

LIFT-OUT: FIREBIRD 200 THE ULTRA-VERSATILE NSW RFS HELICOPTER

BUSH FIREbulletin

VOLUME 38 NO 3/2017

THE JOURNAL OF THE NSW RURAL FIRE SERVICE



Grass fires and start to 2016/17 fire season



Contents



08



12



21



36



48

01 FOREWORD

02 IN FOCUS

04 INCIDENTS

04 Recent fire activity

08 The blades of summer

12 FEATURES

12 Before, during and after

15 Smart and simple

16 COMMUNITY ENGAGEMENT

16 Australian Community Engagement and Fire Awareness Conference

18 Stop, collaborate and listen

20 Mind games

22 GENERAL NEWS

22 A country doctor with a heart of gold

24 Siding spring

25 LIFTOUT

25 A bird's eye view

29 GENERAL NEWS

29 Enhancing fire trails

30 COMMUNITY ENGAGEMENT

30 Get Ready Weekend

32 WOMEN IN THE SERVICE

32 More than just the Captain's wife

36 HISTORY

36 A hero for Hill End

38 BOOKS

38 Extreme incidents in Australia

39 Engaging young minds

40 GENERAL NEWS

40 Bushcraft skills for remote area firefighters

41 A new Guardian for the service

42 COMMUNITY ENGAGEMENT

42 Simple but effective

44 VALE

44 Peter Witton

45 CADETS

45 Born leader

46 AWARDS

46 Queen's Birthday 2016 AFSM recipients

48 RESEARCH

48 Bush fires kill

50 BRIGADE IN PROFILE

50 Yambora

52 GENERAL NEWS

52 Bush Fire Bulletin now on Trove

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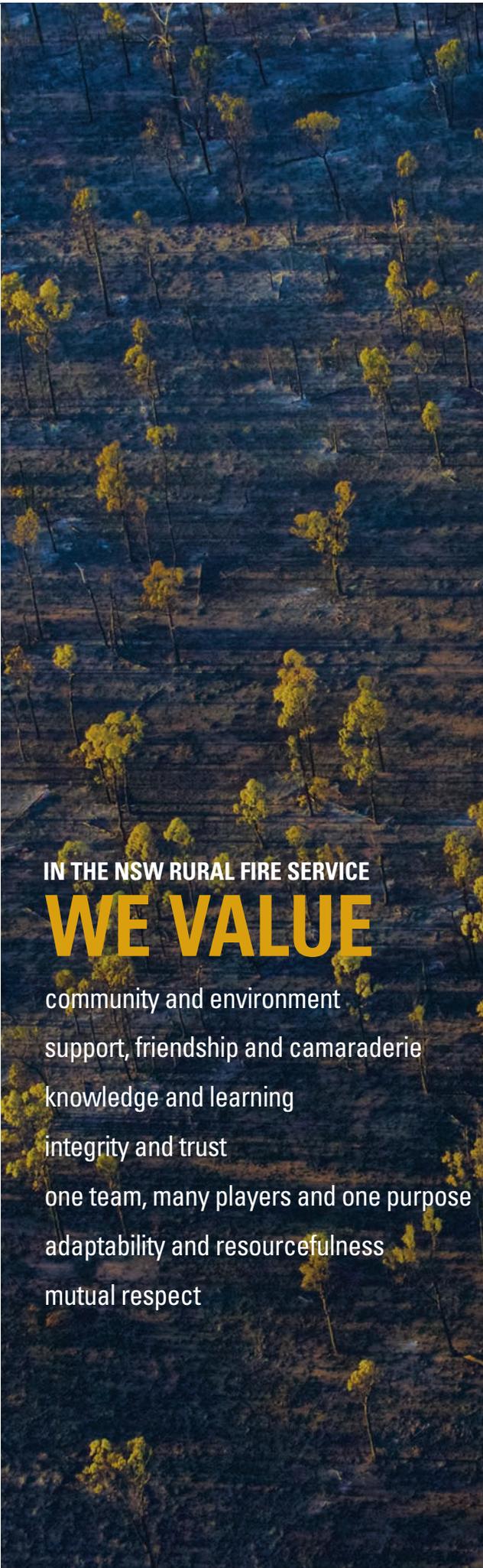
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**IN THE NSW RURAL FIRE SERVICE
WE VALUE**

- community and environment
- support, friendship and camaraderie
- knowledge and learning
- integrity and trust
- one team, many players and one purpose
- adaptability and resourcefulness
- mutual respect



Foreword

After heavy winter rain and some uncomfortably warm weather in the leadup to summer, we knew we were looking at a potentially dangerous season.

To our members on the land, this was no surprise. The same conditions that gave us a late and, for many, bumper harvest also delivered huge grass growth across the state.

We entered this season with a significant focus on the risk of grass fires. The damage caused by a grass fire can be tragic and distressing, and yet research shows that many underestimate how fast or destructive they can be.

Over the past few months we've worked to inform the community of the increased risk, and how to reduce that risk. New resources like a guide for grain harvesting have already proven valuable in supporting rural landholders to make safer decisions. You can read more about these initiatives in this edition of the Bulletin.

This issue of the Bulletin is a reflection of our organisation – one that innovates, seeks a world standard of excellence, and sees the diversity of our membership as a source of pride.

This is our second season trialling the use of the Large Air Tanker and Very Large Air Tanker, and our members who have worked alongside these appliances can attest to their effectiveness, including knocking down fast moving fires. They have proven themselves to be a valuable addition to the state's firefighting fleet, in supporting firefighters on the ground.

Technology like apps and resources like the air tankers are often exciting, fascinating and hugely valuable to the firefighting effort. Their value, however, is always founded on our people who design, use and improve the tools. A good example of this is our increasing capacity in the realm of fire behaviour analysis, and I am proud to acknowledge the input of volunteers like David Philp in this space.

In this issue we are honouring the young and the seasoned, including our Cadet of the Year 2016 and AFSM recipients, as well as an employer, who plays such an incredible part in supporting our people.

In the next issue, we will have stories from the recent incidents and efforts of February 2017. For now I'll express my huge gratitude to all of our members who responded and the communities who were impacted.

Stay safe,

Shane Fitzsimmons, AFSM
NSW RFS Commissioner



@RFSCommissioner



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Young Volunteer of the Year Awards



Many brigades are made just that little bit brighter (and possibly more fun) by the presence of young people. This year the NSW RFS is introducing two awards to celebrate the contribution of young people to the NSW RFS. The NSW Rural Fire Service Young Volunteer Awards has two categories 12-15 years of age and 16-25 years of age. Anyone can nominate a member – you can even nominate yourself. The goal of the award is to acknowledge young members who demonstrate a positive impact on the brigade and their local community and who live the NSW RFS values. More information about the awards and how to nominate can be found on MyRFS.

Generosity in action



Cecile Griffin, a Southern Highlands resident, bequeathed a brand new Category 13 tanker to her local brigade. In a special ceremony in late October 2016 the state-of-the-art fire truck was formally handed to volunteers. Mrs Griffin was a resident of the local area and wanted her legacy to include giving back to the community. The truck is worth around \$380,000 and will be located at the Wingecarribee Fire Control Centre and maintained by the Wingecarribee Support Brigade. Acting District Manager Inspector Neale Ray said: "Considering the generosity of Cecile Griffin, it was only fitting that we honour her generosity and community spirit by naming the truck in her memory."

Remembering our fallen



Two new names were added to the Volunteer Memorial at Sydney's Mrs Macquarie's Point in 2016. In a ceremony on October 2016 all NSW emergency services gathered to remember those volunteers who have died while protecting their communities. This year, sadly, the NSW RFS added the names of Peter Witton and Paul Sanderson to the memorial. Peter Witton, Deputy Captain of Kyogle Headquarters, died on Thursday 18 September 2014 while responding to a house fire. Paul (Sando) Sanderson was Deputy Captain of North Rothbury Brigade and died on Thursday 26 November 2015 while fighting to protect Stanford Merthry from a bush fire. Rest in Peace.

Armidale upgrade



An \$800,000 purpose-built NSW RFS airbase facility has been opened at the Armidale Regional Airport and will be the command centre for all aerial operations in the region. Assistant Commissioner Talbert (above centre) said the event marked the beginning of a new era for the New England Aviation Rural Fire Brigade. The facility has purpose built offices, a repair workshop, a storage facility as well as an operations room and tanker bay. ABOVE(LR): Adam Marshall MP Northern Tablelands, NSW RFS Assistant Commissioner Rebel Talbert, Dr Ian Tiley from Armidale Regional Council and District Manager Steve Mephram unveil the plaque at the opening in July 2016

PPC Trial – one step closer



The upgrade and review of Personal Protective Clothing (PPC) has reached another milestone. In October 2016 the latest prototypes underwent testing at the University of Alberta in Canada. Under laboratory conditions the PPC was tested for its capacity to protect a firefighter in the event of a flashover. The garments underwent temperatures of 800-900 degrees Celsius for four seconds. The garments emerged from the test meeting all the standards and being comparable with the current PPC.

Service HQ stays in Western Sydney



A long-term lease for an enhanced State Operations Centre and Headquarters at Sydney Olympic Park has been signed. Located just a short distance from the current base at Lidcombe, the new building at 4 Murray Rose Avenue will be fitted with state-of-the-art technology to support firefighting operations, such as live fire information and intelligence, digital mapping, public information, warnings and media broadcasting. Commissioner Fitzsimmons said the State Operations Centre would have increased capacity and capability during major emergencies, enhancing logistics, resource coordination, public information and warnings. The current lease for the Lidcombe base expires in November 2018.

Campaign wins



PREPARE. ACT. SURVIVE.

FOR MORE SIMPLE STEPS GO TO MYFIREPLAN.COM.AU



The NSW RFS 'I Am Fire' campaign has picked up a number of awards at the 2016 Australian Effie Awards for advertising effectiveness. The campaign was awarded Silver in the Government and Not for Profit Cause-related Marketing category and Bronze in the Best State Campaign, Insight and Strategic Thinking category. The campaign, titled 'I Am Fire', launched in September 2015 and includes coordinated television, radio, print and online activity. It is closely aligned with the state-wide Get Ready Weekend held in September. The campaign resulted in an increase in the proportion of people who correctly assessed their level of risk from

24 percent to 36 percent, and increased the number of people who had discussed their bush fire plan from 52 percent to 66 percent. Levels of preparation also increased from 38 percent to 50 percent. The three-year campaign will continue each bush fire season until 2018. The campaign was supported by a new website designed to simplify bush fire planning and preparation information. Members and brigades can download tools from the 'I Am Fire' campaign on the MyRFS website under Resources and One NSW RFS Tool Kit.



Cherrybrook Brigade on Nine Mile Creek Road, Medowie working on the Lone Pine Fire. Photo by Gus Gulicher, Senior Deputy Captain, Muogamarra Brigade.



Recent fire activity

In the weeks leading up to the official start of summer, there was significant fire activity around across the state. The first Total Fire Bans of the season were declared for Saturday 5 November in the North Coast and Far North Coast and the first two Section 44 declarations also occurred on that day.

Llandilo

In November, the west of Sydney was affected twice with bush fires. On Friday 4 November, a fire burning in bushland at Llandilo resulted in an Emergency Warning and an Emergency Alert issued to residents. Hundreds

of NSW RFS firefighters were assisted by Fire and Rescue NSW (FRNSW) and National Parks and Wildlife Service (NPWS) crews, as well as help from the air from the Very Large Air Tanker (VLAT) and Large Air Tanker (LAT), Air-Crane and other waterbombing aircraft.

Firefighters saved around 80 homes with the only damage being four houses, along with one care facility, one shed and a number of cars.

First weekend of November

The first Total Fire Bans of the season were declared for

Saturday 5 November in the North Coast and Far North Coast. Conditions were generally hot and gusty with some winds recorded at 89kph throughout the day. Two Section 44 declarations were made: one in Cessnock, Maitland, Dungog and Port Stephens local government



areas and the second was in the Kempsey region.

Throughout that weekend there were 57 bush and grass fires across NSW, more than 1,200 firefighters and around 33 aircraft were working hard in difficult conditions. Even as conditions eased on Sunday evening, 19 fires around the state were classified as uncontained.

Londonderry

On Sunday 12 November, NSW RFS crews were alerted to a fire in neighbouring Londonderry. Approximately 440 firefighters from NSW RFS, FRNSW and NPWS were assisted by waterbombing aircraft including the Air-Crane, VLAT and LAT. The alert level reached Emergency Warning with two Emergency Alert messages sent advising residents to shelter from the fire. More than 50 properties came under direct threat and were successfully protected by the hundreds of

firefighters on the scene.

A 22-year-old female volunteer, Nadia Knox from Loftus Brigade, was injured on the fireground when a tree branch fell and hit her from a height of around eight metres. She was released from hospital later in the evening with a broken shoulder blade. See more information above right.

Racecourse Road

A fire near Cessnock started on Saturday 5 November which spread quickly due to windy conditions. The VLAT and LAT assisted and ground crews conducted extensive backburning over the following days. The strong winds continued on Monday 7 November and an Emergency Warning was issued to residents. While two houses were damaged, there were no other losses.

Lone Pine Fire

On Friday 4 November firefighters were battling a fire

north of Raymond Terrace which escaped containment lines due to strong winds. Within three hours of ignition, the Pacific Highway was closed in both directions. The VLAT and LAT were sent to assist firefighters and an Emergency Warning was issued for local residents to seek shelter as the fire approached. A short time later firefighters had the blaze under control, the fire was downgraded to Watch and Act, and the highway was opened. Cooler conditions overnight allowed crews to backburn and set up containment lines however the 140km fire edge and hot dry winds presented a challenge for firefighters the following day. Residents in Karuah were under threat for most of Monday 7 November before the fire was downgraded to Advice.

When the fire was declared out on 11 November, five outbuildings had been destroyed, one other outbuilding had been

damaged and two houses had been damaged. The fire burned a total of 9,200ha.

Kundabung Fire

On Monday 7 November, further north in the Kempsey area, a fire burned south of the town near the Pacific Highway at Kundabung. A Section 44 was declared for this fire late on Saturday 5 November. Firefighters worked to establish close containment lines around the fire over the following week. The Section 44 declaration remained in place until 14 November.

South Ballina

After igniting on Sunday 12 November in forest and coastal heath, a fire in South Ballina flared up the following day and was burning toward the Seabreeze Holiday Park. Additional firefighters and aircraft were sent to the area and over the coming days the fire moved into peat soil underground,



It was Nadia's Knox's first ever deployment of the fireground and one that she will never forget.

On 13 November 2016, Nadia Knox from Loftus Brigade, was working on the Llandillo fireground as part of an out-of-area deployment. Crews were mopping after the fire had been through and dangerous trees were present in the area. Without warning, a tree branch fell and hit Nadia from a height of around eight metres.

Loftus Brigade firefighter Rob Cole was on the scene and was quick to conduct first aid on Nadia.

At a media conference the following day Rob Cole spoke about his initial fears for Nadia's welfare. Fortunately, Nadia was released from hospital later that in the evening with a broken shoulder blade.

She expressed her gratitude to Rob and the to the Service the following day at the media conference.

(L-R): Rob Cole, Nadia Knox and Commissioner Shane Fitzsimmons at the media conference on 14 November 2016. Photo by Scott Deller

creating a lot of smoke in the area. Firefighters worked hard to flood the ground with water but were unable to completely extinguish the fire. Thermal imaging cameras recorded temperatures in smouldering underground peat to be from 480 to 763 degrees. Smoke continued to be seen in the area for several weeks.

Carinda

On Thursday 1 December crews were called to a fire on property in Carinda, near Coonamble. Local brigades responded as well as a number of privately owned tanker trailer units. The LAT and fixed wing aircraft were called in to assist ground crews. In four hours, approximately 2,540ha of crop stubble was destroyed as well as some fencing, power poles, a private vehicle and trailer and some smaller farm assets.

A number of fires were ignited across Tamworth on Saturday 4 December, after multiple bands

of lightning across the district. More than 40 firefighters and 16 tankers responded to incidents, with most fires contained by 2000hrs.

The Remote Area Response Team (RART) team, based in Tamworth for the day, responded to a lightning strike in a remote area of Moonbi hills. The team were able to extinguish the fire before it became too big to handle.

A fire burning in remote terrain at Watsons Creek was difficult to access and remained active for a number of days. The fire was contained with the help of NPWS and a helicopter that dropped in crews to walk the fire line and then dropped water on the edge of the fire.

Assistance across the border

Across the border in Victoria on 21 November a grass fire broke out just before 1230hrs at Parsons Road, Swan Hill. The NSW RFS sent crews and the

VLAT and LAT to assist however fortunately firefighters gained the upper hand prior to their arrival and they could be stood down. The blaze, fanned by strong winds and gusts up to 56kph and temperatures reaching 39.5 degrees, burnt more than 500 hectares. One of the CFA fire trucks was damaged after flames came over the top of it but no one was badly hurt. The fire was declared controlled by the evening of 21 November.

Later in the fire season

Updates on the later part of the fire season will appear in the next edition of the (ITALICS) Bush Fire Bulletin.

CLOCKWISE FROM TOP LEFT, OPPOSITE PAGE:

Drenching smouldering peat soil, is very dirty work. At the Ballina South fire are Wardell Brigade Captain Ray Collyer, Deputy Captain Jo Heber, Michael Heugh, Andy Collins and Bonnie Heber Wood. Photo by George Rushby.

TOP RIGHT: Friday 4 November 2016 at the Llandillo fire: The intersection of 5th Avenue and Terrybrook Rd. Photo by Brendon Roberts, Wallacia Brigade.

LOWER RIGHT: Sunday 6 November: Racecourse Rd Fire in Cessnock as seen from the NSW RFS waterbombing helicopter. Photo by Shane Geerin.

LOWER LEFT: Firefighters on the Lone Pine Fire. Photo by Michael John Fisher



The blades of summer

There has been an increased risk of grass fires this season

A header sparked a fire destroying almost 405 hectares of wheat north of Condobolin in November 2016.

"It was a normal day," said District Manager Ken Neville, "it was certainly not a day that we would recommend farmers not to harvest."

Around midday on 21 November 2016, the fire spread very quickly through the unharvested wheat on Kiargarthar Station, a large wheat and barley farm

50 kilometres North West of Condobolin.

At around 1300hrs, the first arriving crews from Triangle Brigade, found a fire burning through crops and moving quickly in windy conditions. Crews used an internal road which functioned as strategic fire break to eventually contain the fire. West Glenderry

Homestead was in the path of the fire and one crew immediately began property protection.

Further resources from Baratta, Condobolin HQ, South Vermont Hill, Derriwong, Mogandale and Borambil Brigades arrived over the coming hour.

Firefighters worked to contain fire on both flanks using direct attack and supported by a fixed wing water bombing aircraft.

By 1400hrs firefighters on the ground were able to declare

the fire contained and the West Glenderry Homestead as safe. Crews patrolled the fireground for the rest of the day and overnight. The fire was declared out the following day at 1500hrs.

"There is probably 8,000 hectares of wheat and barley crop on that farm ready to harvest," Mid Lachlan Valley Team District Manager Superintendent Ken Neville said. "It can be very difficult to bring a fire like that under control and its potential to



LEFT: The header that started the recent fire west of Condobolin

Grass fires can move three times faster than bush fires.

cause damage is quite large. We were lucky that it was not a really bad fire weather day.”

Winter rain has meant that across much of western NSW vegetation growth and grass levels are high. While the rain has been welcome, it’s also brought an unwelcome threat of grass fires across the west of the state. As the weather warms up and the grass begins to cure and dry out, the landscape is becoming more susceptible to fire. Grass fires can be especially dangerous

because they start quickly and spread rapidly, destroying not only homes and stock, but also lives and livelihoods. Grass fires can move three times faster than bush fires.

“There is plenty of inherent risk when you have a header, which has so many moving parts, working in three foot high fully cured crops,” Superintendent Neville said.

“Particularly at the beginning of the harvest, some of the parts on the header can fail. A bearing might fail and shoot

out red hot ball bearings into the dry grass, or straw might build up in the belts and chains and the heat of the machinery simply starts a fire.”

A voluntary harvesting guide has been issued for this season and it can be found on the websites of NSW Farmers and the NSW RFS.

It recommends when to harvest and when not to harvest depending on the wind, the temperature, humidity on the day.

Further north in the Orana District, District Manager Lyndon Wieland described his area as “wall-to-wall fuel”.

“We have a lot of headers working in cereal crops, particularly to the west of Dubbo, and that is slowly working back into Dubbo and down to the Wellington area,” Superintendent Wieland said.

“While ever you have got machinery working in cereal stubble there’s the possibility of an accidental ignition point.” He said in the absence of rain



“everything is rapidly curing” to the point that a puff of wind could fan a fire.

Grass fire campaign

Due to this increased risk of grass fires the NSW RFS has been working to ensure rural and farming communities are well-prepared. Grass fires can move three times faster than bush fires.

While NSW has seen significant and destructive grass fires in recent years, including those at Gerogery in 2009 and Junee in early 2006, the last significant and long-running grass fire season was experienced in 1984/85 when more than 3.5 million hectares of land was burnt, resulting in five deaths and \$40 million damage. In 1974/75, the damage was

even more widespread with 4.5 million hectares burnt, six people killed and 50,000 head of stock destroyed.

It’s not unusual for grass fires to burn at 20 or 30 kilometres an hour under certain conditions. In December 2009 the Gerogery fires in the Riverina occurred on a day of Extreme Fire Danger Rating with gale-force winds of up to 60kph, temperatures of 37 degrees and low humidity. In a single day the grass fire scorched 17,000ha and destroyed 11 homes.

The impact of changes to farming practices over the past 30 years has also increased grass fire threat for some areas. Many farms have been purchased by large corporations

who implement ‘fence to fence’ pastures to maximise returns. This has resulted in some firebreaks being removed and the possible risk increased.

Protecting assets in the landscape is also an increasing challenge for firefighters. In some areas of remote NSW, fires can be left to burn out with minimal intervention. Over recent years, however, the construction of large new assets in the landscape such as electricity facilities, communications equipment or even large developments such as mining operations, has increased the possible damage that a grass fire could do.

To assist with informing communities of the increased risk, the ‘I am Fire’ campaign

this season includes direct-mail advertising in Western NSW, online resources, and printed material for members to use in local community engagement activities. All the resources focus on simple steps people can do to reduce their risk, like maintaining firebreaks.

Some of the key points NSW RFS members can talk about with their community include:

Grass fires

There are simple things you can do to prepare for a grass fire:

1. Keep grass short – you can mow it, graze it or slash it back
2. Maintain your machinery
3. Know where you can move your animals to safety



4. Check and maintain firefighting equipment like pumps and hoses
5. Make sure a fire truck can access your property – think about gates or obstructions
6. If you're using fire on your property, find out if you need a permit
7. If you're travelling, be aware of fires in the area - visit www.rfs.nsw.gov.au or get the Fires Near Me app for your smartphone

Bush fire planning

1. Discuss with your family what you will do if a fire happens near you.
2. Prepare your home and get it ready for bush fire season.
3. Know the bush fire alert levels.

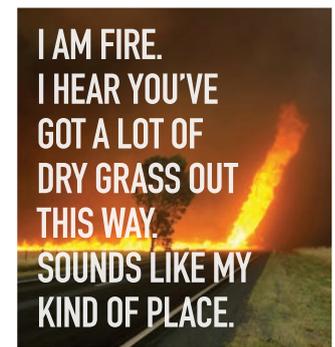
4. Keep information like websites and emergency details handy.
5. Get the easy guide to making your bush fire survival plan at www.myfireplan.com.au

Top five things to do to prepare your home

1. Trim overhanging branches.
2. Mow your grass and have a cleared area around your home.
3. Remove materials that can burn around your home.
4. Clear and remove leaves and debris from your gutters and around your home.
5. Prepare a sturdy hose that reaches all around your home.

New grass fire fact sheets, including tips, preparation advice

and video content has been published at www.rfs.nsw.gov.au for use by NSW RFS members.



Fire has a plan.
You need one too.



ABOVE: In late 2009, grass fires in Gerogery in the Riverina produced startling fire behaviour including this fire whirl. The fires were powered by gale-force winds of up to 60kph, temperatures of 37 degrees and low humidity. In a single day the grass fire scorched 17,000ha and destroyed 11 homes. Photo courtesy of *The Border Mail*. ABOVE: These small flyers are available from local Fire Control Centres.



Before, during and after

The growing role of Fire Behaviour Analysis in the NSW RFS

Following the inquiries into the 2013 Wambelong Bush fire, the NSW Government has recommended that the NSW RFS Fire Behaviour Analysis Team be enhanced. By Laurence McCoy, Senior Fire Behaviour Analyst.

During the Coronial Inquiry the role of Fire Behaviour Analysis (FBA) within fire management in NSW was reviewed. As a consequence of the two inquiries in the 2013 Wambelong fire, the NSW Government has taken significant steps to ensure that Fire Behaviour Analysis will play a key role in the future of firefighting.

Two of the key recommendations from the NSW Government after the 2013 Wambelong fire inquiries held in 2016 were to:

- 1) Employ four additional Fire Behaviour Analysts in each of the four regional offices to provide decision-making support to local Incident Management Teams and;
- 2) Commence the Enhanced Situational Awareness project.

The role of Fire Behaviour Analysts

The four additional Fire Behaviour Analysts (FBA) have now been employed and are located in each of the four regional offices. The

Service had been testing the posting of FBAs into Incident Management Teams since the 2013/14 season. These initial trials proved effective with anecdotal feedback suggesting the FBAs were able to access greater intelligence by being in close proximity to the fire and to fire managers.

They were also able to provide local interpretation of the analyses provided by the Fire Behaviour Analysis team in Headquarters and this resulted in greater uptake and support from within the IMT.

The four new analysts will join the eight Headquarters staff, comprising seven fire behaviour analysts, a meteorologist contracted from the Bureau of Meteorology and administrative support staff. There are also around 80 other

NSW RFS members and other NSW fire agency staff who have attended formal training courses in Fire Behaviour Analysis. Accreditation levels for these analysts are gathering momentum with eight FBAs having been accredited against the national module.

In the five years since the establishment of the Fire Behaviour Analysis Team, NSW has been able to develop a significant capability. There are now established procedures, training, a suite of tools, equipment and personnel in place to support operations with predictions and analysis at state, regional and incident levels.

Enhanced Situational Awareness Project

The second key recommendation from



Fire Behaviour Analysts are now employed in each region

the inquiries into the 2013 Wambelong fire was for the commencement of the Enhanced Situational Awareness Project.

The project has been designed to provide NSW with an adaptive and portable weather observation capability. It aims to coordinate acquisition of weather observation equipment, such as atmospheric sounding (weather balloons), as well as additional Portable Automatic Weather Stations (PAWS). The project will develop procedures and provide training to members to deploy the equipment as well as provide members with the ability to take weather and fire behaviour observations through the use of a "Collector app" (see page 15).

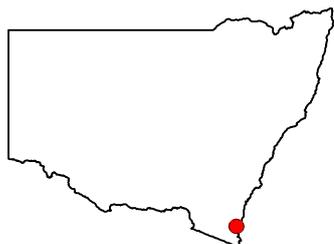
In 2016 an additional four Portable Automatic Weather Stations (PAWS) were acquired bringing the total capability to 12 and four portable atmospheric sounding units have been acquired. These sounding units will enable the FBA team to be able to gain a better understanding of dangerous fire and other weather phenomenon, such as storms, and in particular provide a tool that can be used to interpret atmospheric stability. The equipment will improve the weather forecasting ability of the Bureau of Meteorology and in turn improve fire behaviour predictions enabling operations to make more informed decisions in relation to weather and fire behaviour.

The initial plan is to train State

Mitigation Support Services (SMSS) crews to deploy and operate the equipment in the 2016/17 fire season. In the future it is hoped that training and the opportunity to participate will be offered to all members of the service.

LEFT: Within the State Operations Centre, Fire Behaviour Analysts work closely with the fire managers, comparing intelligence from the field with weather and fire behaviour predictions Photo by Chris Jones ABOVE: Volunteer Fire Behaviour Analyst David Philp setting up a Portable Automatic Weather Station (PAWS) in the field. This tool measures weather features such as temperature, relative humidity and wind speed which is relayed directly to the Fire Behaviour Analyst in the State Operations Centre.

Volunteer fire behaviour analyst in profile



Name: David Philp

Year joined: 2008

Current role: Fire Behaviour Analyst and Community Engagement Officer, Brogo Brigade

D/T/Z: Far South Coast

What first inspired you to join the NSW RFS, and how long have you been a member?

When I retired in 2005 my wife and I decided to move from Queensland to the Far South Coast where we built our house on an undeveloped 50 hectare bush block. During construction the area was subject to a potentially serious bush fire, which highlighted our need to get a better understanding of fires and how to deal with them. So following the completion of the house in 2008 I joined the Brogo Brigade and took the first step to learn firefighting. It also offered me the opportunity to become more involved with the local community whose main social gathering point at that time was the local fire station.

You are the only NSW RFS volunteer qualified to be a Fire Behaviour Analyst. What does this role entail?

While I became the first NSW RFS volunteer to be accredited both as an NSW RFS Fire Behaviour Analyst and nationally to develop and analyse the behaviour and suppression options for a Level 2 wildfire, it is a status that will not last long. The role of the Fire Behaviour

Analyst is one which continues to evolve. It was established as a specialist role following the Victorian Royal Commission into the Black Saturday Fires. Initially the emphasis was on predicting the likely rate of spread and the extent of the fire over time. Today our role includes support to the Incident Management Team on issues such as firefighter and general public safety, effectiveness of containment strategies, alternative containment options, breakout scenarios, deployment of Portable Automatic Weather Stations, fire weather and behaviour briefings and offensive/defensive strategies.

What are some of the qualifications you've obtained?

The key qualifications include my NSW RFS and National accreditation as a Fire Behaviour Analyst and as a Community Safety Facilitator. Getting here has included Village Firefighter, Advance Firefighter, Rural Fire Driver, First Aid, Incident Control System for Incident Management Team and Conduct Briefings and Debriefings.

How many hours a week/year do you volunteer with the NSW RFS?

Unless otherwise deployed I usually spend about one day per week at the Bega Fire Control Centre keeping data up to date and supporting with scenarios of fire behaviour for community engagement, mapping updates, updating the fire trails register or whatever is needed. Each week I provide an overview to the NSW RFS, National Parks and Wildlife Service and Forestry Corporation of NSW on a number of fire behaviour indicators for the Far South Coast Team area. I am still active in brigade training, community engagement activities and respond to

call outs. It is fair to say that the NSW RFS occupies a significant part of my life!

What inspires you to keep volunteering?

Very simply, the challenge. Fire behaviour analysis is not an exact science and it draws on all of one's knowledge and experience to do it well. Maintaining an open mind and the best possible situational awareness is paramount.

Since being involved with the NSW RFS I have become concerned about the level of fear that surrounds bush fires in the general community. So in conjunction with my wife Robin, who is qualified as a Community Liaison Officer, we have gained a lot of satisfaction from helping people understand what they can do to survive a bush fire and to put their lives back to normal as quickly as possible after a fire.

What is an experience you've had in the NSW RFS that will always stick in your mind?

Something that stays with me happened while I was working in State Operations as a Fire Behaviour Analyst for the January 2013 fires. I had to devote all my attention to the fire at Yarrabin which was up and running very fast.

Four hundred kilometres away, however, near my home, a fire kicked off which ran straight into our property. Without the support and assurances from

Bega Incident Management Team I doubt that I could have continued to concentrate on the task at hand. It typified the comradeship and support that is such a big part of the Service.

Would you encourage other NSW RFS volunteers who have retired to become involved with FBA?

Well it certainly beats playing mind games to fend off dementia! For me becoming a Fire Behaviour Analyst has given me the opportunity to continue to make a useful contribution as a volunteer to both the community and the Service at a time when my capacity for active firefighting is declining. Fire Behaviour Analysis is a challenging field involving an interesting mixture of both science and practical experience. Research is just beginning to open the door on more effective ways of predicting fire behaviour. There is a real need to develop operational systems that convert research into effective outcomes for both firefighters and community safety.

Having this opportunity to volunteer my skills and ability in this way is one of those things that helps me get up every day. It is about being involved, of being engaged and making a useful contribution. As a volunteer you have a choice to use your skills and time on your own terms and that's what makes it great.



Smart and simple

A new smartphone app allows data to be collected directly from the field

A new smartphone and tablet app has been configured by NSW RFS GIS (Mapping Unit), with the support of State Operations, to enable data to be collected directly from the field and synchronised with existing operational systems

The new Collector for ArcGIS app, available for members to use in liaison with District Managers, enables data gathered in the field to be uploaded and synchronised with ICON, COP and MapDesk.

Using the internal or an external GPS, Collector for ArcGIS allows members in the field to provide incident mapping, situation reports and weather updates. Members can also download maps to work offline, search for addresses, receive driving directions and upload photographs of incidents.

The information is accessible both in the field and by the Fire Control Centre, increasing the timeliness and accuracy of information flow and improving operational decision making.

Fire Behaviour Analyst at NSW RFS Headquarters, Jamie Carter, trialled the Collector for ArcGIS app at a hazard reduction in October 2016.

"It's pretty useful," he said. "You can do things like run your finger along the map

to indicate the proposed containment lines or walk along the fire edge to indicate the current active fire edge.

"For us, as Fire Behaviour Analysts, it provides us with real-time intelligence from the field and will make our predictions so much more accurate. We will continue to use our prediction models but we will be able to correlate it against the observations direct from the field."

Other features of Collector for ArcGIS include:

- Hazard Reduction Planning – members in the field can plan for control lines and strategies. The data will be available in MapDesk at the Fire Control Centre.
- Ground Truthing – members in the field can audit fire trails, including marking up where ground works are required and the location of locked gates or obstacles. The data will be available in MapDesk at the Fire Control Centre.

NSW RFS members can access the app using their staff or MyRFS login. Once logged in members will have access to a training environment which provides a safe place to navigate and become familiar with the functions and features of the app.

Online mapping tools and the Field Data Collection Manual are available on the NSW RFS Portal for ArcGIS (<https://collector.rfs.nsw.gov.au/arcgis/home/>). Download the free Collector for ArcGIS app for Apple and Android.

For more information about Collector for ArcGIS, contact to your local Fire Control Centre or email the GIS team: gis@rfs.nsw.gov.au

ABOVE: During major fire campaigns the State Operations Centre is fully operational. The Common Operating Picture (COP) is displayed on a large smart screen where intelligence from the field using the Collector App can be viewed in real time. The intelligence from Collector App can also be viewed on ICON and Mapdesk within the NSW RFS network. Photo by Chris Jones

It provides us with real-time intelligence from the field and will make our predictions so much more accurate

Creating value for community engagers

Albury hosts the ACEFA

Every two years the NSW RFS hosts the Australian Community Engagement and Fire Awareness Conference (ACEFA) which has become the premier conference of its kind in Australian emergency services. In 2016 the Southern Border Team welcomed the ACEFA Conference to Albury which saw the first time the event has been held in Region South. Photos by Sharon Quandt

The ACEFA conference attracted more than 550 delegates from around Australia including community engagement practitioners within the Service and as well as those from emergency services, government and private sectors.

“Over the last few days I’ve heard nothing but positive feedback about the event,” Corporate Communications Director Anthony Clark said on the final day, “To have the conference described quite publicly as the ‘most valuable and practical’ conference ever is a huge vote of confidence in what everyone’s achieved.”

ACEFA Conference aims to share knowledge, experiences and best practice in engaging with communities to improve community safety. Some of the best ideas, innovations and research and programs are showcased in presentations over two days. This year there were more than 60 presentations.

The conference is a chance for the NSW RFS members to present their latest successes and innovations. In particular this year there was a focus on presenting the research and reasoning behind the development of the Guide to Making a Bush Fire Survival Plan. On the

following pages you can read an excerpted transcript of a talk by Mike Daniels, founder of Behavioural Architects, where he discusses the research and thinking behind the Guide.

Seeking knowledge from outside the fire management industry is a vital aspect of learning and this year the conference also featured keynote presentations from Craig Cormick an award-winning science communicator, specialising in public attitudes towards new technologies and Kerry McSaveney from New Zealand Emergency Management. Kerry’s presentation appears on

the following pages.

The local Southern Border Team community engagement team played a vital role in liaising with local businesses and local volunteers to make the event a success. Southern Border Team Manager Patrick Westwood was thrilled to have the conference in his area.

“The conference was a great opportunity for this city and the Southern Border Team,” he said. “Our local community engagement team have once again shown us just how passionate, dedicated and professional they are.”



CLOCKWISE FROM TOP: More than 500 delegates came from across NSW to be part of the Australian Community Engagement and Fire Awareness Conference 2016. ABOVE RIGHT: Welcome to Country was performed by local indigenous man Darren Wighton (Wiradjuri). LOWER RIGHT: Dr Melanie Taylor Senior Lecturer at Macquarie University delivering a presentation to delegates. LEFT: The Albury Entertainment Centre was the perfect venue to host the 2016 ACEFA Conference in its first visit to Region South ABOVE LEFT: Director Corporate Communications Anthony Clark, presents the thinking behind the latest public awareness campaign and Guide to Making a Bush Fire Survival Plan. ABOVE LEFT: Commissioner Shane Fitzsimmons, AFSA officially welcomes delegates to Albury during the Welcome Reception. Photos by Sharon Quandt

Stop, collaborate and listen

The Christchurch earthquakes of 2011 changed the face of emergency management in New Zealand forever. Since then the New Zealand Emergency Management Office has been working to build communities that are better prepared and connected. Kerry McSaveny, a volunteer firefighter with the Wellington Rural Fire Force and an adviser at the Wellington Region Emergency Management Office provided insight at Australian Community Engagement Fire Awareness 2016 (ACEFA 2016) into how a devastating natural disaster spurred a movement.

When I started my employment in Emergency Management, each council and district in the region had its own Emergency Management Office and its own way of doing things. Then the Canterbury earthquakes happened. A lack of investment and cohesion in the councils in the Canterbury region meant that the central government took over the response at a national level. This made it clear we had to get organised and do better for our communities' sake too. It made sense to amalgamate our separate emergency management offices into one main office called the Wellington Region Emergency Management Office (WREMO). I am part of the Community Resilience team which takes up more than a third of our organisation's people. Our remit is to help communities survive the hazards, no matter what mother-nature throws at them.

What is community resilience?

One of our first jobs was to work out what community resilience looks like and how we would know when it has been achieved. We came up with the following key features of resilience:

A community that is connected and works together towards shared goals. The idea of connectedness and working together is fundamental.

Isolation is a vulnerability in any community.

Individuals and social structures are engaged and empowered to make a difference. Everyone can do something. They can walk off that escalator when it stops moving.

Our communities have clear channels of communication to link into physical and social resources. People know who they can talk to and how to talk to them.

Communities have realistic expectations of the levels of support available during an event. There is concern that dependency is building on the emergency services. They are not going to be there in the 15 minutes following an earthquake. WREMO are conscious they need to reframe their communities' expectations. The first responders are as impacted by that event as they are.

Public, private and community sectors are prepared to respond effectively and return to business quickly. If this isn't achieved people are likely to leave town.

Communities have strong and trusting partnerships with each other and with local government. Some people have less trusting relationships with local government, but it is important people understand the

organisation does have their best interests at heart.

Communities take actions to reduce the impacts of hazards. For example people build things the right way, choose where to live based on the hazards around them and maintain their property.

People feel a sense of place and belonging in their community. In times of stress people want to stay. WREMO want people to fight to stay in their communities. "What's the point in fixing the entire infrastructure after an earthquake if people are just going to leave?" Kerry asked.

Beyond command and control

Once the team had teased out their goals the next job was to bring them to life. The very operational structure of the command and control model is not well placed to support communities managing themselves in an event.

The Student Volunteer Army that mobilised themselves following the Christchurch earthquake is a prime example of this. They wanted to help in whatever way they could. Shovelling liquefaction silt out of peoples' driveways, tidying up debris – whatever was needed. They were initially refused by the official response because they didn't fit in with the command

and control model.

None of these people were trained in emergency response and none of them had any interest in emergency response before this event happened. But there they were – an invaluable resource, ready to go. They coordinated themselves via a Facebook page and would show up where they were needed most and do whatever was required. A combination of good organisation and a definitive relaxing of the rules by the emergency officials meant they soon found themselves drafted into the official response plan. Long after the dust has settled, the Volunteer Army is an enduring story. This kind of response is beyond 'command and control'. The rapid adaptability and just doing what needs to be done - that is resilience.

Lesson learned

Dan Neely, the Manager of Community Resilience at WREMO is a community development guy who happens to work in emergency management. He has shown us the value of bringing community development principles into everything we do, through his own lessons of what happens when you don't.

As a fresh-faced Peace Corps volunteer Dan was sent to Honduras, one of the poorest



To learn more about WREMO, their philosophy and approach take a look at their website: www.getprepared.org.nz

countries in the western hemisphere, just after Hurricane Mitch killed thousands and displaced millions of people. He got dropped off in a small village and immediately wanted to solve all of their problems.

One of the first things he saw was rubbish, in the streets and rivers - everywhere he looked. His solution to this was to supply multiple rubbish bins. He soon realised that people don't care about the rubbish. If they cared about littering they would have put it in the bin in the first place and not dumped it in the street.

His mistake was not bothering to ask community members what they cared about. He failed to engage with the very people he was supposed to be helping. Fortunately, the community didn't write him off completely and invited him to be part of organising their local mango festival. He began working with what the community did have in abundance: mangoes, rum and donkeys. He set about helping the community organise donkey polo using mangoes. It was a raging success, attracting people from other villages far and wide and to this day, 15 years later, it is still going strong.

The reason that project worked and the other one didn't is that Dan asked the question: "What do you have?" as opposed to "What do you need?"

Communicate and collaborate

The rapper, Vanilla Ice, got it right: "Stop. Collaborate and listen." Stop until you have a chance to hear what the community is actually worried about, see things through their eyes and then collaborate on the solutions from there.

We go with the 'communicate and collaborate' model for community resilience and leave the 'command and control' to the emergency response.

In the process of building resilience we have three 'c's':

- Build capacity,
- Increase connectedness and,
- Foster cooperation.

We need to think about how we can provide community members who don't have the capacity to get through the challenging times and create ladders, bridges and little steps that will help them 'get to the other side'. The core principal of our strategy is recognising that different communities, organisations and individuals have different levels of interest.

Making it happen

Building capacity starts with the individual and then expands out to households, neighbours and community. You can't help others if you can't help yourself first.

We have a number of tools to help people to make preparedness more affordable. For example, we offer rainwater tanks and diverters for \$105 (NZ), when usually they would cost \$300(NZ). The tanks have also been designed to fit in a hatchback, so that you can set it up yourself. We have sold 8,000 in the Wellington region so far. That's an extra capacity of 1.6 million litres of rainwater for people during emergencies. We also have 'grab and go' bags for people to keep at work, or in their car to help them get home again and we sell these for \$75.

But for some people instead of giving them resources we help them **be** resourceful this includes getting people to think about working with others. We have planning guides for households and neighbourhoods which encourage people to discuss what they will do in an emergency.

Our response team also offers free weekend sessions on 'how not to get yourself killed while helping in an emergency'. We cover basic first aid, how to use a fire extinguisher and how to pick up someone who is injured without spraining your back.

The modern-day volunteer

WREMO has recognised that volunteers have less time to donate than ever before. Therefore, we have turned the

traditional model of volunteering on its head. Rather than have our volunteers sitting around waiting for an emergency, instead we have encouraged them to become champions for preparedness in the community. Our volunteers are influencers in their own right and often volunteer for more than just one group. We are especially interested to work with schools who are also key drivers in the community.

In this way we want community resilience to go viral. The ties that bind communities together are also the glue that will hold communities together during disaster and allow it to rebuild. Promoting connections between people is as important as the practical advice. The more connections people have to each other, the more resourceful they are going to be.

ABOVE: Kerry McSaveny, a NZ volunteer firefighter and an adviser at the Wellington Region Emergency Management Office, speaking at the Australian Community Engagement Fire Awareness 2016. Their remit is to help communities survive the hazards, no matter what mother-nature throws at them.

Mind games

The Behavioural Architects were involved in the research and redesign of the new Bush Fire Survival Plan. Here the founder of Behavioural Architects, Mike Daniels, explains how theories grounded in 'behavioural economics' influenced the new plan.

In the scientific world more has been learned about human behaviour in the past ten years than in the previous one hundred. An explosion of learning has occurred and governments around the world are picking up on this theme. One of the most important learnings is that much of what drives our behaviour is sub-conscious and below the surface.

For example, two years ago the Behavioural Architects were commissioned to help a company better understand mothers' priorities when making their children's lunch. The company was particularly interested in the mothers' decision-making process. Firstly we looked at existing market research that focused on why parents made certain decisions. Overwhelmingly the parents responded, "The most important thing to me is variety. I like to give my kids variety in their lunchboxes."

We worked with a group of parents for a period of time and every day we asked them to make their children's lunchboxes as they usually would. We asked them to photograph and video what they were doing and to photograph the lunchbox at the end of the day to see what was left.

At the end of a week we

asked participants if there was anything that surprised them about their own behaviour. Almost everyone said: "Oh my goodness, I give my kids the same thing every day!"

This example illustrates how we are not aware of what we do; we operate in the subconscious more than we think. We like to think we give our children variety but the reality is we give them the same food most days.

People don't necessarily know why they do things, though they can often give you very convincing reasons but be lying to you with good intention. This is an important concept to consider when thinking about helping people be prepared for bush fire.

Why we act the way we do

A key principle when it comes to understanding human behaviour is that there are two modes of thinking: we called them System One and System Two.

System One is fast and emotional; we call this 'auto-pilot'. Then there is System Two which is the conscious thinking you do when you are looking at your bank statements or trying to de-code your superannuation. This thinking requires maximum effort.

Traditional economics-based

views of decision making, have us in System Two all of the time. We evaluate information presented - we line things up and make a conscious comparison between them to come to a rational considered conclusion.

However the science now shows us that doesn't happen at all. Most of the time we live in System One and this helps us get on and live life for the most part, but in some scenarios we don't benefit from not wanting to think.

When it comes to preparing for bush fire we have to assume most people won't work to find out information. We take the first things, the easiest things, all of the time. There is a lot of context around us that we process unconsciously to make decisions about things. Scientists call these anchors or heuristics, otherwise known as short cuts and rules of thumb. An anchor is a reference point and we need these to make decisions.

An example of this occurred in America a number of years ago. A company called William Sonoma launched a bread making machine. They put it on the market for \$250 and it didn't sell well. They had an review about it and some bright spark said "why don't we launch a \$350 one to go along side the

\$250 one?" His colleagues were incredulous, why they would launch a more expensive model if they couldn't even sell the cheap one?

But they did. And the \$250 one started to sell because all of a sudden people had a point of reference to understand that the \$250 model is better value than the \$350 model.

We use anchors all the time to make decisions and comparisons about things – this is called context.

Something else that impacts our behaviour are 'cognitive biases', or social norms. These biases incline us to behave one way rather than another and are influenced by what we think the majority of other people are doing.

Tackling the Bush Fire Survival Plan

The NSW RFS came to us with a clear challenge: how can we get people to take appropriate action to prepare for and respond to bush fire?

The important part of this is wanting people to do something. Not feel something, or think something, but to actually act. In this instance it was about getting all family members to discuss what they were going to do in the event of



a bush fire, prepare their homes and then to take action when a bush fire threatens. That is asking people to do a lot.

Our approach was systematic. We analysed existing research and tools like the Bush Fire Survival Plan, Fires Near Me app and fact sheets and then applied Behavioural Economics concepts. We worked to understand the triggers people use to act, the things that help and barriers to the specific action we want people to take.

We workshopped with a team lead by NSW RFS Corporate Communications, developed a brief, got the materials designed and then tested them.

Cognitive Strain

Cognitive strain is what happens when we see something for the first time. Imagine getting a letter from your bank that is four or five pages long. You don't want anything to do with it. System Two overload. Remember we are cognitive misers who don't like to spend cognitive energy, we find it painful and something to be avoided at all costs. Then there is 'choice paralysis'. When we get too much choice we actually don't take action. Even though people like to think they want choice, they don't.

On evaluating the existing

plan we realised there's a lot to take in. It is really straining. People think: I am not going to read it now and put it down. The booklet is about educating people and education is over-rated. It is not always about educating people – you have to get people to do something. Education alone is not enough. Essentially it primes people to think that action can be postponed.

The goal was to make the new materials focussed on action and provide people with relevant information when they need it. The temptation with a booklet is to put it in a drawer and leave it there. There could be times during the decision making that you need to serve out relevant pieces of information at the right times, instead of being faced with the lot.

We remained focused on the desired behavioural outcome rather than simply 'redesigning the Bush Fire Survival Plan'. Our design focus included: cognitive ease, framing (four simple steps), chunking information (to avoid paralysis), heuristics, and guiding people through the decision making process.

Chunking the decision making process into four key steps – discuss, protect, know and save – with a clear visual icon, makes it easy for people. We wanted to make it look easy, with lots of

visuals, and be easy to complete – hence the name 'simple steps to get ready for a bush fire'. One of the first decisions people need to make is: are you going to leave early or are you going to stay and be prepared to defend? This decision is visually translated into a green side and a red side – this helps prime people for the decision making process.

Validating the concept

We tested the new materials with residents in the Blue Mountains, Parkes and Hornsby. We often say that context is 'both king and queen' so we interviewed people in their homes.

During the interviews in peoples' homes we sought to simulate what we wanted people to do. Half of the people were handed a pack by a researcher, posing as a volunteer. The other half downloaded the new materials from the internet and printed the PDFs. We observed what they did. Firstly we wanted people to have a discussion about what they were going to do.

At this point we needed people to switch into System Two to think through various scenarios. Overall the materials worked very well, particularly the 'discuss' and 'protect' sections. The part people had a problem with was the 'know' section focussed

on the bush fire alert levels. So, we modified the materials and simplified them again. We created more white space, key visuals and asked for minimal writing. The materials have been out in communities for a few months now and the initial feedback has been overwhelmingly positive.

LEFT: Mike Daniels presenting at ACEFA 2016 with an Auslan translator beside him. Photo by Sharon Quandt ABOVE: While the NSW RFS public awareness campaign does has a booklet and advertising campaign, the emphasis is on face to face conversations that lead to action



A heart of gold

A community-minded doctor in Coonabarabran has been making a vital behind-the-scenes contribution to the NSW RFS.

Dr Abul Salim employs four NSW RFS members in his small but busy rural medical practice. He has been acknowledged for his contribution to the Service with a Special Commendation as part of the NSW RFS Supportive Employers Program.

For the past 12 years Dr Salim has been providing his employees with time off to attend call outs and has been consistently being supportive of their involvement with the NSW RFS.

Dr Salim was nominated by Caron Harris, Catriona Pascoe and Deanne Corneliussen from the Coona Fringe Brigade who all work as nurses in the medical practice. Two other employees are married to NSW RFS members and one of the

doctors (a local land owner) is also a member of the Service.

"He's a humble, old fashioned carer," Caron Harris said. "He treats us like family."

"In all my years I have never heard Dr Salim complain about us leaving for an incident. He has never denied us from leaving when the pager goes off and is always happy when we return safe," said Caron.

As a visiting Medical Officer at the Coonabarabran Hospital, on many occasions Dr Salim has been called to the hospital as a result of an incident his staff are attending in their role as NSW RFS volunteers.

"We all have our roles to play in helping people," Caron said. "Dr Salim shares the same compassion for helping people in need."

Dr Salim was one of 12 employers who were selected from around NSW for Special Commendation in 2016 as part of the NSW RFS Supportive Employers Program. The Supportive Employer Program

has been developed to recognise the vital contribution employers make to the NSW RFS; in particular by releasing volunteers to attend incidents and other NSW RFS activities during work hours. The Supportive Employer Special Commendation is a special commendation offered to businesses and self employed volunteers who have made an extraordinary contribution to the NSW RFS and their community.

Dr Salim, his wife Zura and their son Shafin attended the NSW RFS Headquarters in Lidcombe in June 2016 to receive his Special Commendation.

When the chips are down

While Dr Salim has been supporting his employees to attend to incidents in the area since 2004, it was not until the Wambelong fires in early 2013 that the value of his employees "other job" as volunteers became truly apparent.

In January 2013 a fire took off in the Warrumbungle National Park eventually burning 56,280

hectares of the National Park and private land, 53 houses and 113 buildings. Farmers in the area lost large numbers of prime farm stock and wildlife.

"Dr Salim saw first hand the hard work and commitment of his RFS volunteers who are staff," Deanne said.

Caron and Catriona were on the fireground while Deanne was busy helping with catering as well as covering all the shifts at the surgery. All the other staff, apart from Dr Salim himself, were either cut off by fire or had been evacuated due to the fires.

"Having the fires in our local area meant we were first on-scene," Catriona said. "In the first few days there is very little sleep. Any time off we did have was spent worrying about what was happening on the fireground. Dr Salim asked after our welfare and let us fight the fires without any concern."

Caron agreed. "Dr Salim supported us the whole time, there was never any pressure to return to work and I, myself was off for a couple of weeks (with



pay). We thank him for being the caring boss he is."

On the morning of 13 January 2013 Coona Fringe Brigade was paged and called to the local airbase to help fill up the waterbombers which were already active in the area north of Coonabarabran.

"We knew of a fire in the Warrumbungle National Park just west of Coona," Caron said, "but we were not aware of the fire threatening any property at that time".

"As the morning progressed, the day heated up and the weather conditions intensified. We stood at the airbase in amazement watching the fire in the National Park jump from mountain top to mountain top. Shortly afterwards we were sent out to the fireground.

"It's very different rolling out to a Section 44 when it's your home town that's under threat," Caron explained. "You can't switch off to what is happening around you. The hours are longer and emotions are very different. You are thinking about

your own family and friends as well as doing your job. It takes multi-tasking to a different level.

"The next eight days merged into one. I drove the truck for seven of those eight days. I saw lots sweat and tears and we all had limited sleep. I saw a lot of devotion and a lot of devastation.

"There is always something to learn from an emergency situation and I know people are still living with the loss. Mother Nature can be cruel and comes with no remote control."

The support from their employer, Dr Salim, allowed these women to make a massive contribution to the fire effort during the Wambelong fire. Deanne remarked on Dr Salim's understanding of the value of volunteering.

"Dr Salim knows the importance of being part of a community and he respects what is important to his employees."

Supportive Employers Program

The NSW RFS Supportive Employer Special Commendation has been developed to publically recognise those businesses and self-employed volunteers who have gone 'above and beyond' to help the NSW RFS and its volunteers, protect the community from bush fires and other emergencies.

The Certificate of Appreciation is available all year round and the Special Commendation nomination opens around November and closes around April. The Special Commendation is a wonderful way to publically recognise a combination of employers and self-employed volunteers across NSW who have made an extraordinary contribution to the NSW RFS.

If you would like to nominate employer please visit www.rfs.nsw.gov.au/volunteer/supportive-employer on the NSW RFS website.

ABOVE: (L-R) Zura Salim, Dr Abul Salim, Shafin Salim, Senior Assistant Commissioner Bruce McDonald AFSM, Deanne Corneliussen, Catriona Pascoe and Caron Harris (Coona Fringe Brigade President). Photo by Jaimi Jackson

Rising from the ashes at Siding Spring

It was the beginning of a new era for the Timor Brigade when Assistant Commissioner Steve Yorke officially declared the brigade's new station at Siding Spring on 1 October, 2016 open.

Assistant Commissioner Yorke urged the Timor Brigade to celebrate the opening of the new station which had been rebuilt following the destructive Wambelong Fire in 2013.

"This station, housed in a building owned by the Australian National University (ANU), is a testament to how diligently and tirelessly the Timor Brigade volunteers have worked," he said.

"Together, these volunteers

have protected the Siding Spring Observatory site and surrounding areas for many years. The Timor Brigade is understandably thrilled that it has now had the space rebuilt to house its fire truck and equipment."

The Timor Brigade was formed in 1951 and when the ANU opened the Observatory at Siding Spring in early 1970s the brigade worked closely with staff there. However the ANU had its own firefighting resources and personnel.

In 2009 the Observatory decided to work more closely with the NSW RFS to provide fire protection at the site and employees became NSW RFS members as part of Timor Brigade.

There are now six NSW RFS members who work on site at Siding Spring Observatory from a total of 27 Timor Brigade members. Members are trained in village firefighting skills and motor vehicle accidents and also learn how to utilise fire

protection equipment, at the Observatory site.

The Wambelong Fire in January 2013 had a significant impact on the local community including more than 50 houses. In this instance the whole brigade area was affected and the Timor Brigade gave many volunteer hours during this time.



ABOVE: Damage to the Siding Spring Observatory during the 2013 Wambelong Fire was not major but did include the on-site Siding Spring (Timor) Brigade station. This photo was taken the day after the fires came through, the damaged brigade station can be seen in the centre of the photo. Photo by Inspector Stuart Green LEFT: Group Captain Wayne Clarke, Warwick Couch, Director of the Australian Astronomical Observatory and Corey Philip, Castlereagh Zone District Manager at the opening of the new station. Photo by Steve Chapman, Timor Brigade

A BIRD'S EYE VIEW



Gathering and relaying vision direct from the fireground

Equipped with a 360 degree camera, Firebird 200 (FB200) relays footage direct from the fireground.

Extremely versatile, Firebird 200 (FB200) is one of three firefighting helicopters owned by the Service.

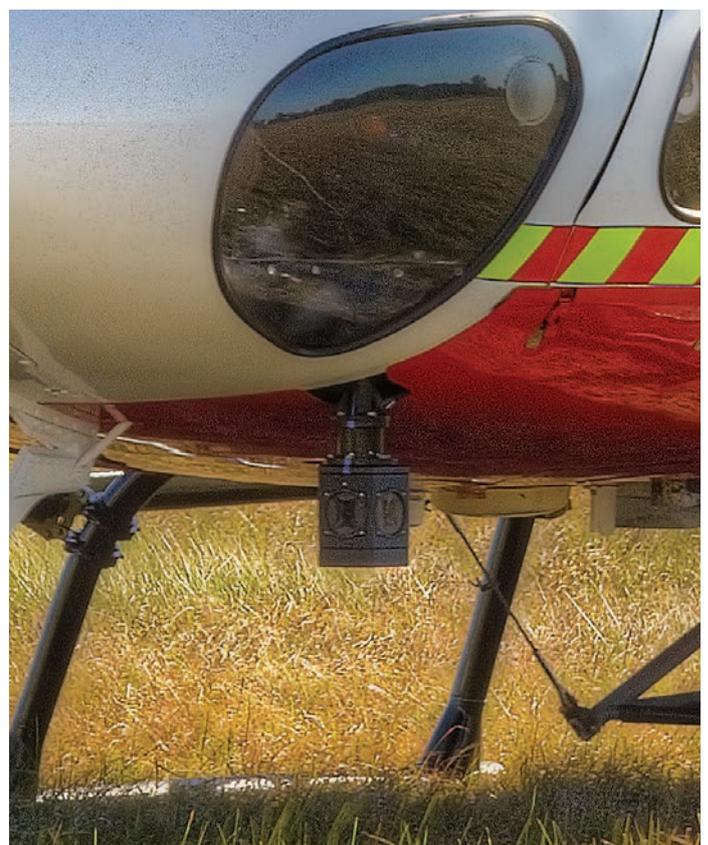
It is housed at Sydney's Bankstown Airport and is regularly used for intelligence gathering and aerial incendiary operations. In the 2015/16 year FB200 was deployed 49 times.

Unique to this particular aircraft is a customised 360 degree camera fitted near its nose (see right). NSW RFS Media Services and Aviation worked alongside US-based company Immersive Media to develop the purpose-built system – the first of its kind in Australia.

The camera re-packages 360 degree images into 30-second video clips and then sends the footage back over the mobile network. Delayed by only a few minutes from capture, the footage can be viewed via a website and is accessible by NSW RFS Headquarters, Fire Control Centres and Incident Management Teams.

The footage provides information that assists those on the fireground and in the development of structured warnings for communities threatened by fire.

The first major use of the technology was during the 2013 Coonabarabran fire.



PRIMARY ROLES

Aerial Incendiary, Air Attack, and intelligence gathering.

FUEL QUANTITY

426kg/540L

SEATING

1 Pilot plus 5 passengers

POWERPLANT

Turbomeca Arriel 1D1 Turbine Engine, 546kW. The maximum rated kW in the RFS Cat 1 is 174kW

HELICOPTER DIMENSION

Minimum 26 metres round

SPEED

Cruise speed 226km/hr, Maximum speed 287km/hr

HELICOPTER LENGTH

12.94m

HELICOPTER CAPACITY

750kg

MAXIMUM TAKEOFF WEIGHT

2,250kg

INCENDIARY MACHINE

Capable of dropping 240 incendiary pills per minute

ENDURANCE

3 hours



Length 7.8m

CATEGORY ONE TANKER



Length 12.94m

FIREBIRD 200





FIREBIRD 200 VH-NFO

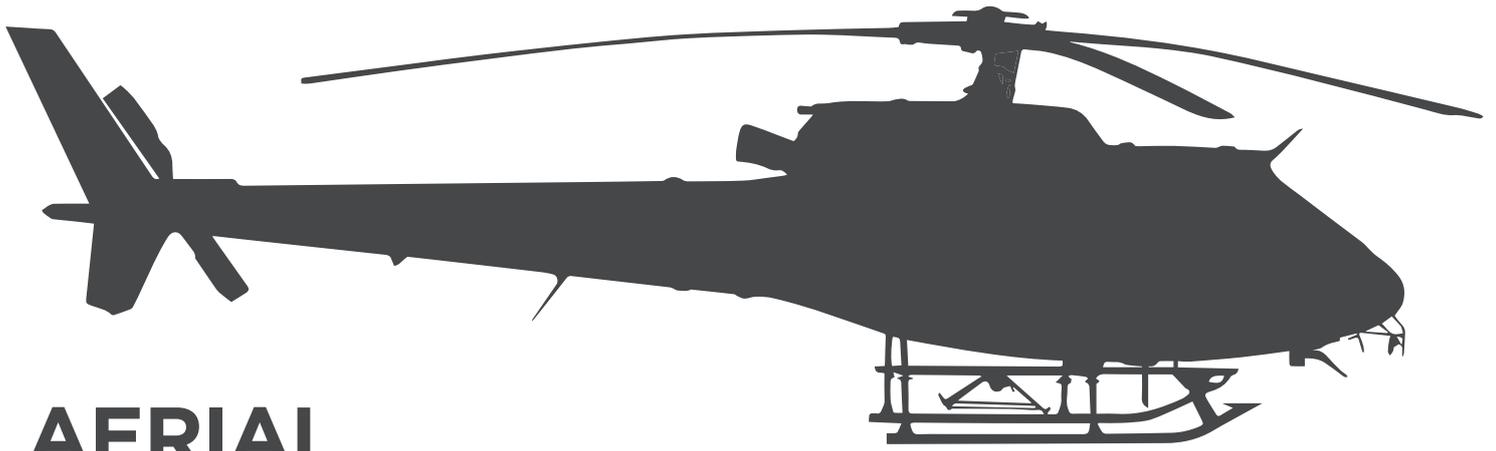
Eurocopter AS350B2 Helicopter



**FIREBIRD
200**
Produces 546kW



CAT 1
Produces 174kW



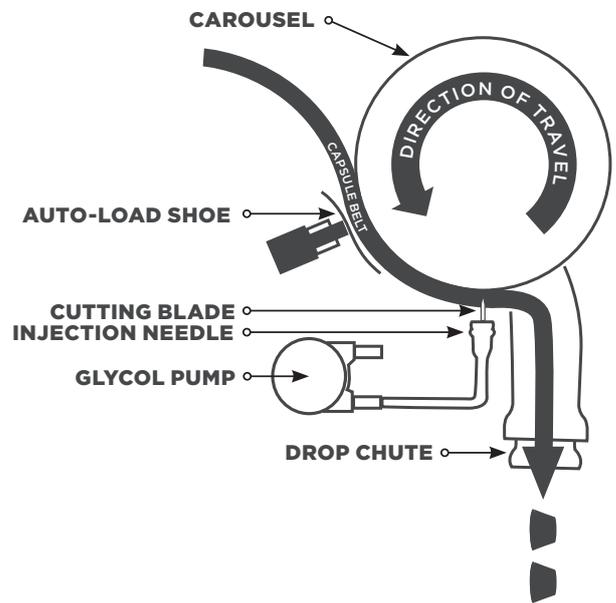
AERIAL INCENDIARY MACHINE

Igniting hazard reduction burns from the air is known as aerial incendiary and this is one of the primary roles of Firebird 200 (FB200).

The aircraft can be fitted with an aerial incendiary machine which drops capsules of flammable material at a rate of up to 240 per minute.

The incendiary capsules contain potassium permanganate. Once injected with ethylene glycol, the two chemicals have a delayed exothermic reaction to produce an intense ignition source. This process is illustrated to the right.

Large hazard reduction burns, or areas that are hard to access by truck or foot, are the most suitable for ignition by aerial incendiary. Areas that require hazard reduction are identified in Bush Fire Risk Management Plans. Once identified burn plans are prepared and a request is made to the State Air Desk for aircraft and personnel to assist with the burn.



LEFT: The burn plan of the Buxton hazard reduction in the Southern Highlands in October 2016. RIGHT: A photo of the hazard reduction after ignition showing the lines set by aerial incendiary.



Enhancing fire trails

Under new legislation all fire trails in NSW will be connected to a strategic network of trails, improving access to the fire prone areas for firefighting and hazard reduction planning

Thousands of fire trails across bushland in NSW are to be linked up to help firefighters battle blazes and aid hazard reduction across the state.

Following a recommendation from the NSW Government, an integrated network of strategic fire trails will be established to improve access for firefighters during bush fires and better facilitate planning and management of hazard reduction.

The Minister for Emergency Services, David Elliott, introduced legislation in August 2016 to amend the Rural Fires Act 1997 to establish a functional fire trail network, connecting the thousands of existing fire

trails across NSW.

The enhancement to the fire trail network will require local Bush Fire Management Committees to develop a local fire trail plan and identify any gaps.

The NSW RFS has begun work on a register of all trails across the state with the goal of completing the network within three years. The Bush Fire Coordinating Committee will develop an implementation schedule for the development of plans to ensure an orderly delivery across the state.

Within the NSW RFS the focus is on developing strategies, frameworks and tools to support the success of the enhanced fire trail network. A discussion

paper has been drafted to analyse the current situation and identify potential solutions. A Strategic Fire Trails Manager and Fire Trail Specialist staff have also been appointed.

All fire trails will have standard width, gradient and signage and a regular inspection regime will ensure they are properly constructed and maintained. The Fire Trail Standards will be developed by NSW RFS, in consultation with key stakeholder agencies, using the current Bush Fire Coordinating Committee's policy as a starting point.

Most fire trails will be located on public land with a small minority hosted on private land. The NSW RFS will only develop fire trails

on private land with the landowner's agreement.

"NSW RFS members will be supported at a local level by dedicated, regionally-based fire trail personnel to work closely with BFMCS to assist in the development of the Fire Access and Fire Trail Plans," Deputy Commissioner Rob Rogers said. "They will also work with land managers and agency staff to support the implementation of the plans and deal with complaints."

The Bill to implement the legislation has been passed through NSW Parliament and once the Fire Trail Standards are in place, the NSW RFS will request that the legislation be assented.



Think big

Get Ready Weekend saw the largest mobilisation of NSW RFS members ever seen outside of firefighting operations

Engadine Brigade went about 'playing big' by involving nearby brigades, the district office and other emergency service agencies.

Get Ready Weekend was held on 10/11 September 2016. Four hundred and seventy brigades participated representing all 47 NSW RFS Districts and conducting an incredible 500 activities right across the state.

Brigades focused their efforts on delivering one key message to their communities - prepare your home and your family for bush fire by completing the top five actions:

- Trim overhanging trees and shrubs
- Mow your lawn and remove all cut grass
- Remove material that can burn around your home
- Clear and remove all debris and leaves from the gutters surrounding your home
- Prepare a hose or hoses that can reach around the perimeter of your house

Don't wait for the community to come to you – go to where the community is

Penrose Brigade decided to do something different for their

Get Ready Weekend.

Elizabeth Ellis, Community Engagement Officer from Penrose Brigade, led a team of six passionate brigade members down to two local businesses - Penrose Station Cafe and Southern Highlands Sand and Gravel. They called it 'Meet the Members'. By sitting down and having a coffee with local residents the brigade members were able to initiate a discussion around the Guide to Making a Bush Fire Survival Plan.

It also provided Penrose Brigade members with an opportunity to invite residents to sign up for the 'Six Week Challenge' - an online program developed in partnership with Wingecarribee Shire Council aimed at motivating residents to take action to prepare their home ahead of the fire season.

"The day was a big success with around 30 residents sitting down and having a chat with Penrose Brigade members," Elizabeth said.

"The residents were very receptive and appreciative of the brigade's presence

at the cafe and to top off the successful day, Penrose Brigade may have three new recruits."

For more information about the Six Week Challenge visit www.yoursaywingecarribee.com.au/bushfire or follow the Penrose Brigade on Facebook.

#ACEFA sparks a fresh approach

Engadine Brigade Deputy Captain Deborah Sharp returned from the 2016 Australian Community Engagement & Fire Awareness (ACEFA) Conference in Albury, with renewed vigour for Get Ready Weekend.

At the conference Deborah was impressed by one of the keynote speakers, Melissa Abu-Gazela, NSW Young Australian of the Year and founder of Top Blokes Foundation. One of Melissa's notable quotes was: "There is no value in playing small".

With that in mind the brigade went about 'playing big' by calling meetings not just with their own brigade but with Sutherland Communications



Brigade and the District office. They also engaged other local emergency services agencies and created displays with more diversity and interest.

Engadine Brigade staged a very successful Get Ready Weekend event that saw State Emergency Service, NSW Police Force, National Parks & Wildlife Service and Sutherland Communications Brigade join

forces to create one big, fun engaging event, resulting in very positive feedback from the community.

Engadine Brigade is also active on Facebook - follow their initiatives there.

Share your photos and videos

This year several brigades made excellent videos to

encourage members of the public to get involved in Get Ready Weekend. These were distributed via social media.

If you have photos or videos you would like to share of your Get Ready Weekend activities, email them to the Get Ready Weekend Team get.ready@rfs.nsw.gov.au

FAR LEFT: Engadine Get Ready Weekend event. Photo courtesy Engadine Brigade. ABOVE LEFT: Penrose Brigade members went to a cafe to meet with members of the public and talk about their Bush Fire Survival Plans. TOP: Brisbane Waters Brigade held their Get Ready event by the water. Photo by Deputy Captain Michael Boyce. BELOW LEFT: Casula Brigade. Photo by Ria Land. BELOW RIGHT: Minto Heights Brigade Photo by Ria Land

GET READY WEEKEND

SATURDAY 16 - SUNDAY 17 SEPTEMBER 2017

#GETREADYWEEKEND IS AN OPPORTUNITY FOR BRIGADES TO ENGAGE WITH THEIR COMMUNITIES ABOUT PLANNING AND PREPARATION FOR BUSH FIRES.

PREPARE.

ACT.

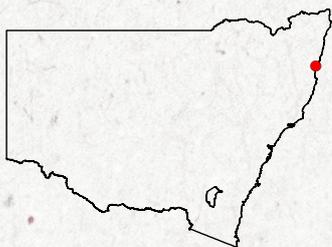
SURVIVE.

INTERESTED IN PARTICIPATING? VISIT MYRFS



Much more than just the Captain's wife

The role of women in rural fire brigades has often gone unacknowledged, despite being a significant part of brigade life. Many women came in contact with the brigade through their husbands yet quickly became involved in broader aspects of brigade life, forging a significant role for themselves and the women who have come after them. Narelle Swanson, from Bonville Brigade, profiles the changing role of three women in her area.



Crossmaglen and Bonville were typical bush fire brigades in the Coffs Harbour District and both boast long histories. A role that is now familiar to most service members as 'firecom' used to be a rarely-acknowledged role undertaken by women. From the first local manual telephone exchange to the Brigade Captain's home being used to report fires.

At a public meeting of the Crossmaglen Community in 1954, a request was made to form a bush fire brigade. Bonville, a nearby small farming community, started a brigade a few years later.

Fire was every landowner's

concern and they were all encouraged to be involved by paying an annual membership fee of one shilling. At that time only the men attended the fires and meetings. The woman's role was to maintain the farm and family and provide food to firefighters during fires. After a big fire in 1964 the brigade minutes noted that phone lines should be kept open in times of fire. In Crossmaglen the local telephone exchange operator was Mrs Neilson and everyone who wanted to make a call was required to ring her to request connection. She was the communication hub or 'firecom' for the district.

From the mid-1960s Bonville Brigade membership numbers declined as many farms were bought by the paper company Australian Paper Mills (APM) and many others subdivided. The idea of women fighting fires was mooted in 1974 by the Fire Control Officer as a way of boosting crew numbers during the day when men were away.

A resolution to 'contact women volunteers for emergency occasions' was made. The minutes of the following year recorded that 'information cards' had publicised the drive and people contacted but no female volunteers recruited.

In 1981 Crossmaglen and Bonville Brigades discussed the shared use of the first fire tanker. A call went out for those interested in getting truck licenses, specifically female members. 'Lady drivers required from each brigade if possible,' the brigade minutes noted. One lady from Crossmaglen came forward. She told me the training day was more exacting than the actual test.

In 1987 there was a re-structure of fire services in Coffs Harbour District which saw an amalgamation of Crossmaglen and Bonville Brigades. Then a year later fire awareness was reinvigorated in the community following a large fire. There was a well-attended public meeting with some women

stepping forward as leaders. As a result other women felt able to join and contribute their organisational skills. The brigade became strong and known for the number of family memberships and fund-raising and other events.

Kath Bedggood

Kath Bedggood formally joined the brigade in 1988. Her involvement in Bonville Brigade began as the Captain's wife in 1974 when the telephone was a fixed unit in the house and fire calls were made directly to the Captain's residence. Kath was usually the person that answered and would then proceed to notify members. Her endless work calling up the required crew for various jobs was impressive. Her appointment as Communications Officer in 1988 was an official recognition of this. On occasion she went out with her husband to investigate fire reports or small incidents so she wouldn't have to bother others in the brigade.



Slowly this shy, reserved mother and housekeeper started speaking up at meetings and when the first basic fire training course was offered, she was ready to sign up. She never wore overalls and when certificates were presented she wore a yellow coat to which she had sewn the bush fire badge. I also have a fond memory of Kath up a stepladder in her dress and apron helping to wash and polish the tanker for a parade.

When brigades were organised into districts the need for documentation really stepped up and Kath met the challenge head on as the dedicated keeper of brigade records. Membership forms were now required to be completed, recorded and filed. Kath neatly ruled columns and numbered a 96-page exercise book to be designated the official station logbook. In a tribute to Kath's work the Fire Control Officer Peter Butler, who brought about many of the changes, said "every brigade

should have a Kath Bedggood".

Kath was also a first-class fundraiser. She loved gardening, so it made sense for Kath to sell plants as a money maker. She stacked potted plants on top of the Bedggood tabletop truck to sell next to the brigade car wash at the Bonville market.

An increase in the number of female members made it blatantly clear that a station toilet was needed. An old wood dunny and concrete pipe solved the problem for a few years, until in 1992 the brigade resolved to build a new station. It was to be replete with a meeting room, toilets, kitchen and a room for the children. The project took four years to complete and Kath was in the thick of it from start to finish. She organised weekend refreshments for the workers, enlisted more wives to help in fundraising and catering, as well as taking a photographic record of the build process.

Kath attended her last brigade meeting in 2004 when her

health was deteriorating. She spent her last years in a nursing home, where she was presented with her 15-year service award. It was a memorable sight to see brigade members and tankers set up in the nursing home carpark. Kath was very pleased with her shiny service badge declaring that no one had ever given her a badge before. Apparently she was reluctant to take it off before going to bed.

Narelle Swanson

In 1974 I became a landowner in Bonville. A brigade member who introduced himself told me that the fire brigade had knapsacks which I could borrow should I need them.

In 1979 I married a local farmer who was a member of Boambee Brigade, with years of fire experience behind him. I learnt a lot from him including the practice of burning off grass to create firebreaks and how to judge weather conditions. Working full-time I shared in

...following a large fire in the area, several women stepped forward as leaders. As a result other women felt able to join and... the brigade became strong

When I started attending fires everyone wore overalls which was awkward, as a female, when you had to completely disrobe at fires. I recall that all the female firefighters were happy when the two-piece equipment was issued.



the task of running the farm and became a mother to our young son so I did not have time for the fire brigade. In 1988 I was involved in planning a market day with the local hall committee and we wanted all local community groups involved including the local brigade. I ran into some obstacles when trying to get access to the brigade to invite them to participate. After some perseverance however I managed to get them involved and in the end all went well with fire tankers on display and members collecting donations. I then proposed a carwash to the brigade which became a regular fundraiser. Using fire tankers to wash cars had many benefits including building great relationships within the community and ample opportunities to check equipment.

In October 1988 fire conditions were extreme. On a property near mine clashing power lines caused a fire, nearly destroying a couple of houses. Only a wind

change and forestry bulldozer contained its spread. When things quietened down I took photos of the fire trucks and crews which made the front page of a local paper. Following this publicity of the fire and firefighters' efforts a public meeting after the event was well attended by residents.

In November that year it was time for me to join the brigade and pursue my interests of training and community awareness. I was appointed training officer in 1989 and given the opportunity to present the first basic training course. The first night was well attended and the Captain rounded up even more people to attend the next session. Sharing past experiences became an important and enjoyable part of each module, resolving the issue of me not having years of firefighting under my belt. I became part of the district training committee that was tasked with selecting candidates for new training courses. When

I joined there was no brigade constitution. It took a bit of time but I was successful in getting the first and then subsequent upgrades passed.

I became a 'Captain's wife' when my husband Vivian Gill became Captain following the station opening in 1996. I set about helping him create activities and brigade team challenges to revive membership numbers. The first was a quiz night based on the basic fire training modules and knowledge of the local area. We followed this with a forest picnic day and the local National Parks and Wildlife Service (NPWS) joined us with their tankers. Events included 'robbing Peter to pay Paul' an exercise using the portable pump and a relay event using knapsack spray to propel balloons. An original Crossmaglen Brigade member was invited to judge and was helped by the NPWS Regional Manager who also turned up.

I thoroughly enjoy organising events and displays and getting everyone together to have fun.

I believe one of my best was a stories night. With my husband's help we invited every living person that had previously been associated with the brigade. I studied early brigade minutes and prompted the former members with questions. Many interesting stories came out of the woodwork, with the story of a grass fire at the local caravan park in 1976 among them. The story told was that two members turned up with their knapsacks and the lady at the reception desk looked at them and said: "It's alright I've called the fire brigade." To this the members replied: "We are the fire brigade."

When I started attending fires everyone wore overalls which was awkward, as a female, when you had to completely disrobe at fires. I recall that all the female firefighters were happy when the two-piece women's Personal Protective Equipment (PPE) was issued.

Throughout my many years in the brigade I've been privileged to have experienced a lot. I've been to many fires and before the highway was upgraded,



numerous road accidents, some serious, others just time consuming. I occasionally drove the Category 9 tanker and served time as a Deputy Captain, Permit Officer and in Communications. I've also held the positions of Secretary and President. When brigade training became a requirement I again became a Training Officer and challenged myself to invent training that was a bit different and fun but also relevant. In the last few years I've also taken on the role of brigade auditor, an easy task as so little money is spent now. These days I try and record a lot of training and controlled burns with my video camera, as it's a useful training aid.

Wendy Crampton

Wendy Crampton has twice been 'Captain's wife', from 1999 to 2000 and again from 2006 to 2008.

I recall meeting Wendy at her front door in 1990 and suggested she might like to join the brigade. She went on

to become fully involved in the brigade attending meetings, fundraising and helping to build the station. She took on the challenge to get a truck driving licence, then rural driving course, senior first aid and crew leader course. Pregnant during a big fire period in 1994 she joined the Headquarters Brigade to become part of the Incident Management Team. Mothering duties did not stop her from participating in meetings or supervising at training. When the brigade needs first-aid, related training Wendy is the go-to person.

Wendy was a trailblazer when it came to educating children. Alongside husband Neville, the pair presented many sessions at the two local primary schools and kindergartens; teaching and inspiring local young people to stop drop and roll before formal courses and education kits became available. If success is measured in repeat requests and junior members signing up, then their sessions

were a resounding success.

Over the years she has held the positions of Secretary, First Aid and Communications Officer. She became a Deputy Captain in 2000 and Senior Deputy in 2004. To date she has declined the role of Captain. Wendy now works full-time on night duty as a midwife and also cares for an aged relative, so taking on the Captain's role will have to wait. She is still often the Officer In Charge, enjoys driving the Category 1 tanker and being 'one of the guys.'

I am proud to say that despite our differences, we three women have contributed a lot, including raising seven children who have all gone on to become adult members of the brigade. We have all been 'Captain's wives' who've thoroughly enjoyed supporting our husbands and in turn, with their support, we have had endless opportunities and fun within our brigade.

PREVIOUS PAGE: 1990: Narelle Swanson watching Peter Butler FCO present Kath Bedggood with badge and brown book for basic training FAR LEFT: March 2008: Bonville Brigade tankers and crew present the 15 year service medal to Kath Bedggood (centre wheel chair with husband Les). Viv Gill is behind Les, Narelle Swanson is far right. Centre Wendy Crampton, with husband Captain Neville Crampton to the right, and two of Wendy's daughters are on her left. Robert Gill is back third left. Retired FCO Peter Butler ABOVE LEFT: July 2006: Wendy Crampton at a Bonville Brigade training exercise Photo by Narelle Swanson. TOP: 1991: Tea break during the construction of the new brigade station. Wendy Crampton is at the front left. Note the children's playpen in the foreground Photo Kath Bedggood. BOTTOM RIGHT: May 2006: Narelle Swanson at a Bonville Brigade training exercise inspecting a local Christian Community School for fire and water resources. The groundsman is displaying the building layout



A hero for Hill End

By Jim Shanahan, Hill End Brigade Senior Deputy Captain and Training Officer

It had been a fire season of 'unprecedented intensity' according to the June 1958 *Bush Fire Bulletin*.

In late December 1957, with temperatures reaching over 100 degrees Fahrenheit, a number of fires started in the Turon Shire area including around the township of Hill End.

The *Bush Fire Bulletin* noted: "The period from August to end of December 1957 was marked by general heat-wave conditions, accompanied with strong northerly and north-westerly winds. The difficulties associated with the constantly occurring extreme fire danger conditions which enveloped vast sections of the state, during this period were added to substantially because of the complete drying up of ground water supplies over

considerable areas of NSW..."

In these extreme conditions the Hill End Fire started on the Ullamalla Road north of Hill End. Brigade Captain George Anderson and about 100 men were fighting the fire and at first were able to control it. In the face of increasingly strong north-westerly winds the fire quickly moved south toward the village of Hill End. Calls were made for reinforcements and the battle to protect the township continued for four days and three nights with the fire creeping ever closer to Hill End. Fortunately a wind change from the south enabled the fire to be brought under control.

In the March 1958 edition of

the *Bush Fire Bulletin*, it was reported: "The fire at Hill End drew attention to the need for early fire suppression in hill country, not an easy job at any time. This fire presented many challenging features and at times appeared to have had the upper hand but the Turon Council, the local brigades, police and helpers from surrounding country and towns have a splendid save to their credit, an evidence of the value of the volunteer movement to rural New South Wales."

Three months later the same publication stated: "In fact the face of these explosive conditions of fire danger the volunteer fire brigade movement again proved itself a major force in the control and suppression of bush fire outbreaks."

It had been a close call for the people of Hill End. After much

discussion and controversy in the local media, it was decided that Hill End needed new firefighting equipment to be able to effectively fight fires and protect the Hill End village.

With enthusiastic local support the Hill End Bushfire Festival commenced with the aim of raising the funds required. The festival included teams demonstrating fire-fighting methods, a "mine shaft" stall, locally grown wool, ornamental plants, bottled fruit and many other amusements. One thousand Hill End residents and visitors ensured the day was a community and financial success. With some further financial help from the Turon Shire Council, the Hill End Brigade was able to purchase the Ford Blitz.

It was the first time the brigade, and indeed the district,

(Continued from page 11)

MARCH MESSAGE

The incidence of fire this past summer has been State-wide. Hardly any district was fire free, and, as said before, the volunteer brigades gave excellent service. Some fires call for special mention. Large ones at Lockhart and between Bathurst and Dubbo were serious threats to extensive areas but the Brigades, aided by Police and public acquitted themselves well. Our largest fire was in most difficult country in the Mount Hope, Roto, Matakana districts where, with minimum water supplies but aided materially by plant secured by the Bush Fire Committee from the Department of Main Roads, a fire which spread over half a million acres was finally subdued by small and well directed teams with very little loss of stock and improvements. The fire at Hill End drew attention to the need for early fire suppression in hill country, a not too easy job at any time. This fire presented many challenging features and at times appeared to have had the upper hand but the Turon Council, the local brigades, Police and helpers from surrounding country and towns have a splendid save to their credit, an evidence of the value of the volunteer movement to rural New South Wales.

We join in thanking the Police, Forestry Commission and Department of Main Roads for assistance readily given everywhere. Army and Air Force, when and where available gave needed help also, but we must emphasise that the Defence Forces are not organised for civil firefighting purposes; they are available only in serious emergencies and again only when circumstances permit their being taken from their normal duties.

The Postmaster-General's Department,

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Editorial . . .

THE "RED TERROR" STAGES ANOTHER BLITZ

The annual contest with the "Red Terror" is ever a relentless struggle against a merciless destroyer, and the 1957-58 fire season saw this fire demon cut loose with an unprecedented burst of sustained ferocity.

The forces that were marshalled during the current year on the side of the "Red Terror" were more formidable than for decades past. Record high-temperatures, strong winds and drought conditions combined in an "all-out" challenge to the volunteer bush fire brigades throughout the State.

That the brigades met this challenge with relatively minor property losses is a record of which each and every firefighter can feel justifiably proud.

In the period of eight years since the Bush Fire Fighting Fund was established the brigade's power to hit back has been built up both in strength and purpose. Today, expenditure on brigade holdings of fire fighting equipment exceeds £900,000. The million pounds mark will be passed before the next fire season starts.

But notwithstanding this accumulated strength, there must be no let up in the annual campaign to curb the "Red Terror" and his twin accessories—carelessness and irresponsibility.

The "Red Terror" never passes up the chance of a sneak blow under cover of a carelessly thrown match or cigarette end, a cooking or billy fire left unextinguished, or of a property-owner's indifference to fire hazards cluttering his land.

As yet, scientific developments have not reached a stage where weather and conditions can be changed at will, but none-the-less, individual citizens by the ceaseless exercise of care and caution can do much to check the "Red Terror's" devilish onslaughts.



Raging bush fires at Lindfield, "Blow-up" day, 20th December, 1957
Photo by courtesy "Sydney Morning Herald".

FAR LEFT: Beautifully restored to glory, the Hill End Blitz is now an important historical artefact for Hill End village. Photo by Hill End Brigade member, Kel O'Shea CENTRE: The *Bush Fire Bulletin* featured the Hill End fire in its March 1958 edition RIGHT: The fire season of 1957-58 was described in the *Bulletin* as: The Red Terror stages another Blitz. All references can be found on the *Bush Fire Bulletin* on *Trove*. See page 53 for details.

had owned any motorised firefighting equipment. Prior to this fires were fought on foot using dry firefighting methods. Some volunteers used horse back or privately-owned Four Wheel Drive vehicles.

The Blitz was a Ford Canada, Canadian Military Pattern Vehicle, Model F60S 30cwt 4 x 4, with a type 13 cabin manufactured in 1942. The water tank was built and added by Australian company Engineering Products Pty Ltd of Burnley, Victoria and parts of the cabin may have been built in Australia.

When the Blitz came to Hill End it needed a home. At first it was stored in a shed in Tambaroora Street, Hill End and later a modified, old house next to the general store was used. This second location was right in the centre of the village

so when a fire call came in there was a ready source of volunteers available.

The Blitz really revolutionised all aspects of firefighting for Hill End. It enabled the brigade to have a large volume of water at hand and make its plans of attack accordingly. Additionally volunteers could easily refill their knapsacks direct from the truck's water tank. It also brought a new focus to the building of fire trails which would give the Blitz access to the seat of fires in the bush.

The Blitz remained with the Hill End Brigade for almost 20 years however, with newer model vehicles becoming available, the days of the Blitz came to an end. Initially sold to a local property owner, it later passed to another owner where it continued its life as a water carrier.

Early in 2002 the Blitz was noticed by brigade members on a property on the Turon River. It took several years to come to arrangements with the owner before the brigade was able to purchase it back. With the assistance of brigade members and the Hill End Police on Saturday 17 July 2004, the Blitz finally made its return up the steep winding Bridle Track to the village of Hill End.

Unfortunately the news that greeted its return was sad. Captain George Anderson, who had served the brigade for 30 years, passed away that very day. While maintaining changes that were made by the brigade in previous years, the brigade members got to work to restore the Blitz to full working order and as close as possible to its original condition.

The restoration has taken many

thousands of hours with work being carried out by ex Brigade Captain Robert Anderson and more than 30 local volunteers. There were many notable achievements along the way such as the starting of the engine in January 2014, a cause for great celebration. An unexpected result of spending so many hours together was the camaraderie that developed among the volunteers. We went from just knowing someone to becoming really good mates over the course of the restoration. It was one of the great benefits of the project.

The Hill End Brigade believes the Blitz is the single most important item of history it owns. The restored Blitz has taken its place in the newly opened Hill End Heritage Centre.

Extreme incidents in Australia

Incident Management in Australasia:
Lessons Learnt from Emergency Responses
Editors: Stuart Ellis and Ken MacCarter
CSIRO Publishing 2016 By Russell Taylor,
AFSM (retired)

The first inescapable thought that strikes you when reading this book is just how many major and extreme incidents have occurred in Australasia in the first decade-and-a-bit of the 21st Century - and this is not a comprehensive list.

This book is a welcome addition to the growing body of literature regarding incident management. It is a collection of personal accounts of major incidents occurring between 1998 and 2013.

The ten contributions range from the descriptive to the personal, from accounts of outcomes, to widespread destruction and the coronial and other investigations that must inevitably follow these events.

For those who have more recently undertaken incident management training, be it in AIIMS or similar methods, you will find that many of these incidents have led to the very training regime you have just participated in. For others it provides a reminder and even a checklist of the necessary processes in the successful management of major incidents.

Senior managers and those

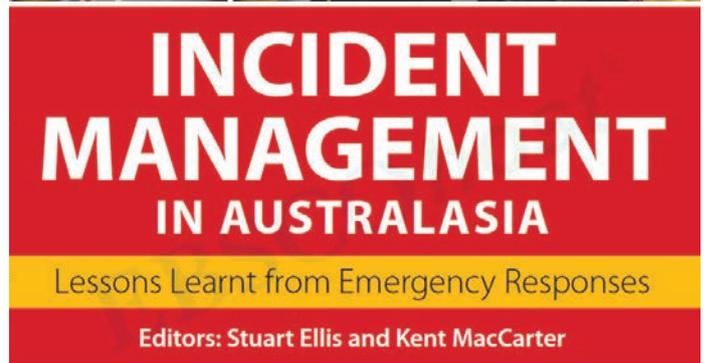
aspiring to such positions will also benefit from the insights into pre-planning and positioning emergency services organisation to be ready post-incident for the investigations - both internal and external - that follow the incidents described here.

Many of the major incidents detailed in the book will be familiar to NSW RFS members who will have either participated in them or been deeply touched by them. Bob Conroy's contribution of the firefighter entrapment in Mt Kuring-gai or Mark Crowweller's reflections on the Canberra fires of 2003 will resonate with many, I'm sure.

Incidents range from structure fires to chemical spills, major bush fires and floods to the Christchurch earthquake.

This is not a text book-type resource and does not need to be read from cover to cover nor in any particular order. It is an easy read and is highly accessible.

It is available for loan from the NSW RFS Library, through the CSIRO Publishing website for \$49.95 or as an eBook, (eg Kindle \$25.12).



ABOVE: Incident Management in Australasia is also part of the NSW RFS library's eBook collection. NSW RFS members may contact the library to request a password-embedded link to access the eBooks at home.

Engaging young minds

The NSW RFS Library now has a collection of Australian children's literature, including juvenile fiction and picture books which focus on bush fires.

Members, schools and interested groups are welcome to borrow books from this select collection of children's literature to assist in engaging children on the subject of bush fires. The collection can be borrowed for three weeks at a time and is being used by brigades for their school visits or by teachers who have scheduled in classes about bush fires.

District Officer Graham Brown from the Liverpool Range Zone first borrowed the collection in September 2015.

"We used Bertie and the Great Jelly and Bushfire with a group of about 150 kids between zero and eight-years-old," he said. "Most of the kids really liked the story and when we got to the activity we had them make a paper plane (we used yellow paper to match Bertie). They really got into the swing and had a great time!"

At St Joseph's Primary School Merriwa teacher Sally Hagley has been

enthusiastic about the success of the Children's Bush Fire Collection and activity sheets. Where there's Smoke book and activity sheet proved popular with the Kindergarten, Year 1 and 2 children at her school. On the day they chose to read this book there was haze in the air from bush fires in the area.

"We began the session with a discussion predicting the possible content of the text," she said. "The children were very insightful and accurate in their predictions. Some shared their experiences of fires. We talked about the difference between destructive fires and those that have a purpose such as hazard reduction, campfires and Bunsen burners.

"We then read the narrative, pausing to talk about the feelings of the characters in response to the changing environment. The illustrations were excellent in generating discussions. During the session we focused on the safety aspect, asking the

children to share what they would do in particular bush fire scenarios.

"One grandmother remarked later that she was very impressed by her grandson's knowledge of bush fire safety!"

Books available for loan

NSW RFS Librarian Katie Vandine lists here the children's books available for loan proving some useful tips on their use. These books are suitable for ages 4-9-years-old. Those books with an asterisk have an accompanying Activity Sheet available for download on the library website. Around 18 books are available and the following are Katie's top five. Email rfs.library@rfs.nsw.gov.au or 02 8741 5455 to borrow the books.

Fire-Engine Lil

One of my favourites – Andrew and Janet McLean cover a bush fire and fire engine attendance in a very gentle way detailed with comical illustrations.

Captain Kangaroo saves the day*

Join Captain Kangaroo and his firefighting friends as they save the day with a little help from Old Pa Roo.

Applesauce and the Christmas miracle*

Against a rural Australian setting of drought and bush fire, a little pig called Applesauce learns that Christmas comes from the heart.

Bertie and the Great Jellyland Bushfire.

Bertie the little aeroplane spots a bushfire in Jellyland. He radios the Volunteer Fire Fighters who then ask for Bertie and his flying friends to help fight the fire.

Where there's smoke.

One hot summer day a bushfire threatens Bodie's farm and time is running out. Will his home be saved? Firefighters come to fight the fire.





Bushcraft skills for remote area firefighters

NavShield is the perfect opportunity for new Remote Area Operators to practice the skills they have learnt without the added stress of working in a wildfire environment. Two members of the Hawkesbury RAFT, Tova Gallagher and Paul Bryant, explain why NavShield proved a great way to upskill and have an enjoyable weekend at the same time

NavShield is an annual combined emergency services navigation challenge run by the Bushwalkers Wilderness Rescue Squad on the first weekend in July. The event is open to all NSW RFS members and attracts teams from NSW Ambulance, NSW Police Force, Fire & Rescue NSW, State Emergency Service, the armed services, bush walking clubs as well as the NSW RFS.

This year NavShield was held in the rugged terrain of the Wombeyan Caves in the Southern Highlands. The event is a great way to test your navigation and bushcraft and a fabulous team-building exercise to boot. No GPS is allowed so teams must plot and navigate their way to markers using traditional map and compass skills. This year we formed a Hawkesbury/Hunter Valley Remote Area Firefighters team. New and prospective Remote Area team members got to work with more experienced remote area operators. Everyone on the team improved their situational awareness, mutual scrutiny and

dynamic risk assessment skills as a result.

After 30 hours and almost 60 kilometres of walking, climbing and scrambling through the Wombeyan Caves area each member of the team had learnt something new about navigation, foot care, route planning, gear selection, fatigue management, hydration and nutrition – all skills that can be directly related to the fireground or search and rescue operations.

Gear choice

Members had to prepare for operating in a remote environment and learnt a lot about gear choice. We had to carry what we needed including mandatory survival gear. Choosing the lightest and most versatile essential gear was important!

Choices in footwear and clothing systems were also tested. There was plenty of relatively 'easy' walking through open bushland on the high plateau, but the distances to get to markers were great. It was also very cold with

a few summits over 900 metres above sea level. We wore layers of synthetic and merino-based clothing that could wick away sweat and at the same time allow us to maintain a good core temperature.

Planning the route

Planning is critical in any fire-based scenario and the same applies to an event like NavShield. The teams' planning worked well managing to complete the circuits within the timeframes allotted.

This year we chose a conservative route that would take us in a loop and bring us back to base camp for a rest overnight. We also had to take into account the fitness and bushwalking experience of our members and the likely pace we could maintain in the terrain, the use of features to minimise navigation error and which markers we would be aiming for in the daylight and in the dark.

Fatigue management

We had to monitor our hydration,

fuelling and fatigue levels. The only way you can know how your body is going to react to long hours of effort is to practice. Some members were experienced in how much water, food and rest they would require and others learned a lot on the day - better here than on the fireground!

This event is not just for remote area operators. Many other NSW RFS brigades were involved from Gosford, Warringah, Blue Mountains, Hawkesbury and Lake George.

We would recommend the event to all RFS members interested in developing and challenging their skills. Above all the team did well and was able to survive the cold, the course, the hills, the ration packs and a few bad jokes. We all came out the other end smiling.

ABOVE: GPS is not allowed during NavShield so teams must plot and navigate their way to markers using traditional map and compass skills

Charlie Forsyth,
Noggin Ltd and NSW
RFS Commissioner
Shane Fitzsimmons,
AFSM signing the
agreement to build the
new spatially enabled
system, Guardian
Photo by Tony Longa



A new Guardian for the Service

Project Guardian will transform the way in which the NSW RFS, as well as all other agencies involved in Bush Fire risk mitigation, manages and reports on bush fire risk mitigation activities.

Due to be launched in June 2017, Guardian is a enterprise-wide system that will allow for the effective management and consolidated reporting of all bush fire risk mitigation activities in an integrated, spatially enabled system.

Guardian will integrate all risk mitigation activity management into one system-including the Risk Register, the Fire Trail Register as well as the growing number of risk management activities such as Community

Engagement and planning and the AIDER (Assist Infirm, Disabled and Elderly Residents) Program.

Guardian will enable the NSW RFS and external agencies, to better protect the 1.3 million properties and 22 million hectares of bush fire prone land across NSW, by providing a single source of truth for all bush fire mitigation activities.

Information available to the general public about mitigation activities will be vastly improved. Comprehensive reports of activities planned and completed across the landscape will be displayed on easy-to-read maps.

Guardian will replace BRIMS

(Bush Fire Risk Information Management System) and will provide integrated data sharing with external agencies. This integrated system will allow for data entry to occur once, improving data integrity and consistency. Furthermore, many paper-based processes will be automated, ensuring there is reliable and up-to-date information within the system.

A great benefit of Guardian is that it is being developed as a mobile friendly system. What does this mean?

The functionality found in the desktop version of Guardian will be available on mobile devices, such as iPhones and iPads in the field, therefore details of site inspections may be

recorded immediately.

Data can be entered offline in the field on a mobile device, and then uploaded to Guardian when connected to a wifi network.

Guardian will be compatible with most internet browsers.

Project Guardian is well underway, with the software vendor currently building the first iteration of the new system. Get in touch via the Project Guardian email: guardian@rfs.nsw.gov.au.



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Simple but effective



Ashby Brigade, in Clarence Valley on the state's north coast, has brought a simple idea for engaging their community to fruition with diligence and care for detail. Postcards sent to local residents have been successful in raising awareness of the brigade, generating data for local pre-incident plans and increasing the number of completed Bush Fire Survival Plans. Helen Dickson, Clarence Valley District Services Coordinator, explains how the program started with one enthusiastic brigade member.



Where did the idea come from?

Clarence Valley District has been encouraging brigades to prepare or update pre-incident plans in their brigade areas. Ashby Brigade enthusiastically took this project on board with one of its members, Rebecca Smith, taking the initiative to design a postcard questionnaire to access information from the community.

What worked and what didn't?

Like many in semi-rural communities, it's difficult to access information from face-to-face communications. Many residents, including brigade members, travel long distances to and from work at major towns and are busy with their

day-to-day lives. It is therefore difficult to coordinate community engagement efforts at times when residents are available or at home. The postcard allowed residents to answer a set of questions in their own time and at their own pace. Rebecca developed the postcards with a simple tick box and a range of questions. Ashby Brigade members put in long hours distributing the postcards to every residence in the brigade area. The cards were addressed and stamped to return back to the brigade post office box at the general store. The District Office assisted with the process, firstly by aiding with wording for the postcard, as well as providing the cardboard, printing and cutting of the postcards (at

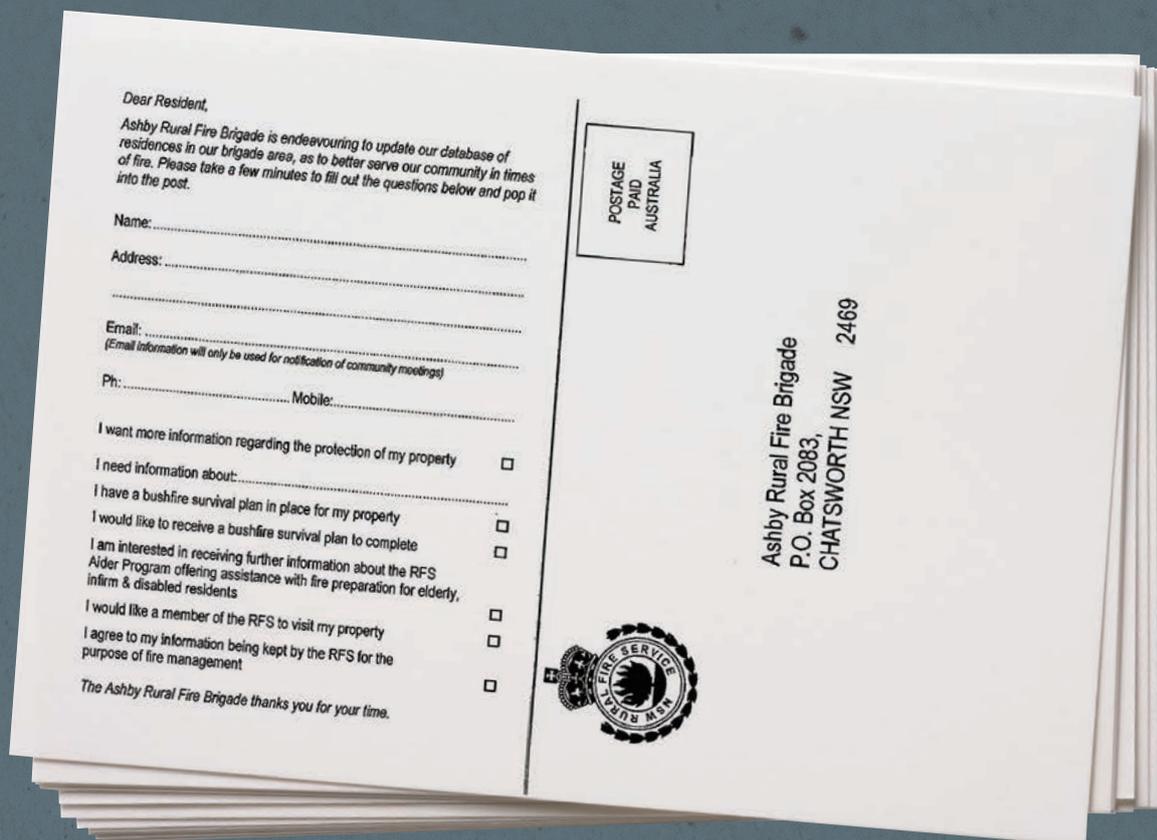
one stage the District Manager was enthusiastically manning the guillotine). Ashby Brigade provided stamps for return postage of the cards - at a substantial cost to the brigade - and although many replies were posted back, there were just as many who didn't return their responses. A reminder slip was then dropped into the mailboxes of the non-repliers, which resulted in the receipt of many additional responses.

The Ashby community holds markets every month and residents were also invited to return postcards to Ashby Brigade at these events. This allowed the brigade to access excellent feedback from the community regarding the project, and residents were free to ask

a range of questions in a less formal environment. Because Ashby is comprised of both village and rural communities, the brigade was able to create two individual information packs, one for village residents and one targeting the rural community. The postcards allowed the brigade to target information specific to each resident's needs.

Was it successful?

There were 289 postcards delivered to the community. 134 responses were received in the following five-month period and many additional discussions were held at the Ashby Markets. From these responses, there were 85 Bush Fire Survival Plans distributed



ABOVE: Ashby Resident's Card as produced by Ashby Brigade member Rebecca Smith

Of the 289 postcards delivered to the community, there were 134 responses in a five-month period, 85 Bush Fire Survival Plans and 48 information packs were distributed. Twenty-nine residents received assistance through AIDER program and a further 33 residents requested a visit by NSW RFS for property inspections.

(many with hands-on assistance to residents to complete), 29 residents received assistance through the RFS AIDER program, 48 residents received the full information packs and 33 residents requested a visit from NSW RFS representatives for property inspections. Rebecca also developed a spreadsheet of information for pre-incident planning which will greatly assist the brigade and the NSW RFS during fire incidents. Overall it was a very successful project.

What did it achieve in the local community?

The community has an increased awareness of the information and assistance available to residents from

the NSW RFS. The brigade now has a database that can be drawn upon in emergency situations, that gives information such as demographics (age, disability, etc.), how prepared and defensible particular properties are, water storage and availability, greater understanding of the brigade area, access roads and fire trails.

Were any other benefits realised through this project?

With the brigade being more proactive and visible around the community, there appears to be a friendlier atmosphere with a greater level of confidence in, and understanding of, what the brigade does. Enquiries regarding brigade membership have risen with at least two potential new

members completing and lodging membership applications.

What follow up activities have been done?

Property inspections are still ongoing and there are still late replies being received. AIDER work is being carried out by the State Mitigation Support Service which has also been an excellent promotion for the NSW RFS and tends to generate its own work as more residents become aware of what's available.

Has anyone else in the District done a similar thing off the back of this success?

The postcard initiative has been discussed at Clarence Valley District Community Engagement

Advisory Committee level with a view to spreading to all brigade areas in the District. The District office has been successful in gaining Community Engagement Grants Scheme funding to assist with production costs and postage and will be rolling this initiative out across the Valley over the coming months.

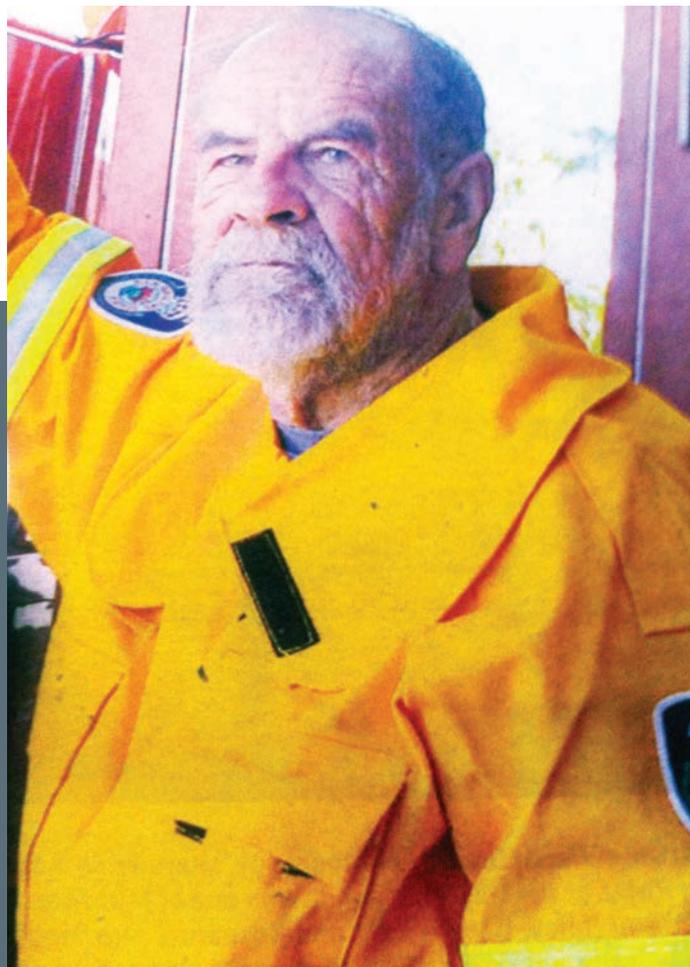
Special thanks go to...

Ashby Brigade would like to thank their member Rebecca Smith for her tireless efforts in designing and producing the postcard, maintaining the spreadsheet database, collating and presenting all information collected. Rebecca's input was invaluable in preparing Ashby Brigade area's pre-incident plan and the brigade members are eternally grateful for all her hard work.

VALE Peter Witton

30 March 1938 - 18 September 2014

Brigade: Kyogle Headquarters,
Northern Rivers Zone



Peter Witton, Deputy Captain of Kyogle Headquarters, died on Thursday 18 September 2014 while responding to a house fire. On St Florian's Day 2016 his fellow crew members Vic Fischer, David Aberdeen, Cody Runciman were acknowledged with a unit citation for demonstrating the highest levels of professionalism and dedication in their efforts to preserve the life of their fellow crew member and mate Deputy Captain Peter Witton.

Peter Witton was also remembered at a memorial service held in Canberra in April 2016. The memorial honours members of the fire and emergency services community who have paid the ultimate sacrifice while helping others. Mr Witton has also been included in the Volunteer Memorial at Mrs Macquarie's Chair in Sydney. A veteran of 36 years in the NSW RFS, Deputy Captain Peter Witton joined the Mt Kuring-gai Brigade in 1978. During his NSW RFS service he was awarded the 25-year National Medal and the 25-year long service badge.

By all reports he lived for the brigade and his wife and family took comfort in knowing he died with his uniform on and surrounded by friends.

On Thursday 18 September 2014 Kyogle Headquarters 1, with a crew of four, was responding to a house fire. Multiple units were responding to the same incident. Shortly after departing the crew became aware that Deputy Captain Witton was showing signs of distress and had become unresponsive. The crew immediately notified Fire Control, requested an ambulance and stopped the incident response.

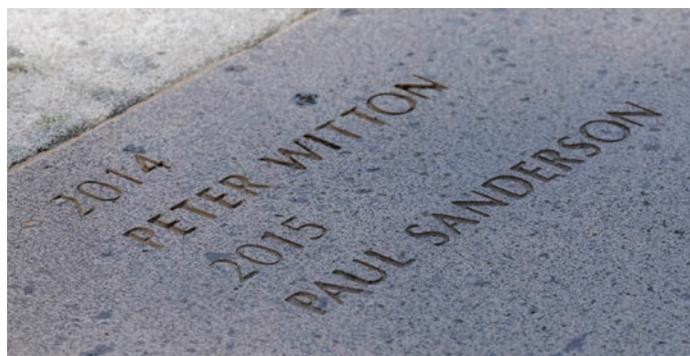
As they pulled the truck to the side of the road Deputy Captain Witton was lapsing in and out of consciousness. With grave concern for his condition the crew extricated Deputy Captain Witton from the rear cab of the Category 1 truck. They placed him on the ground readied the Automated External Defibrillator unit and administered first aid. As the paramedics arrived

Deputy Captain Witton went into cardiac arrest. The crew initially performed CPR until the paramedics were able to take over and deploy their equipment.

The paramedics and NSW RFS crew worked together on the side of the road for approximately 25 minutes to stabilise Deputy Captain

Witton before his transport to hospital. Unfortunately he did not regain consciousness and passed away on the way to the hospital.

To honour Deputy Captain Witton's memory the Witton family is encouraging people to join their local RFS brigade.



...he lived for the brigade and his wife and family took comfort in knowing he died with his uniform on and surrounded by friends.



Born leader

Sophie Cox from Hay has been named Cadet of the Year

For 17-year-old Sophie Cox being connected to the NSW RFS is a part of living on the land.

"You can't walk down the main street of Hay without bumping in to a member," the NSW RFS Secondary School Cadet Program 2015 Cadet of the Year explained. "I joined the Hay Brigade in December 2016 and I can't wait to put what I've learnt into practice."

More than 7,500 students have completed the 10-week NSW RFS Secondary School Cadet Program since it began in 2004, with more than 800 taking part last year alone. The program provides Year Nine and Ten students with an insight into fire safety and preparedness while developing practical life skills and a general appreciation of community service and volunteering.

While every student gains invaluable experience and skill, Hay War Memorial High School student Sophie Cox was awarded the prestigious title of Cadet of the Year.

Sophie now realises the importance of being prepared in the event of an emergency.

"Living where I do on a farm, a situation like a fire could be

disastrous. I thought, being in a rural area it was really important to know about fire safety," she said. "Last year following a lightning strike, my family contained a fire on our property and I'd like to think I would be able to help in that circumstance in the future."

Superintendent Kevin Adams, AFSM District Manager MIA District, easily sees the potential that a student like Sophie could bring to the NSW RFS.

"Sophie is a born leader," Superintendent Adams said. "She is extremely community-minded which is what being a volunteer is all about."

"I could see she had a sense of discipline to both herself and her team."

Superintendent Adams was not surprised that both Sophie's peers and teacher thought she should be nominated for the accolade.

"It was a decision I was more than happy to endorse," he said.

Superintendent Adams also praised the efforts of Ms Gretl Schiller from Hay War Memorial High School and the MIA District staff and volunteers.

Sophie strongly recommends

other students who have the opportunity take part in the Cadet Program.

"You'll pick up life skills that will be beneficial to use with any career or community experience," she said.

"After school I'd like work in the emergency services industry and with the program highlighting discipline, teamwork and leadership I know it will certainly help."

The gravity of the achievement hit home when the Cox family travelled to Sydney to accept the award at NSW Parliament House in the company of NSW Emergency Services Minister, The Hon David Elliott, MP and NSW RFS Commissioner Shane Fitzsimmons, AFSM.

"To be told my name would be recorded in Hansard, in the parliamentary history books - that was pretty amazing," Sophie exclaimed.

Delighted for her daughter, Janine Cox said: "Sophie winning this award was the most amazing thing. I am just so proud. Her Dad's even bought a new truck for the farm that Sophie will be able to use if needed in a fire."

The Cadet of the Year correctly points out: "I am now the one who tells him what the equipment on the truck is for and how to use it."

The Cox family and community of Hay should be proud to have a member ready and willing to assist when needed.

After being named Cadet of the Year, Sophie spent a week at the NSW RFS State Operations Centre in Lidcombe. Sophie gained first hand experience of how fires are managed with the State Operations Centre, which was activated during her visit.

ABOVE: Cadet of the Year, Sophie Cox, visited the NSW RFS Headquarters in January 2016. Photo by Jacqueline Murphy

To be told my name would be recorded in Hansard, in the parliamentary history books - that was pretty amazing.



Australian Fire Service Medal Recipients

Queen's Birthday 2016

Five of our most dedicated members were awarded the Australian Fire Service Medal (AFSM) in the Queen's Birthday honours list. These outstanding individuals have been nominated for this honour by the people and communities who they have served over many years. The AFSM is a national award and the highest honour in the Australian firefighting industry

Firefighter
Joseph Brown, AFSM
Canobolas Zone

In 1936 the Hobby's Yards Bush Fire Brigade was established with 15 members, six beaters and six knapsacks. In 1947 when the-then president was away young Joe, who had just finished school, reluctantly agreed to chair the meeting. Soon after Joe was voted in as President - a post he still holds today almost 70 years later.

Since then Joe has held several other positions including Brigade Captain for 22 years from 1972 and Deputy Fire Control Officer for the Blayney Shire Council in the 1980s. While in the Captain's position Joe designed and built a fire truck out of a 1950s 'seven tonne Commer'.

Joe's most memorable incident is a fire sparked by a lightning strike on his property in 1965. Locals rallied to fight the fire including one neighbour who cleverly used his orchard sprayer to help save sheds and property. This inspired Joe to design the brigade's first fire truck soon after.

Even though Joe is approaching 90 he is still a very fit member of the Barry Hobbys Brigade and neighbouring brigades will agree he has not only been a mentor, but an inspiration.

Group Captain
Alec Byers, AFSM
Namoi-Gwydir Team

Alec Byers joined the Ashley Rural Fire Brigade in 1997 and has remained an active member ever since. From 1997 until 2007 he was Captain of his brigade and was involved in all aspects of brigade life from attending incidents to issuing permits.

In 2006 Alec was elected as a Deputy Group Captain and quickly moved on to become Group Captain in 2007 - a position he still holds today. No two days are the same for Alec due to the diversity of his involvement; whether he's acting Incident Controller and Divisional Commander at incidents, helping with training or attending senior management team meetings.

The new Category 6 tankers benefitted from Alec's input and he has also helped introduce them to the local area. During Alec's time with the Service he has conducted an extensive overhaul of the Moree Tanker fleet.

Alec has a raft of qualifications under his belt including Group Leader and he willingly shares his knowledge with members throughout the Namoi Gwydir Team area.

He received the 10 year NSW RFS Long Service Medal in 2012 and is a worthy recipient of the AFSM for his 18 years' diligent service to the community.

Group Captain
Patrick Linnane, AFSM
Chifley

Although it's not officially recorded Patrick Linnane started his service fighting fires in 1954 with the Neville Bush Fire Brigade in his late teens.

Patrick then joined the Raglan and Jenolan Caves Brigades in 1984 and since then has risen up the ranks to Deputy Group Captain and Group Captain. Patrick was also the founding member of the Oberon Support Brigade, where he was Captain for nine years.

The majority of volunteers in the Chifley Zone have benefitted from Patrick's first class tutelage at some point, as well as senior officers - including two Group Officers and several Captains in the Chifley Zone.

He takes his instructor role for the Rural Fire Driving course seriously, having missed just one course since it began in the early 1980s when he started the Training Committee in the area. Patrick still remains dedicated to raising members' training standards through his contribution to the training committee and leading events. It has been estimated Patrick contributes around 300 hours training volunteers each year. The current Chifley Zone and Lithgow District cadet programs were set up by Patrick in 2006 and he has been instrumental to their success.

In 2006 Patrick received the National Medal for his dedication and tremendous contribution to the Chifley Zone and Lithgow District.



Joseph Brown



Alec Byers



Patrick Linnane



Alfred (Bill) Snowden



Christopher Nesbitt



**Firefighter/Inspector – Retired
Christopher Nesbitt, AFSM
The Hills**

Chris Nesbitt joined the Baulkham Hills Headquarters Brigade in Castle Hill in 1975. He quickly gained the support of his fellow brigade members and was appointed Captain in 1977. He held that position for the next 13 years before being named Deputy Group Captain.

Under his exceptional leadership the brigade flourished. It attracted more than 60 members and provided invaluable support for the district through provision of well-trained firefighters, bulk water support, the original district canteen and communications group, as well as transport and logistics roles.

With a background in training for Qantas, Chris took on the role as lead instructor for the original basic training courses developed by the Service in the early 1980s.

He went on to develop the course into a formal training program within the District before commencing full-time employment with the NSW RFS Learning and Development team. Chris also has extensive information technology knowledge and was heavily involved in the development of software programmes which was invaluable in setting the direction for the Service IT systems used today.

Chris' empathy with members is well recognised, particularly through a system he developed to ensure members' welfare is prioritised in the event of an injury.

Having devoted immeasurable time and energy to the Service across the State, Chris is held in the highest regard by all.

**Firefighter/Group Captain -
Retired Alfred (Bill) Snowden,
AFSM Mid Coast**

Alfred (Bill) Snowden joined the Tinonee Bush Fire Brigade in May 1971 and became Group Captain soon after. Bill has held the rank of Group Captain, the highest NSW RFS elected volunteer rank, for approximately 30 years. This is an exceptional personal achievement and a leadership example with few precedents.

Throughout his service Bill has taken a personal interest in all aspects of brigade management and administration. His training interests included rural fire off-road driving, fire ground safety, mentoring and the operational firefighting capability of brigades in the Manning District. In recent years he has also been instrumental in the reconstruction of the Krambach Brigade.

In an outstanding career Bill has made a substantial contribution to the security of the general public by his operational expertise and as a member of the local Incident Management Team at numerous local and interstate fires ranging from the mundane to catastrophic. Bill is driven by a desire help communities become more resilient to bush fire. His dedication has seen him attend numerous out-of-area fires including the 2009 Victorian bush fires. This passion for the job was recently recognised when he was awarded Life Membership of Tinonee Brigade.



Bush fires kill, but knowing exactly how might make them less deadly.

By Justin Leonard, Team Leader, Bushfire Urban Design at CSIRO

The January 2015 bush fires in the Adelaide Hills, which claimed 27 homes, once again highlighted the importance of planning for the worst. Mercifully no human lives were lost however it is important to learn whatever lessons we can to avoid future tragedies.

My colleagues and I analysed 825 deaths in 260 Australian bushfires from 1901 to 2011 and our research has revealed some compelling evidence to help fire agencies such as the NSW RFS to guide residents to plan for future bush fires.

Most bush fire deaths (58 percent) were people who lost their lives when caught out in the open. Tragically 72 percent of this group were within 200 metres of their own homes (this statistic is based only on cases where details are accurately known).

As NSW RFS members it's useful to imagine what circumstances and decisions

might have led to these outcomes. Questions for consideration include whether a large number of people simply wait to see if the fire is really going to arrive on their doorstep.

Bush fire deaths within a house represent 75 percent of all fatalities during bush fires that occurred on days with "catastrophic" fire danger conditions. This is despite them representing only 27 percent of all bush fire deaths.

Of those who died inside homes, 92 percent were in rooms that did not have a door leading directly to the house's exterior. This raises uncomfortable questions: why did these people apparently not try to leave the home as the house fire developed? Were they monitoring the conditions outside as the fire passed? Had they thought about which exit was the safest?

Homes under attack

When a fire arrives at a property ember attack is strongest as the main fire arrives and will persist for a long time after it has passed. They may also start to happen before the fire actually arrives. If the house is close enough to the bush it may also be affected by radiant heat, and if very close then direct flame contact is possible although most houses are lost without any direct interaction from a bush fire front. This goes some way to account for the seemingly random loss patterns that occur.

Given the timing and intensity of ember attack, it is no surprise that our data shows that houses can ignite before, during, and after a fire front's passage – with the most likely time being during and immediately after the fire front has passed.

For the relatively small number of houses that ignite before the fire front arrives, the

occupants may be faced with life-threatening conditions both inside and outside concurrently. There are also a few cases where houses are built so close to the bush or other combustible elements that even the low-level fire that persists after the main fire front has passed is too intense to survive outside.

Nevertheless for the vast majority of homes that burn in bush fires it is likely that at any given time conditions would be survivable either inside or outside the house. Meaning that with the right strategy lives can be saved.

Designing a lifesaving strategy

It is interesting to note that the current building codes for bush fire-prone areas include specific fire weather severity limits beyond which these standards may no longer be effective. The standards aim to reduce the risk that a building will catch fire however also rule



out any guarantee that it won't. The code also fails to address the issues of how fast-burning homes might succumb or how to provide a safe or effective exit path from the building.

So even if a bushland home is fully up to code, residents need to plan for a wide range of scenarios. The NSW RFS, together with equivalent agencies in other states, remain the best place for residents to source the information they need to develop a bush fire survival plan.

Once a plan has been developed I encourage residents to test their fire plan by checking whether it answers the following questions:

- At what level of forecast fire weather severity will they retreat to a non-bush fire prone area for the day?
- Do they understand the local potential fire severity for weather conditions below this level?

- For any given circumstances, what are the signs or triggers that indicate that it is no longer safe to evacuate to a non-bush fire prone area? For some isolated communities this will be when fire weather severity passes a certain level; for less isolated residents it will be when they are no longer certain that the roads are moving freely and fire will not impact their travel route.
- What and where is their personal protective equipment and firefighting tools?
- Is the property free from combustible items under or adjacent to the home?
- Is the home in an acceptable state of repair to survive a bush fire?
- Which areas would be the safest external location to move to if it becomes impossible to stay in the house?

- Does the path leading to this cleared area involve walking over or past combustible elements such as vehicles and decking?
- How do they monitor all rooms and cavity areas of the home for signs of ignition of fire development inside the house?
- What is on hand to monitor and put out these fires (stored water, ladders to monitor internal roof space, etc.)?
- If they can't put them out, which exit path is the most appropriate?

A deep understanding of the nature of bush fire threat is the best tool to assessing and managing risk.

ABOVE: Houses destroyed during the Linksvie Road fire, October 2013. Photos by Brad Hunter, courtesy of The Daily Telegraph

Environmental circumstances surrounding bushfire fatalities in Australia 1901–2011 by Justin Leonard and his colleagues is available to download at sciencedirect.com. This paper describes the development of a dataset covering bush fire-related life loss in Australia from 1901–2011. Over this time, 260 bush fires have been associated with a total of 825 civilian and firefighter fatalities. This database was developed to provide an evidence base from which an Australian national fire danger rating system can be developed, and helps formalise our understanding of community exposure to bush fire.

YAMBORA RURAL FIRE BRIGADE



NSW RURAL FIRE SERVICE

...for our community

BRIGADE IN PROFILE

Yambora



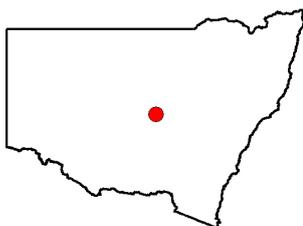
Name of brigade: Yambora

Year brigade formed:
Approximately 1949

Current Captain: Don Fidock

Current President: Geoff Gill

D/T/Z: Mid Lachlan
Valley Team



Can you give us a brief history of the brigade?

Unfortunately there are few records available to verify the details of when the brigade was first formed. We do know the very first Captain was Irvan Williams who resigned after 19 years of service in 1968. So we can assume the brigade started sometime in 1949. The original secretary was Hori McGuire. The following are some facts we do know:

In September 1954 the President was Roy Lander, Secretary/Treasurer was Jim McColl and the Captain was

Irvan Williams. The brigade has one Cooper power unit, two square iron tanks, one low-down pump, first aid kit, galvanised iron tank and eight knapsacks. Meetings were held at the Mallee Gates each year at night. In cold weather a fire would be lit and everyone would sit on a log, tailgate or whatever was available. After Tiger Berryman joined the brigade the meeting went up-market as he brought along his school bus and everyone sat in that.

In August 1962 the brigade paid £37.10s, equating to one-quarter of the cost of a 1948 Fargo Motor Lorry Bush Fire

vehicle with stamp duty paid of threepence. The next year the brigade paid £64.15s.3d for 57 sheets of roof iron, four lengths ridging and 20lb of nails for brigade members to build a shed. The shed was 20 feet long, 12 feet wide, had walls eight feet high and a gable roof.

In 1965 a fire sparked by two D9s pulling timber got going on 'Wanganui'. It jumped the road and headed north east into 'Wilga Plains' Hill. Don Fidock and his son Allan were fighting the fire alongside others when they found themselves out of water. So they went up to the main road, a two-wheel track,

Brigade meetings were held at the Mallee Gates each year at night. In cold weather a fire would be lit and everyone would sit on a log, tailgate or whatever was available.

in search of more. At that point the wind changed and rapidly surrounded them with fire. Don being the driver was ordered by his father to just "put your foot down and go, go, go. Don't look back." They drove straight through the fire front and fortunately came out the other side uninjured.

In those days the only way to communicate to brigade members, when there was a fire, was via the party line telephone. In 1966 Post Master Generals Department sent a directive that on party lines the fire code would be "0" which was three long rings. All private calls on the party line would be immediately terminated by the telephonist and the authorised bush fire person could immediately translate their message. On this occasion and only this occasion, the hearing of three long rings on the party line gave all subscribers permission to get on the line together and listen.

Long-serving Captain Irvan William resigned in 1968 and Jim McColl took over the mantle. Bill Gill was President and of course, Jack O'Dea was still the Secretary/Treasurer, a post he held until 1992.

In 1973 Robert Gill became President and the brigade decided the fire shed at the William's property may need shifting, due to the property being sold. It was also decided to sell the fire truck because it was too old and slow to be useful. It is understood that at some time after this Robert Gill purchased the truck for \$200. The shed was dismantled but was not rebuilt due to the sale of the truck.

In 2000 Don Fidock became the Captain with Geoff Gill as Senior Deputy Captain. That year there were two notable fires in our brigade area. The first was a grass fire started by lightning in 2002, burning through approximately 10 acres. Then in 2004 the police lit up a drug haul in our brigade area that we weren't notified of. It transpired that a neighbouring brigade had given them a permit to do so.

On January 22 2011 we received a new fire truck.

Luckily members were attending the handover to familiarise themselves with the new truck and to swap some equipment from the old truck, which was going on to Melrose Plains Brigade. Almost on cue thunder rumbled and lightning struck a small bush down the paddock. Up went a wisp of smoke and the new truck and members launched into action. Some members came back quite wet from the experience.

On February 4 that year a large fire started on 'Merndale' jumping the road into 'Braulghy' Hill. This was referred to as the Braal Fire and help from many brigades near and far was greatly appreciated. Aircraft were called in to water-bomb the fire, marking a new era for firefighting in the area. A thank you must go to the three young firefighters who bravely fought the fire when it first started: Michael Jarvis, Wayne Jarvis and Ewan Fidock, an experience they are unlikely to ever forget.

In 2015 a shed was built on 'Wilga Plains' to house the new fire truck and there was one fire in Fidock's crop and one fire started by lightning hitting a box tree at 'Lagonda'. In October 2015, the shed was officially opened along with the presentation of 12 Long Service medals (see photo to left).

What are some unique parts of your brigade's history?

Historically, at the first sight of smoke everyone hits the action button. Over the years there have been many smaller fires our brigade has rapidly got under control, stopping them escalating into anything more serious. Not all incidents have been recorded in the minutes but luckily some members can vividly recall the firefighting, although dates and specifics have been lost.

For example, on the day of Tullamore Schools speech-night some years ago one family was picked up at the bush stop to travel back to their homestead when they saw the wind blow over an electricity pole in a neighbour's paddock, quickly sparking a fire. They raced home with a hand on the horn to alert the brigade captain and deputy

captain, who happened to be emptying the fire tank onto the lawns and garden. That exercise was immediately halted and serious firefighting swung into action. The neighbour whose paddock was alight was in the shower shampooing her hair for speech night. Her first sign of trouble was the shower stopping when the power blackout halted her water pressure. She soon realised her biggest problem was not how to get the shampoo out with no water, but her burning farm. The fire was quickly dealt to and those Yambora Brigade members all arrived at speech night smelling of smoke with a good story to tell.

How many active members does the brigade have?

The total membership for Yambora Brigade is 27 and 12 of those members received Long Service medals in October. The average years of service amongst the group is 39 years and represents a combined total of 475 years of service.

There are several families in the brigade that have multiple members, for example the Edwards, Gill and Fidock families. The Fidock's occupy the current captain, secretary and deputy captain roles, plus one other member. Alan Fidock was one of the founding brigade members. Stan Gillett is our most conscientious members having only missed 12 meetings in 54 years.

What are some recent milestones the brigade has achieved?

Receiving the first new truck in 2011 was definitely a milestone and the new shed on the 'Wilga Plains' property in October 2015. There was no previous station as the brigade's previous truck had been stored in a farm shed since 2011.

What type of area do you cover? (e.g. farm/urban/bushland)

We are a typical remote rural brigade in a farming area. The landscape is mainly undulating with a large range of hills on the western side.

What types of incidents does your brigade attend?

Fires sparked by lightning are the most common and due to the vegetation in the area, it is primarily grass and scrub fires. The most recent large fire campaign the brigade was involved in was east of Fifield in 2014.

What type of hazard reduction is performed in your brigade area?

The main hazard reduction in the area is completed through farming practices such as grazing.

What vehicles do you have?

Just the one! Single Isuzu Cat 1.

What type of training do you conduct and how do you go about doing this?

Members are encouraged to go over equipment on the truck each year to refresh their memories.

What are some unique skills and features of your brigade?

Ours is a remote farming brigade. Like most farming brigades we were established to protect our own and our neighbours' farms if a fire should start. We have a great knowledge of the local area and years of firefighting experience.

What are some unique features of your community?

We are not unique, just ordinary folk on farms - but unfortunately like most rural areas, the majority of farms are becoming less populated due to young people going away for work and the properties needing to become bigger to remain viable. *Written by Sandra Fidock, Yambora Brigade*

LEFT: (L-R) Ken Neville, Stan Gillett, Ewan Fidock, Charlie Lacey, Don Edwards, Tom McMahon, Kaye McMahon, Terry Fitzgerald, Don Fidock, Sandra Fidock, Mark Fisher, Paul Smith. Not present on the day: Phillip Edwards & Geoff Gill

A crossword from June 1958

Test yourself with a crossword that appeared in the Bush Fire Bulletin in June 1958. We found this page by simply entering 'crossword' in the search box in the NSW RFS website and the Bush Fire Bulletin page.

SOLUTION ON...

Test your skills using the *Bush Fire Bulletin on Trove* to find the solution. Try searching for: Crossword June 1958 solution.

<http://www.rfs.nsw.gov.au/resources/bush-fire-bulletin>

The main Public Risk policy Exclusions are:

- (1) Claims directly or indirectly arising from the use of locomotives, aircraft or waterborne craft.
- (2) Claims for death or personal injury in respect of which the Insured or any other person or party is required by the law of any place to have in force at the time when such liability is incurred a Policy of Insurance by virtue of any Act or Ordinance relating to motor vehicles (covered by Third Party Blanket Policy for unregistered vehicles).
- (3) Claims for death or personal injury in respect of any motor vehicle which is registered under any Act or Ordinance relating to motor vehicles. (Covered by owners individual Act policies).
- (4) Claims for death or personal injury to any volunteer fire officer or fireman whilst carrying out activities authorised under the Bush Fires Act, No. 31, 1949, or any regulations thereunder. (Covered under the Workers' Compensation Act.)
- (5) Claims for death, injury or damage arising directly or indirectly out of or caused by or in connection with the erection, demolition, alteration of and/or addition to buildings except an alteration or addition not exceeding in cost the sum of £500.

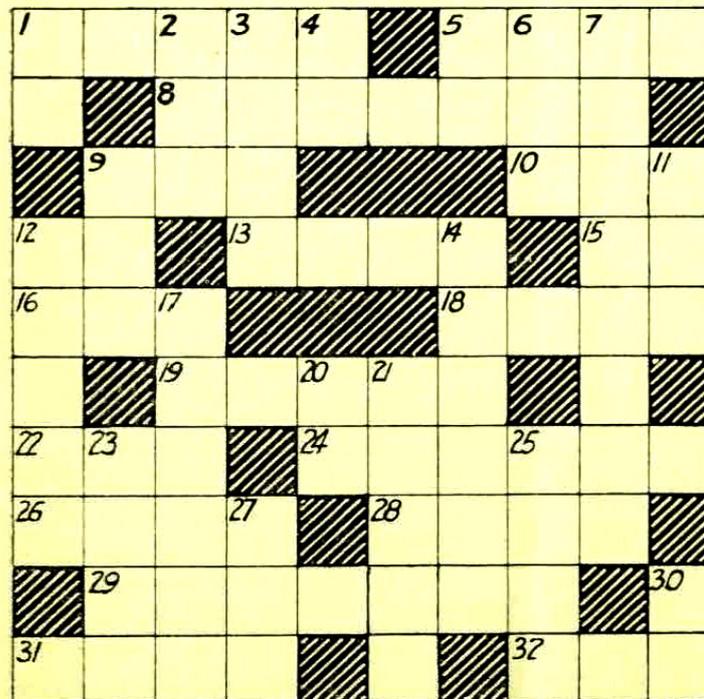
(6) Claims covered by any other insurance in force at the time of the event.

The "blanket" policies to be arranged through the Government Insurance Office of New South Wales, will commence on 1st July, 1958, and a schedule will be attached to the policies indicating the names of Shire and Municipal Councils embraced in such policies.

The Minister has approved of the annual premiums being a charge against the Eastern and Central Divisions Bush Fire Fighting Fund and being apportioned equally to all Councils eligible to participate in the Fund. On that basis each Council will be required to provide approximately £25 17s. 9d. in its estimate of expenditure for the 1958-59 period to meet its proportion of the cost of the insurance cover. The Council's share of this amount after applying the provisions of the Act will be 25 per cent., i.e., £6 9s. 5d. The Council's estimate for the 1958-59 period will be adjusted to provide for the insurance charge.

It is proposed that the machinery operation of the insurance covers will provide that claims under these policies should be forwarded by the Council to the Government Insurance Office of New South Wales, and not to this Department. Any such claims must bear a certificate from the Town or Shire Clerk to the effect that the accident or event occurred within duly authorised bush fire fighting or training activities.

The Bulletin Crossword



DOWN

1. Company (abbrev.).
 2. Employ.
 3. Obligation.
 4. Electroplate (init.).
 5. To perform.
 6. Part of a circle.
 7. Undergraduates.
 9. Guided.
 11. An era.
 12. Constructs.
 14. Replaced.
 17. Entice.
 20. Conditional purchase (init.).
 21. Relieve.
 23. Part of the ear.
 25. Requirement.
 27. To free from.
 30. Upon.
- Solution on page 14.*

ACROSS

- | | | |
|---------------------|-----------------------|--------------------------------|
| 1. Raw. | 13. Belonging to you. | 26. Rancid. |
| 5. To rush. | 15. To perform. | 28. Falsehoods. |
| 8. To subscribe to. | 16. Girl's name. | 29. Firefighting organisation. |
| 9. Allow. | 18. Level. | 31. Exploit. |
| 10. A hint. | 19. Of a place. | 32. Loud noise. |
| 12. Pronoun. | 22. A measure. | |
| | 24. Places. | |

BUSH FIREbulletin

onTrove



The NSW RFS has joined forces with the National Library of Australia to digitise the entire collection of the Bush Fire Bulletin dating back to September 1952.

All editions of the Bush Fire Bulletin are available online and are fully searchable, making this huge historical archive easily accessible.

Commissioner Shane

Fitzsimmons has praised the chance to make the Bush Fire Bulletin so accessible.

“The skill and dedication of our volunteer service has been recorded in the pages of the Bush Fire Bulletin, informing and bringing to life the important work our members undertake,” Commissioner Fitzsimmons said. “I am very proud that this history of the NSW RFS will be available for all of Australia and the world to see.”

Search place names, brigade

names, dates and fire-related topics such as ‘fire trails’.

How to search Bush Fire Bulletin On Trove

1. Type in your search term
2. Click ‘Go’

You will be taken to the Bush Fire Bulletin’s archive on the National Library of Australia’s Trove website

3. A range of articles will be offered for selection
4. Click on the green View Online box on right to view the article

You can print, download or simply read online.

To initiate another search return to the search box on the Bush Fire Bulletin page on the NSW RFS website.

Or leave the search terms (“nla.obj-284283986” OR “nla.obj-284265362”) in the search box to stay within the Bush Fire Bulletin archive.

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ISSN: 1033-7598

Publisher NSW RURAL FIRE SERVICE Produced Corporate Communications Editor Jacqueline Murphy

Graphic Design & Art/Production Coordinator CMMA Digital & Print Printed on Monza Gloss; FSC (CoC), ISO 14001, IPPC, ECF environmental accreditation

Cover photo The South Ballina Beach Road fire flared up in coastal forest on 14 November. The fire soon entered the peat soil in the area and was difficult to suppress. Photo by George Rushby