to neighbours who were around and unprepared was: *“if you just don’t feel comfortable, then don’t be here”*. However, if conditions were a little more settled then advice was provided about home preparations. In addition, one group discussed getting their neighbours to fill containers with water before they evacuated to assist the CFU if water pressure dropped. Three of the groups noted that they went around and checked who was present and what their plans were in terms of staying or evacuating.

One unit discussed how they were worried about the actions of two of their neighbours who were not members but stayed to defend and were inappropriately dressed. This was

considered by the unit to have given them extra worry and anxiety as they felt they also needed chaperoning.

One member noted how they felt that they were less fearful and more in control than their non-CFU trained neighbours.

*“The main difference between us and the people, just on either side of us who weren’t in our group, was just the level of fear that was, they had so much more fear than we did...that’s because we know, things what you can do. You’re more in control. It takes the fear away.”*

### ***Discussions and communications with non-members about bushfire risk reduction***

The majority felt that their non-CFU neighbours were not well prepared for the fires in terms of having reduced their risks around their property or having prepared a fire plan. One group noted how a number of their neighbours properties were holiday homes and were simply left unattended and another unit discussed that a few households in their area had recently moved in and were new to bushfire risk.

*“Unfortunately, our neighbours... don’t prepare their houses at all. And round here we found houses with all their firewood stacked up against their walls, timber houses. And this is what we live amongst. So you know, that’s an added risk to all of us, really. So I think there needs to be a lot of education, but I don’t know how you get it through to them. We’ve got a lot of holiday houses round here, too. So they’re empty a lot of the time.”*

A number of units discussed how properties that belonged to non-CFU members posed a fire risk to their area and noted how they had assisted with preparation activities at some of these properties. The need for neighbours to be aware and prepared was felt to be important for the unit’s bushfire risk reduction strategy. In particular, one unit noted that the number one learning from their period of activation in October 2013 was the need to: *“make the community, the immediate community, aware of who we are, and their risks. We live in a high-risk area. They should be aware.”*

The units generally noted that if they’d had more members and their jurisdiction was bigger, or if there was another CFU group further up the road to meet with theirs, then they would have been in a much better position in the October 2013 bushfires. Overall, these CFU members believed that people were reluctant to join, or continue their membership, because the training was too repetitive and bureaucracy and paperwork had increased. They felt that there was a need to progress with their training and, as noted elsewhere, learn more site specific information to better defend their homes. Interaction with the RFS and involvement in back burnings was noted as an activity that would increase and maintain membership.

However, perceptions regarding the role of the unit in promoting membership and communicating and educating their neighbours were mixed. While some individuals and

units considered it part of their role and they could engage to do more. Others felt that they were already doing enough and did not have the time.

*“Personally, no, I find the amount that I’m doing is about the amount that I can give. I’m not much of a civic person, anyway.”*

*“At the end of the day you’re talking about freehold landowners, and you know, it’s amazing how touchy a lot of these people are about the way their properties are kept and the way their properties are run and the way they all have different ideas of what the CFU is about”*

*“We could probably do a walk round the neighbourhood, knock on doors, and give stuff to people and say, “We’re not asking you to join the CFU, but here’s something that might help you.” Because I believe we’ve got a community liaison role as well as just a...protect their houses when there’s a bushfire role.”*

One member, who had recently attended the CFU induction training session, discussed how useful one of the sessions had been around household preparations and thought this training could be opened up more broadly to the wider community. The member stated that it was extremely engaging attending the training and much more informative than written material. It was noted that this could also be an opportunity to discuss the CFU program and what it could offer to motivate further membership.

*“I’m thinking how useful would this be to actually advertise this for people to come along, saying, “Look, you may not want to join CFU, or this is not so much about that, it’s about becoming more aware of your property and how you can actually prepare it better.”*

One unit discussed how they often did their training in different parts of their area to try and encourage discussion with non-CFU members around property preparedness and becoming a CFU member.

*“One thing I see with the CFU part of our job is to train people around here to be aware. Well, one of the things [names unit coordinator] has been doing with us is taking us up into [names street] checking the hydrants, putting the standpipe in, flowing them to make sure they’re working... We do it so they see. People come out and say, “Oh, this is great. What are you doing?” And we’ve got new members out of it.”*

The groups discussed the views people had in the wider community about the roles of the CFU, and the majority didn’t consider that they had expectations that their homes would be defended but considered, *“as a neighbourly-type thing they would probably like it to be offered.”*

On the whole the units did not think that the fires and activity had generated significant interest from the community in terms of membership. Even the group who had received assistance from the community felt that the majority of people had simply drifted away again.

Nevertheless, they now have two new members and are the only unit from the five who stated that they had new members since the fires.

*“No, that’s the thing I find surprising, actually. I mentioned to ... we’ve got a couple of new neighbours in the street I’m surprised that they’re not interested in coming and joining, of course, we’ve said to them, you know, we need all the help we can get...”*

*“If you’re interested in fires and all that, you’d probably be part of the CFU, that’s the bottom line. People who are not interested in the fires just don’t get involved in the CFU. Because they don’t regard it, as important enough or they don’t have the time.”*

Another important issue that three units considered was part of their role was, knowing their non-CFU neighbours strengths, vulnerabilities and whereabouts during a fire. Two units discussed how they would like to map and document the risks, resources and vulnerable people in their area of operation. However, it was noted that although this was important the role of actually defending unit member’s homes always took the focus.

### **CFU profile in the media and community**

Members noted that during the incident the RFS and their actions were well documented in the media. However, the actions of the countless CFU volunteers were absent. It was felt that this was a missed opportunity to raise the profile of CFUs and attract more members.

*“During the whole incident you hear about the RFS and the Fire Service and everything but no one ever mentions the CFU.”*

*“There are 40 people in our office [member’s place of work] and they don’t know what the CFU means.”*

*“No one in my work knew. I work in the Hawkesbury area and there’s bush everywhere and no one knew what a CFU was.”*

It was also stated that if the CFUs had a higher profile in the community, people would understand their limits in that they could only protect their designated areas. Members believed that the public would have a better understanding in that they would need to form their own unit if they wanted their properties protected.

*“And that’s another reason why the message has got to get out about what our position is, because if there’s people there looking at us going “what are you doing, what about us?” Well....join! Get your own unit!”*

## Conclusions and findings

This section summarises the most salient points emerging from the quantitative and qualitative results in relation to the aims and objectives of the research. Findings are provided for FRNSW to consider in the context of their CFU program.

### Membership and team cohesion

Questionnaire results indicated that 31% of members were dissatisfied with their CFU, either because of a lack of leadership and team cohesion impacting on preparedness and fair use of equipment or because they felt that in the event of an actual fire they wouldn't be allowed to do anything useful anyway. Some disagreements were noted with members looking after themselves and some wanting to work outside of their operational area when others did not. On the whole, however, the majority were satisfied and felt that their unit worked well together. In addition to reduced bushfire risks it was noted in the questionnaire and focus groups that the CFUs generally improved the sense of community and increased social capital<sup>1</sup>, factors which also significantly reduce bushfire risks.

### Activities during the fires

#### Activation

The questionnaire and focus group data indicated that activation was challenging for many as either the fire arrived too quickly and / or four members were not present. Confusion about how or when groups should activate was also noted. Considerable problems with the activation phone line were discussed with respondents noting difficulty getting through and also in terms of the response and experience of the personnel answering the calls.

#### Communication

The majority of questionnaire respondents heard about the fires from official sources such as the RFS and media, followed by FRNSW notification and physical signs in the environment. Units noted that the text alerts were not particularly useful as they were sent to the general community and did not provide information specifically for CFU members and were not received by all. The majority of the focus group units also had at least one member who was a volunteer or in one case a paid employee of an emergency service organisation and also received informal communications from them in regards to the fires. A significant amount of conflicting official information was noted, in particular that between the fire authorities and the police.

---

<sup>1</sup> Within the social sciences 'social capital' refers to the positive outcomes that can eventuate when individuals and groups form bonds, networks and work together. In this case, social capital refers to the local community getting to know each other and assisting each other to reduce risks.

## Activities undertaken

Over 50% of questionnaire respondents stayed to defend but the fire did not arrive. The majority of respondents detailed how they undertook activities to prepare properties and equipment, provide advice, assistance, and communication, and in some cases training, to non-CFU members, clear vegetation and keep a lookout. 19% engaged in activities to assist fire services which included helping with back burning operations watching for embers, extinguishing spot fires, mopping up and clearing a fire break. 14% actually undertook active property defence which involved dealing with ember attack and extinguishing spot fires. Many units recounted how they had to continually monitor and put out flare ups as areas which had been burnt in a controlled burn, or fires which had been extinguished, continually reignited. Respondents also indicated that they provided invaluable localised information to fire agencies in terms of showing non-local crews the location of hydrants and describing the local topography.

## Impact and success of the CFUs

A total of 5.4% of respondents reported that homes were lost within their CFU area of activity during the October 2013 bushfires with 6 respondents losing more than 15 homes, one respondent losing 13 homes and nine respondents losing 6-8 homes. The majority of respondents opined that the main reason these homes were lost was due to the extreme conditions on the day, the vulnerable location and building type of many homes and, a general lack of preparedness. However, 76% of questionnaire respondents noted that they were quite or well prepared to deal with the October 2013 bushfires and overall, 27% of respondents believe that the actions undertaken by their CFU reduced impacts in their community (this percentage is high given that 61% had no fire threat).

Many respondents cited adequate training, equipment and preparedness as to why they were able to successfully defend homes and properties. All the focus group participants noted that they felt their actions had been extremely effective and had certainly made a difference. Some noted that their presence enabled professional agencies to focus their attention in other areas. However, views on success are very much related to the conditions experienced and what each unit and individual thinks the overall aims of their unit are. It is important to stress that focus group participants explained and understood that they were facing very different fire conditions to those where significant numbers of homes were destroyed. They also had the time to set their equipment up, wait for enough members to return home and access additional equipment. Several respondents stated realising the importance of getting back in as early as possible after evacuation to prevent further loss of homes and property by attending to spot fires.

Please note: findings for this section are listed under the headings training and preparation, communication, equipment etc.



## Challenges

### Personnel

The majority of questionnaire respondents noted that the availability of CFU members and the unit's ability to activate was the biggest challenge faced. Many members had been at work when the fires started and were unable to gain access. Other issues arose with some members wanting to evacuate when others were prepared to stay and defend.

### Following the rules

The majority of the focus group participants disagreed with the rule that that a unit can only activate if four or more members are present. This question was not asked directly in the questionnaire. However, in their open responses several respondents noted that they felt that activation and useful defence could occur with less members present. The questionnaire and focus group data also explored issues relating to members working just outside their area of operations, this often occurred when units were assisting FRNSW and the RFS with hazard reduction activities. However, units noted that they would likely defend homes just outside their area of operations, particularly if leaving them unattended would pose a knock on risk to homes within their area of operations. One unit also noted how some non-CFU members had used the equipment under the strict supervision of the fully trained unit members. This was found to be the most effective way of covering their area effectively and utilising the available personnel. The data highlights that working within the very black and white rules is extremely difficult when a unit finds themselves actually defending their homes and street.

## Findings

The CFU program could be improved if FRNSW considered:

- Amending the CFU boundaries of operations to better reflect CFU capacities and the actual fire danger.
- Clarifying the insurance issues with greater understanding that there will always be grey areas that people will work within during a fire. Being too rigid and trying to make community members 'do the right thing' to reduce risks often doesn't work and for a range of underlying reasons, people will likely continue to do what seems right to them at the time. The best developments in risk reduction and resilience have come where authorities have sat back, learnt what people actually do and then provided support to enable this to occur in the safest way.
- Reviewing the protocols regarding the number of personnel needed for activation, in order to enable practical use of available equipment.

## Communication

The research highlighted issues with communication and lack of awareness of the situation at-hand. It is clear that communications between group members during activation is difficult yet extremely important. Mobile phone coverage was an issue for many and UHF radios purchased by units themselves were the most effective means identified. In addition, it was noted that it was useful for one member to remain as a runner checking on all the members and reporting their locations, actions and messages back to the group leader.

## Findings

The CFU program could be improved if FRNSW considered:

- Developing appropriate internal communication strategies – specifically consider that some units may need UHF radios and a dedicated runner/coordination role to relay messages and check on everyone’s positions and activities. Advice is needed on the best radios to purchase and how to use them most effectively. Units could be coordinated to purchase a number of radios at a time to save costs.
- Facilitating the sharing of ideas that were identified as successful across the CFU community. For example:
  - A system of flags was used by one group to alert each other when they were home and when they had left the area. This was considered extremely useful as they then easily knew which homes were empty if the situation escalated.
  - Where multiple units work closely together a white board in the trailer to document when equipment has been shared may be useful.

## Training and preparation

A total of 75% of respondents felt that their CFU training had adequately prepared them for the October fires and over 70% had been involved in training with their unit within the last four months. The majority of questionnaire respondents who didn’t think the training was adequate noted that they wanted specific training on extinguishing fires and being exposed to fire behaviour. This is in line with the majority of focus group participants who stated that the basic training was adequate and all could set up and use the equipment provided. However, the majority wanted training on likely fire behaviour in their local area and the best strategies for protection.

Those who had been involved in the fires noted that they provided them with an invaluable training experience to:

- Test their equipment and skills.
- Witness how bushfires actually behave in their area.
- Learn new skills and use the equipment in a real situation.
- Learn new skills in terms of teamwork.

- Learn new skills in terms of strategies for defence.
- Understand the difficulty and complications of activating four members.
- Understand the importance of having and knowing individual roles and leadership.
- Understand the importance of communication between members.

It was felt that better training around realistic scenarios and also with proper fire simulation would provide this for those who had not yet experienced a fire. It was considered that the best way to provide real fire experience to the wider CFUs would be to engage with FRNSW and/or RFS when they undertake hazard reduction burns.

## **Findings**

The CFU program could be improved if FRNSW considered including the following points in their training and preparations:

- Need for site specific training covering the most likely fire scenarios and fire behaviour, best strategies for defence in terms of personnel and equipment taught in the unit's areas of operation.
- Best strategies for defence for different realistic fire scenarios should be practiced and documented, i.e. fire occurs on a weekday when only two members are home.
- High risk spots and areas where members may get trapped need to be mapped.
- Engage CFUs with FRNSW and/or RFS when they undertake hazard reduction burns in order to provide real fire experience.
- Maintain contact with neighbouring CFUs and discuss strategies/plans, better coordination between neighbouring CFUs with one overall identified coordinator.
- Individual CFUs and management should reassess the current rules and planning behind their activation plans given the dynamic constraints that occur when a real fire occurs, such as people being at work, away or finding themselves with family commitments. In addition, CFUs need to openly discuss their individual plans in relation to desires to evacuate versus staying to defend in certain conditions and individual versus community property protection etc.
- Develop a clear command structure, member role identification with priorities and actions within each CFU.
- Ensure mobile numbers of members and neighbours are known.
- Map the community, documenting high risk homes, private equipment, SWSs, vulnerable members - especially the elderly and those who have restricted mobility, household plans to stay and defend or leave early.
- Useful to put signs up alerting others of SWSs and fill bins around the community with water.
- Need for better and earlier household preparations - CFU and non-CFU members.
- Investigation into Workers Compensation is needed in order to determine the legal viability and practicality of units training non-members in their area of operations the

basics in terms of preparation and property defence. This would allow them to assist with basic activities under close supervision in the event of a fire.

- Coordinators and leaders to undergo more rigorous training in terms of leadership, bushfire defence and fire behaviour.
- Better information provided to the police concerning the CFU units in terms of the training they have received, the equipment they have and their abilities to stay and defend.
- Training around solar panels and gas bottle safety.

## Preparedness of and communication with non-CFU members

There was a considerable amount of communication with non-CFU neighbours during the period of the fires around the status of the fires, the dangers posed and what people should do to reduce their risks and prepare their homes. The dominant advice provided to neighbours who were around and unprepared was to evacuate if they were worried or unprepared. Questionnaire respondents ranked the majority of non-CFU members in their area as somewhat 48% and poorly 36% prepared. The majority noted that communication with them prior to the fires had been minimal and of that 34% believed that it had not been at all or not very successful. A number of questionnaire and focus group respondents noted that they would be willing to do more to communicate and assist in their neighbour's preparation as unprepared neighbours posed a risk to the whole community. However, some did not think it should be part of their role.

## Findings

The CFU program could be improved if FRNSW considered:

- Providing CFU trailers with short fact sheets that could be handed out to people at this highly opportune time.
- Supporting CFUs who are willing to do more local community engagement activities with training and materials.
- Engaging non-members in some of the scenario based training exercises as observers.
- Explaining the role of CFUs to other emergency service organisations locally.

## Equipment

Some problems were noted with the use of the equipment, with 12% of respondents noting problems (Appendix E). However, over half the questionnaire respondents and the majority of focus group participants noted the equipment provided was insufficient for them to effectively defend their area. Questionnaire and focus group participant alike called for more hoses, pumps and standpipes.

## Findings

The CFU program could be improved if FRNSW considered providing:

- A possible equipment sharing policy, so that trailers can get moved from areas that are not at risk to those that are.
- More hoses, pumps and standpipes based on the specific needs of individual CFUs.
- Equipment to suit each unit's personnel and area of operations.
- An extra pump as a stand-by, in case of a fault with the first in addition to providing an extra resource.
- Better torches.

## Survival plans

Questionnaire and focus group data indicated that many members do not have a clear idea about their plans and triggers for when the situation to stay and defend may become untenable. Many were critical about the lack of warning, however, the reality of not receiving official warnings in some severe and fast moving conditions, and having to act on their own judgment, was not well understood.

## Findings

The CFU program could be improved if FRNSW considered providing better education and advice on:

- The possibility of not receiving official warnings to evacuate and the need to understand triggers in the environment.
- Developing plans for when the situation to stay and defend may become untenable. There is a need for units to have sat down and discussed their survival strategies so they all know what triggers they are working towards, what people will do and where they will go.
- Fallback and evacuation points.
- Safe rooms. FRNSW need to develop guidelines to inform CFU members on the pros and cons around the use of safe rooms within their homes.
- The significant risk of bushfires that can still remain after a hazard reduction burn or even a bushfire in their area.

## References

- Blaxland Brigade History, 2014. History of Blaxland Volunteer Bush Fire Brigade. <http://www.blaxland.com/bushfire/What/history%201.htm#Sect2> Accessed: 2 June 2014.
- Blue Mountains RFS, 2013. Blue Mountains Bushfire Emergency from 17-10-2013 to 29-10-2013. [http://www.bluemountains.rfs.nsw.gov.au/dsp\\_content.cfm?cat\\_id=4589](http://www.bluemountains.rfs.nsw.gov.au/dsp_content.cfm?cat_id=4589) Accessed: 15 March 2014.
- BMWHI, 2014. How the '57 fires unfolded. The story of the 1957 Leura Fires. A lesson in time. Fire stories. Blue Mountains World Heritage Institute. [http://www.fire.bmwhi.org.au/?page\\_id=58](http://www.fire.bmwhi.org.au/?page_id=58) Accessed: 2 June 2014.
- CFU, 2014. Fire & Rescue NSW: Community Fire Units. <http://cfu.fire.nsw.gov.au> Accessed: 6 March 2014.
- Commonwealth of Australia, 2007. National Statement on Ethical Conduct in Human Research. The National Health and Medical Research Council, the Australian Research Council and the Australian Vice-Chancellors' Committee, Canberra.
- Cunningham, C.J., 1984. Recurring Natural Fire Hazards: A case study of the Blue Mountains, New South Wales, Australia, *Applied Geography*, 4:5-77.
- Haynes, K. Bird, D. and McAneney, J., 2013. Mitigate damage risk from bush fires, *Nature*, 503:469.
- Lowe, T., Haynes, K. and Byrne, G., 2008. Resilience at the urban interface: the 'Community Fire Unit' approach. Chapter 3 in Community Bushfire Safety. (Eds) Handmer, J., Haynes, K. CSIRO, Melbourne.
- MacDougall, I. D., 2003. The Australian Bushfire Cooperative Research Centre Program: – A National User-Driven approach towards a coordinated Fire Research Program. <http://www.fire.uni-freiburg.de/summit-2003/3-IWFC/Papers/3-IWFC-088-MacDougall.pdf> Accessed: 2 June 2014.
- McAneney, J. 2013. Climate change and bushfires – you're missing the point! <http://theconversation.com/climate-change-and-bushfires-youre-missing-the-point-19649> Accessed: 1 November 2013.
- New South Wales Parliamentary Library Research Service (Smith, S), 2002. Bushfires, March. [http://www.parliament.nsw.gov.au/prod/parlment/publications.nsf/0/87CF62366063879DCA256ECF00077084/\\$File/05-02.pdf](http://www.parliament.nsw.gov.au/prod/parlment/publications.nsf/0/87CF62366063879DCA256ECF00077084/$File/05-02.pdf), Accessed: 14 May 2012.

NSW Rural Fire Service, A State Ablaze. The January 1994 fires. 1998.  
[http://www.rfs.nsw.gov.au/file\\_system/attachments/State/Attachment\\_20050308\\_DFF87D81.pdf](http://www.rfs.nsw.gov.au/file_system/attachments/State/Attachment_20050308_DFF87D81.pdf) Accessed: 2 June 2014.

NSW Rural Fire Service, 2014. Brief History of Bush Fires in NSW.  
[http://www.rfs.nsw.gov.au/dsp\\_content.cfm?cat\\_id=1180](http://www.rfs.nsw.gov.au/dsp_content.cfm?cat_id=1180) Accessed: 2 June 2014.

PerilAus, 2014. Risk Frontiers PerilAus Database. Accessed: 7 January 2014.

Stewart, D., Shamdasani, P. and Rook, D., 2007. Focus Groups: Theory and Practice. 2<sup>nd</sup> Edition. Sage Publications.

## Appendix

### A. Questionnaire cover letter

Dear Community Fire Unit member,

Fire & Rescue NSW and the Bushfire Cooperative Research Centre have engaged Risk Frontiers, a research centre based at Macquarie University to investigate the activities of Community Fire Units in the Blue Mountains area during the period of 17 October–23 October 2013. We are interested in the views and opinions of all Community Fire Units whether activated or not.

This research involves an online survey that will take approximately 20–25 minutes to complete. Please find below a link to the survey. This can be copied and pasted and emailed to others. We would like to collect as many responses as possible and would appreciate all family members to complete the survey if they are all in a Community Fire Unit.

<https://www.surveymonkey.com/s/BlueMountainsCFUs>

A hard copy of the survey is available on request. Please see contact details below.

Participation in the study is entirely voluntary and all information or personal details gathered are confidential. No individual will be identified in any publication of the results. The data from the completed surveys will be sent to a secure server at Risk Frontiers, Macquarie University and not to Fire and Rescue NSW or the Bushfire Cooperative Research Centre.

The research is examining the following topics:

- Your experience of the October bushfires – whether activated or not.
- Any activities or preparation undertaken – whether activated or not.
- Any challenges or lessons learnt – whether activated or not.
- Views on your equipment and the training you've received.

If you decide to participate, you are free to withdraw from further participation in the research at any time without having to give a reason and without consequence.

You are welcome to request access to reports arising from this research.

If you have any questions or comments about the research, please email [katharine.haynes@mq.edu.au](mailto:katharine.haynes@mq.edu.au) or call Risk Frontiers on 02 9850 9683. Post: Risk Frontiers, Macquarie University, North Ryde, 2109

Alternatively please email [Karolina.Marks-Kraska@fire.nsw.gov.au](mailto:Karolina.Marks-Kraska@fire.nsw.gov.au) or call 02 9895 4642.

Many thanks for your participation.



## B. Questionnaire

### Community Fire Units - Blue Mountains region

1.

Dear Community Fire Unit member,

Risk Frontiers, a research centre based at Macquarie University in Sydney have been engaged by Fire and Rescue NSW and the Bushfire CRC to investigate the activation of Community Fire Units in the Blue Mountains area during the period of 17 October – 23 October 2013.

The survey will take approximately 20 - 25 minutes to complete and we would greatly appreciate it if you provide us with your views and opinions.

Participation is voluntary and all information or personal details gathered in the course of the study are confidential. No individual will be identified in any publication of the results. If you decide to participate, you are free to withdraw from further participation in the research at any time without having to give a reason and without consequence.

You are welcome to request access to reports arising from this research.

If you have any questions or comments about the research, please email [katharine.haynes@mq.edu.au](mailto:katharine.haynes@mq.edu.au) or call 02 9850 9683. Alternatively please email [Karolina.Marks-Kraska@fire.nsw.gov.au](mailto:Karolina.Marks-Kraska@fire.nsw.gov.au) or call 02 9895 4642.

## Community Fire Units - Blue Mountains region

### 2. Demographic questions

#### 1. Please indicate your gender

- Male  
 Female

#### 2. Please indicate which age group you belong to

- 18-24  
 25-34  
 35-44  
 45-54  
 55-59  
 60-64  
 65-74  
 75+

#### 3. Is English the main language spoken in your home?

- Yes  
 No

If no, what is the main language spoken in your home?

## Community Fire Units - Blue Mountains region

### 3. Demographic questions (continued)

#### 4. Please indicate your working status (tick all that apply):

- Working - Full time (30+ hrs)
- Part-time (9-29 hrs)
- Unemployed
- Not working - retired
- Looking after house / children / others
- Invalid / disabled
- Student
- Other

#### 5. Approximately how far is your main place of work from home?

- Not working / retired
- Work from home
- 0-3 km
- 3-5 km
- 5-10 km
- 10-20 km
- more than 20 km
- Other (please specify)

## Community Fire Units - Blue Mountains region

### 4. Demographic questions (continued)

**6. Please indicate whether you are renting or you own your primary residence:**

- Renting  
 Home owner  
 Neither

**7. Please indicate what level of insurance you are covered by:**

- None  
 Home only  
 Contents only  
 Home and contents insurance

**8. What is your postcode?**

**9. What is your Community Fire Unit number?**

## Community Fire Units - Blue Mountains region

### 5. Demographic questions (continued)

#### 10. What is the composition of your household?

- Couple with children or other dependents
- One adult with children or other dependents
- Couple without children or other dependents
- One person household
- Shared house with other adults
- Other (please specify)

#### 11. Do you, or anyone else in your household, require assistance due to disability or longterm injury or illness?

- Yes
- No

Please provide details if needed:

#### 12. In general, how would you describe your physical fitness?

- Very good
- Good
- Average
- Poor
- Very poor
- Other (please specify)

## Community Fire Units - Blue Mountains region

### 6. Community Fire Unit membership information

#### 13. For how long have you been a Community Fire Unit member?

- Less than two years
- Two to four years
- Four to six years
- Six to eight years
- Eight to ten years
- More than ten years

## Community Fire Units - Blue Mountains region

**14. Please read the statements below and select the option that best reflects your motivation to become a Community Fire Unit member: Please answer every statement a -j.**

	Strongly agree	Somewhat agree	Neither agree or disagree	Disagree	Strongly disagree
a "Bushfires damaged my property in the past so I wanted to be able to protect myself/property/family in the future"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b "Bushfires affected my local area in the past so I wanted to be able to protect myself/property/family in the future"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c "I know that I live in a bushfire prone area so I wanted to be able to protect myself/property/family in the future"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d "Bushfires are a major threat in Australia and everyone should be prepared to fight them"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e "I feel that staying at home is the best way to protect my property and wanted to be able to do this safely"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f "If I and my neighbours are trained and equipped to defend our homes it gives us the greatest chance of saving them"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g "My friends joined so I joined too"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h "I wanted to become more involved with my community"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i "I thought it would be fun to join a Community Fire Unit"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j "I wanted to be of help to Fire and Rescue New South Wales"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

## Community Fire Units - Blue Mountains region

**15. Of the statements above, please select the one which you consider to be your main motivation for joining a Community Fire Unit:**

a

b

c

d

e

f

g

h

i

j

Other (please specify)

**16. Are you planning on remaining a Community Fire Unit member?**

Yes

No

Not sure

If you answered 'no' or 'not sure', please briefly explain your answer



## Community Fire Units - Blue Mountains region

### 7. Questions about previous bushfire experience and preparation

**17. Please tell us what experience you have had of bushfires prior to the 2013 October bushfires: Tick the statement(s) which best resembles your experience of bushfires (you may tick more than one box):**

- I have had no direct experience of bushfires but have seen and heard about them from various sources, e.g. in the distance, on the news, training videos, family and friends
- Bushfires have damaged my neighbour's property in the past
- Bushfires have damaged my property in the past
- I have fought bushfires in the past
- I have been involved in a hazard reduction burn / back burn
- Other (please specify)

**18. Please tell us if your Community Fire Unit has been activated at some point in the past (prior to the 2013 October bushfires):**

- Yes
- No

If yes, please give detail:

**19. If you share your home with others (e.g. family, friends), what would they do in the event of a bushfire in your area (e.g. evacuate, stay at home etc.)?**

## Community Fire Units - Blue Mountains region

### 8. Questions in relation to preparedness and communication

**20. Please indicate how prepared you feel your household was to deal with the October 2013 bushfires. Please answer this question even if the fires did not reach your immediate area.**

- Not prepared at all
- Poorly prepared
- Somewhat prepared
- Quite prepared
- Well prepared

**21. Please indicate how prepared you feel your Community Fire Unit was to deal with the October bushfires. Please answer this question even if the fires did not reach your immediate area.**

- Not prepared at all
- Poorly prepared
- Somewhat prepared
- Quite prepared
- Well prepared

**22. In your opinion, how prepared do you think people in your area who are NOT Community Fire Unit members were for the October bushfires?**

- Not prepared at all
- Poorly prepared
- Somewhat prepared
- Quite prepared
- Well prepared

Please explain your answer above

## Community Fire Units - Blue Mountains region

**23. Before the October bushfires, how much had you communicated with people in your area who are NOT Community Fire Unit members about reducing bushfire risk?**

- Not at all
- Very little
- To some extent
- A good deal
- A great deal

**24. How successful do you feel the transfer of information from Community Fire Unit members to the surrounding community has been?**

- Not successful at all
- Not very successful
- Moderately successful
- Quite successful
- Totally successful

Please explain your answer above

## Community Fire Units - Blue Mountains region

### 9. Activities undertaken during the 17 October – 23 October 2013 bushfires

#### 25. Did your UNIT activate during the October bushfires?

- Yes  
 No

If you answered 'no', please briefly explain why not:

#### 26. Did YOU activate during the October bushfires?

- Yes  
 No

If you answered 'no' please briefly explain why not:

#### 27. How did you first hear about the fires / activation?

- FR NSW notification through text message or phone call  
 Other official sources (RFS, media etc)  
 Friends / neighbors (not Community Fire Unit members)  
 Community Fire Unit members  
 Saw embers, smoke, flames  
 Other (please specify)

## Community Fire Units - Blue Mountains region

**28. What activities did your Community Fire Unit undertake during the October 2013 fires? Please tick all that apply.**

- Clearing vegetation
- Preparing property
- Defending property (ember attack and spot fires)
- Point of contact for the community
- Assisting other fire services
- No activities undertaken
- Other (please specify)

**29. If you engaged in activities to assist other fire services can you please list your actions below:**

## Community Fire Units - Blue Mountains region

### 10. Activities undertaken during the 17 October – 23 October 2013 bushfires (co...

#### 30. What sort of fire conditions did you experience at your home? Please tick all that apply.

- None
- Light smoke
- Heavy smoke
- Light ember attack
- Heavy ember attack
- Spot fires
- Fire front
- N/A as I was not home
- Other (please specify)

#### 31. If you were actively defending, approximately how long were you doing so?

- N/A
- 0 - 3 hours
- 3 - 6 hours
- 6 - 12 hours
- 12 - 24 hours
- 24 - 48 hours
- 48 - 72 hours
- More than 72 hours
- Varying periods over multiple days, please define total time below:

## Community Fire Units - Blue Mountains region

### 32. Which of these statements best describes your actions during the October 2013

#### Bushfires:

- Did not take any action as no fire threat
- Was not home / could not get home
- Did not conduct any defense and left the area
- Stayed to defend but the fire didn't arrive
- Began defending and then left
- Stayed and defended throughout
- Stayed and defended, left and then returned to continue defense
- Arrived after the main activity had passed and put out spot fires
- Other (please specify)

## Community Fire Units - Blue Mountains region

### 11. Activities undertaken during the 17 October – 23 October 2013 bushfires (co...

**33. How many, if any, homes were lost within your Community Fire Unit area of activity during the October 2013 bushfires?**

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- More than 15

**34. In your opinion why were these homes lost?**

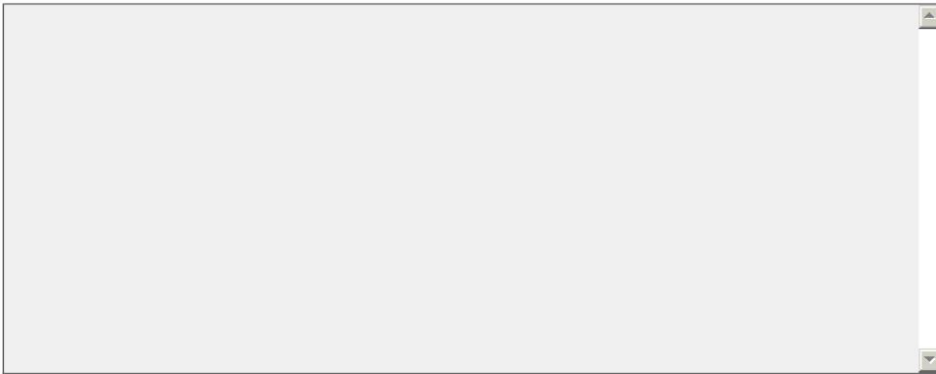


## Community Fire Units - Blue Mountains region

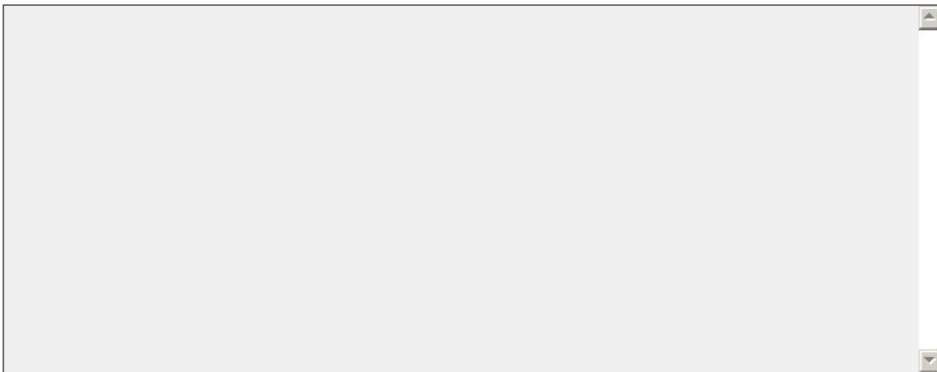
**35. Did your Community Fire Unit actively defend homes in your area during the October 2013 bushfires?**

- Yes  
 No

If yes, what actions were undertaken by your Community Fire Unit to defend those homes?

A large, empty text box with a vertical scrollbar on the right side, intended for the respondent to describe actions taken by their Community Fire Unit to defend homes during the October 2013 bushfires.

**36. If you answered 'yes' above please comment on how successful you feel your Community Fire Unit's actions were and why:**

A large, empty text box with a vertical scrollbar on the right side, intended for the respondent to comment on the success of their Community Fire Unit's actions and provide reasons.

**37. Do you think the actions undertaken by your Community Fire Unit reduced the bushfire impacts in your community? In terms of actions taken prior to and / or on the day.**

- Yes  
 Maybe  
 No  
 N/A i.e. no fire threat

## Community Fire Units - Blue Mountains region

### 12. The challenges faced during the activation and lessons learnt

**38. What were the major challenges that your Community Fire Unit faced during the October 2013 bushfires?**

**39. What lessons, if any, did you or your Community Fire Unit learn from your experience during the October 2013 bushfires?**

**40. What, if anything, would you do differently during a future bushfire / activation?**

## Community Fire Units - Blue Mountains region

### 13. Questions regarding Community Fire Unit training

#### 41. When did you last attend Community Fire Unit training conducted by FRNSW?

- More than a year ago
- 8 - 12 months ago
- 4 - 8 months ago
- 0 - 4 months ago

Other (please specify)

#### 42. When did you last attend Community Fire Unit training conducted by your Community Fire Unit?

- More than a year ago
- 8 - 12 months ago
- 4 - 8 months ago
- 0 - 4 months ago

Other (please specify)

#### 43. Do you think your Community Fire Unit training adequately prepared you for your activation (or potential activation) during the October 2013 bushfires?

- Totally adequate
- Mostly adequate
- Moderately adequate
- Somewhat adequate
- Inadequate
- Other

## Community Fire Units - Blue Mountains region

### 14. Questions regarding Community Fire Unit training (continued)

**44. If you were activated what particular aspects of your Community Fire Unit training were beneficial to you during the October 2013 bushfires?**

**45. Do you think that your Community Fire Unit training was inadequate in any way for preparing you for the October 2013 bushfires? Please answer this question in terms of your activation or the potential for you to be activated.**

Yes

No

If yes, please provide detail:

## Community Fire Units - Blue Mountains region

### 15. Questions regarding Community Fire Unit equipment

**46. Did you encounter any problems with the Community Fire Unit equipment during the October 2013 bushfires?**

- Yes, problems encountered while using or testing equipment
- No problems encountered while using or testing equipment
- Equipment not used or tested

If yes, please provide detail:

**47. Is there any extra equipment needed by your Community Fire Unit to help you defend homes and properties during a future activation?**

- Yes
- No

If yes, please provide detail:

## Community Fire Units - Blue Mountains region

### 16. The End!!

**48. Is there anything else you would like to add?**

**49. This is the end of the survey.**

**Thank you for taking the time to provide us with your views and opinions.**

**We will be conducting focus groups to discuss these issues in more detail in early 2014. If you are interested in taking part please provide your email address or contact number below (this information will be stored separately to your answers above):**

## C. Lessons learnt with respect to preparedness, training and communication

Response topics	Selected quotes
Preparedness	<ul style="list-style-type: none"> <li>• <i>The experience was a useful rehearsal for enacting our bushfire survival plan (what to take/when to leave)</i></li> <li>• <i>We learned that we can, and do, gather to prepare our area against fire attack.</i></li> <li>• <i>About being prepared and in being able to help with the back burn behind our homes, it was great to see how our efforts had an effect on the fire and how much effort it takes to stop areas reigniting. This was invaluable experience.</i></li> <li>• <i>That preparedness is vital and group discussion essential</i></li> <li>• <i>Further home preparation was needed as we have an old home built before the current regulations.</i></li> <li>• <i>For myself it gave me more confidence that we could do it, and more confidence to know what to do next time and be better prepared mentally.</i></li> <li>• <i>Not to be complacent, have a Plan, and a Plan B.</i></li> <li>• <i>Preparation in due time is paramount for efficient setup.</i></li> <li>• <i>We need to focus more on preparation of houses, not use of the equipment.</i></li> <li>• <i>The need to be prepared at all times of the year</i></li> </ul>
Preparedness and training	<ul style="list-style-type: none"> <li>• <i>Training, training, and then awareness of situation are paramount to being prepared.</i></li> <li>• <i>Having a map of our street prepared to distribute with water resources shown was helpful. Also maintaining our CFU training was useful.</i></li> <li>• <i>Further practise with our equipment including some additional water tanks on our street. I had cleaned our gutters approximately 6 weeks prior to the fire period, when I returned home Friday pm I assisted working outside our area when I should have refused and re-cleaned our house gutters firstly. It was not until Sunday morning when I completed the gutter clean, something I will not repeat again.</i></li> <li>• <i>Preparation and regular monthly training made a big difference to our ability and preparedness.</i></li> <li>• <b>PREPARATION AND MONTHLY TRAINING ARE INVALUABLE</b></li> <li>• <i>To continue to practising so that each member knows exactly what they are doing. To get physically fitter. That nothing can be left to the last minute as everything took a lot longer than anticipated.</i></li> <li>• <i>It is important to continue training so that we are ready and prepared should a fire come.</i></li> <li>• <i>Preparation and regular practice is essential to keep skills at the necessary level.</i></li> <li>• <i>There is no substitute for preparation and training – to ensure people and properties are prepared and safe.</i></li> </ul>
Preparedness and communication	<ul style="list-style-type: none"> <li>• <i>Maintain good communication. Be well prepared and practised in procedures</i></li> <li>• <i>That preparedness is vital and group discussion essential. Constant monitoring of media enabled us to be well informed.</i></li> <li>• <i>Communication and liaison with team members is important. A big issue seems to be complacency within the community. We should all have our bushfire survival plans completed and discuss with the family and neighbours.</i></li> <li>• <i>Probably the importance of regular communication amongst members and community</i></li> <li>• <i>Communicate clearly where everyone was and to keep panic to a minimum</i></li> </ul>

<p>Training and equipment</p>	<ul style="list-style-type: none"> <li>• <i>How well members responded to the fire threat and how frequent training benefits in emergencies.</i></li> <li>• <i>More familiarity of the equipment and the neighbourhood properties.</i></li> <li>• <i>We learnt that we are not there to actively fight fires, as we are not equipped to do that. It was reinforced that we stay and activate our own emergency bushfire survival plan. When the front has passed we then activate to mop up and assist where we can. That is what we are trained for.</i></li> <li>• <i>The training kicks in when you need it. You do need somebody to lead these events</i></li> <li>• <i>We want to have professional training and not just be left to our own devices as we have been over the last couple of years.</i></li> <li>• <i>I realised that our regular training especially with our walkie / talkies was crucial</i></li> <li>• <i>The value of training for such emergencies, in both an individual and a team capacity. The unit was ready for activation at short notice.</i></li> <li>• <i>Continue to train in order that all members are familiar with equipment and setup</i></li> <li>• <i>The importance of regular training and knowing that the equipment has been well maintained. A fire situation is stressful enough without the added burden of not being confident in how to operate equipment effectively and safely, with regular training allowing basic operations to become second nature.</i></li> </ul>
<p>Communication</p>	<ul style="list-style-type: none"> <li>• <i>As an 'associate member' I was the 'person on the ground'. I called in the activation &amp; relayed messages to the members. Found this system worked extremely well as the members were in discussion with fire fighting personnel &amp; would have had trouble hearing over the noise of pumper trucks etc. I could retreat the house to speak clearly without the noise.</i></li> <li>• <i>We have since developed a structured response plan, with role identification, priorities and actions detailed and documented that form the basis of action in similar situations, and improved internal communication strategies.</i></li> <li>• <i>We learned that a constant supply of information is needed to the co-ordinators as the CFU members and all people in the street come to them for information which they may or may not have. The co-ordinators meeting held at Glenbrook was good but needed to be done days earlier. The fire was Thursday, a meeting was not conducted until Monday night.</i></li> <li>• <i>Improve methods of contacting members who were at work.</i></li> <li>• <i>That staying in touch with each other is helpful and it made us know that we can trust each other to keep aware of our safety.</i></li> <li>• <i>The importance of good communication and working together as a team.</i></li> <li>• <i>That we need to improve communication between members when activated.</i></li> <li>• <i>Maintain contact with neighbouring CFUs and discuss strategies/plan.</i></li> </ul>



## D. Things that CFU members would do differently during a future bushfire or activation

Response topics	Selected quotes
Evacuation	<ul style="list-style-type: none"> <li>• <i>Would probably leave early as no life is worth losing. A house can always be rebuilt.</i></li> <li>• <i>Evacuate early and try to return as soon as possible to put out fires after the front has passed. Forget about trying to deal with spot fires as a unit for that intensity of fire and focus more on either leaving early or staying near shelter if unable to leave.</i></li> </ul>
Stay and defend	<ul style="list-style-type: none"> <li>• <i>Difficult to judge but possibly stay home on extreme+ days</i></li> <li>• <i>Possibly stay for longer, if I knew there were enough others to stay to activate with me.</i></li> <li>• <i>If the same situation arose again, I would remain home (until advised to do otherwise) as I feel I am now better equipped to prepare and have now had several street training sessions with our CFU team so have a much better idea of what would happen and what I could do. (In October, I had only just become a CFU member and done the initial one day training session a week earlier, e.g. no street training at that stage.)</i></li> <li>• <i>Ensure that we were better/earlier prepared to stay and defend</i></li> </ul>
Evacuation and preparedness	<ul style="list-style-type: none"> <li>• <i>We have revitalised our evacuation list to include things we had forgotten. I will have our evacuation boxes prepped as soon as hot weather happens. We were lucky that the Mt Vic fires gave us prep time but in future that might not happen so I realised the need to be prepared whether there is a threat or not.</i></li> <li>• <i>We packed our car and walked the 500m up to the CFU trailer, then couldn't get back home, so we may as well have not packed anything. Next time we'll drive up, and earlier!</i></li> <li>• <i>Be better prepared to leave!</i></li> </ul>
Preparation	<ul style="list-style-type: none"> <li>• <i>We did not fill out gutters with water this time, and we would do that in the future.</i></li> <li>• <i>Ensure that tanks are filled.</i></li> <li>• <i>I will prepare the property further in advance – at the start of spring and maintain it throughout the fire season</i></li> <li>• <i>I plan to make better use of the cooler periods of the year to do hazard reduction.</i></li> <li>• <i>More regular yard maintenance to avoid rush when conditions deteriorate.</i></li> <li>• <i>Now have a better structured plan for preparation – also helped by the bushfire survival plan app giving more prompts and being easily adapted to individual circumstances.</i></li> <li>• <i>We decided to do more about helping each other prepare properties in advance.</i></li> <li>• <i>I would not be watering down unit members' properties the day before a fire is due to impact with high winds. By 10am the next day there were absolutely no sign we had done so. A total waste of water and member time.</i></li> </ul>
Coordination	<ul style="list-style-type: none"> <li>• <i>Much more coordinated effort amongst the unit members based upon our internally developed action plan</i></li> <li>• <i>Utilise the contact numbers distributed throughout our CFU to better prepare to activate.</i></li> <li>• <i>Not much. Just need to work on communication, command and control.</i></li> <li>• <i>Ensure we had a good grasp of the needs and status of all the people in our street (ie who was home and who wasn't)</i></li> </ul>
Leadership	<ul style="list-style-type: none"> <li>• <i>We have three units in our street and at times they felt a little disconnected, possibly need a single coordinator.</i></li> <li>• <i>Don't doubt, do it. Activate when a risk is apparent.</i></li> <li>• <i>More support from the local fire station, if not before at least a contact after to ensure that we had what we needed and everything was alright.</i></li> <li>• <i>Install a new chief who will not run away and has contacts within the RFS so we know exactly what is happening</i></li> <li>• <i>Not take order from people who think they know what they are doing, but have proven themselves to panic and make poor judgements in an emergency</i></li> </ul>

	<ul style="list-style-type: none"> <li>• <i>Ensure there was adequate pre incident planning; formulate a command structure within the unit. Constant communication within the unit prior to the event may also provide confidence with the unit to adequately make decisions on dealing with the situation</i></li> </ul>
Engagement	<ul style="list-style-type: none"> <li>• <i>More community engagement.</i></li> <li>• <i>Offer our assistance to other areas/fire brigade, etc.</i></li> <li>• <i>Try and increase communication between residents who are normally home during business hours and those that are not, as their assessment of likely risk is much more timely and realistic.</i></li> <li>• <i>Ensure we all have each other mobile numbers. Not just members, but neighbours too. Especially the elderly and stay at home people who can get the call out.</i></li> <li>• <i>Attempt to recruit new members before the next emergency</i></li> <li>• <i>I would be talking to neighbours and finding out who would be staying to defend and who would be evacuating.</i></li> <li>• <i>In the future we might do some more community work at the start on the next fire season with other CFUs in the area.</i></li> </ul>
Protocols and equipment	<ul style="list-style-type: none"> <li>• <i>Do not work outside our area of operation.</i></li> <li>• <i>We would have had a CFU meeting to discuss who would stay, who would go, etc.</i></li> <li>• <i>I'll buy a fume mask and put this in my survival kit – the masks that are in the fire trailer just aren't good enough to sustain you to keep going mopping up the damage and continuing to put the fire out for as long as you need to. Suggestion: members are given fume masks as part of our kit.</i></li> <li>• <i>Change the way we deploy our equipment until we can obtain more.</i></li> <li>• <i>Source extra equipment and have our written plan copies and laminated so it could be handed to members to allow a quicker, smoother setup</i></li> <li>• <i>Limit myself to the amount of time I would be working with the unit, so as not to tire myself.</i></li> <li>• <i>Request to be activated to assist other areas</i></li> <li>• <i>Would like to have a 30mm Storz fitting installed on one pensioner neighbour's 9000L rainwater tank. Tank is located very near to our point of most likely defence and could be our only water supply if RFS/FRNSW needs to use our only hydrant. Would be great if this Storz fitting could be funded by CFU funds, but we're likely to pass the hat to get this done regardless.</i></li> </ul>

## E. Problems encountered with CFU equipment during the October 2013 bushfires

Hydrants and stand pipes	<ul style="list-style-type: none"> <li>We noted that a second hose and stand pipe for use at a property that was at the other end of our area would have been useful as the stand pipe and hydrant we had set up was well occupied on the 2 properties owned by the 4 members who activated. The other end property would have been better protected/defended with the use of the other hydrant towards their end of the street.</li> <li>Hydrant on the corner of Buena Vista St and Grant St is not accessible due to depth of connection. Water Board and FBNSW have been contacted on this previously with no action to date.</li> <li>If hydrant pressure was not available, there is insufficient equipment to cover the 10 properties in our unit based on stored water only, particularly due to the subdivision layout.</li> </ul>
Pumps	<ul style="list-style-type: none"> <li>We had a water pump casing leak while training with transfer pumping but it was fixed by tightening the casing bolts (was logged in the occurrence book for future maintenance check by service contractor).</li> <li>We realised that the Davey pump was not strong enough to pump water to 3 properties. When used for one or 2 in close proximity of the pump things worked well.</li> <li>One of our Davey pumps would not pump at full pressure. We have not come across this previously in our training sessions.</li> <li>On checking the pump function, we found that the float bowl on the carburettor of one of the pumps had not been fitted properly. As a result of not being seated correctly on the gasket, it leaked petrol profusely. This was an older refurbished pump which we'd received in exchange for our stand-pipe (these being useless in our area), and it was the first time we'd tested it. The petrol leak was easily fixed because we had a member who was a trained fitter, who was able to diagnose and rectify the problem within a few minutes.</li> <li>Found out low-oil sensor in fire pump shuts off pump engine if pump is not on a level surface.</li> <li>One of the pumps did not pump as well as expected. We moved in out and replaced it with a hose from the stand pipe.</li> <li>One pump had low pressure.</li> <li>One Davey pump was found to not pump at full capacity.</li> </ul>
Hoses, branches and nozzles	<ul style="list-style-type: none"> <li>Holes on one of the hoses.</li> <li>One hose needed replacement.</li> <li>Longer hose needed I believe.</li> <li>One line of 25 mm hose had a significant leak.</li> <li>We need longer or extra suction hoses to access static supply.</li> <li>Some branches had internal corrosion and were very stiff and difficult to operate.</li> <li>Some equipment was submitted for repair/replacement some time before the October fires. Several hoses have been with the FRNSW since before the fires. This reduced the ability of the CFU to adequately prepare or potentially conduct mop-up operations.</li> <li>With two standpipes we did not have enough branches and breaches for the large hoses.</li> <li>Many of the hose connections were tough to get on.</li> <li>Used hoses not returned by local brigade.</li> </ul>
PPE	<ul style="list-style-type: none"> <li>The goggles were second hand and scratched making visibility when wearing them difficult – if activated and really necessary to sue I would have struggled with vision.</li> <li>Needed more face masks.</li> <li>The face masks provided were not particularly effective in heavy smoke conditions, particularly</li> </ul>

	<i>for members who must wear spectacles.</i>
Other	<ul style="list-style-type: none"> <li>• <i>Had to replace dolphin torch batteries as they did not work to provide light at night.</i></li> <li>• <i>Spare Batteries for Dolphin torches were flat. Local FRNSW replaced them.</i></li> <li>• <i>Leaking water back pack.</i></li> <li>• <i>Backpacks needed subsequent tightening to stop leakage.</i></li> <li>• <i>The locks on the unit have never worked well and it was of concern to me that if activation had occurred they would present a problem to open.</i></li> <li>• <i>More keys could be allocated.</i></li> <li>• <i>Not enough equipment for all households.</i></li> <li>• <i>There was the potential of equipment to be taken from our unit by the NSW F&amp;R for use elsewhere limiting our capability should the need to activate arise.</i></li> </ul>