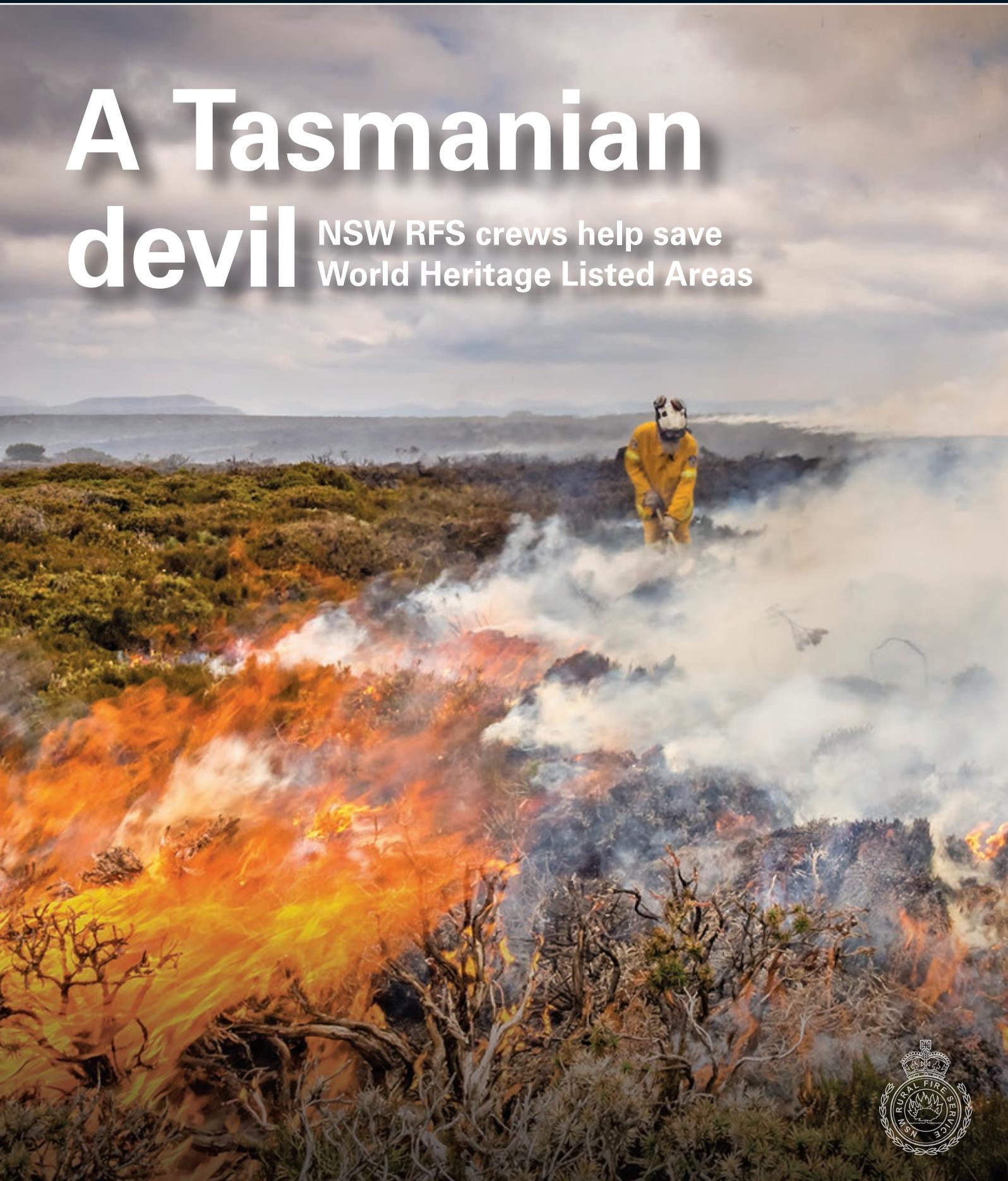


BUSH FIREbulletin

THE JOURNAL OF THE NSW RURAL FIRE SERVICE

A Tasmanian devil

NSW RFS crews help save
World Heritage Listed Areas



Contents



01 FOREWORD	25 LIFTOUT
02 IN FOCUS	25 Identify and mitigate hazards around the home
08 INCIDENTS	30 AWARDS
04 Smoke signals Climate change may impact the timing of hazard reduction burns	30 St Florian's Day 2016
06 A Tasmanian Devil	34 COMMUNITY ENGAGEMENT
12 RESEARCH	34 A long engagement – Bonville Brigade
12 Fire behaviour in grass – do we tend to under estimate it?	38 FIRE BEHAVIOUR
14 ENGINEERING	38 Fires in the mallee woodlands
14 Best truck ever built? New features for Cat 10 pumper	43 SPOTLIGHT ON VOLUNTEERS
16 Fire on water A new vessel for the Service	43 Volunteer in profile – John Davison
18 SPOTLIGHT ON VOLUNTEERS	44 COMMUNITY ENGAGEMENT
18 The Young ones	44 From the inside out Building community within a changing world
19 RESEARCH	48 BRIGADE IN PROFILE
19 Preparing children for disaster	48 Bundanoon
20 GENERAL NEWS	50 YOUNG PEOPLE
20 Working with school communities	50 Girl Power
22 SPOTLIGHT ON VOLUNTEERS	51 SPOTLIGHT ON VOLUNTEERS
22 Hidden Treasures Celebrating NSW RFS women who give so much to their rural communities	51 Volunteer in profile – Ray Barron
	50 GENERAL NEWS
	50 Why should your brigade become a Deductible Gift Recipient?

The NSW Rural Fire Service (NSW RFS) encourages the availability, dissemination and exchange of public information. You may copy, distribute, display, download and otherwise freely deal with this material for personal, in-house or non-commercial use, on the condition that you include the copyright notice © State of New South Wales through the NSW Rural Fire Service [plus year of creation or first publication] on all such uses. In the event that you wish to copy, distribute, display, download, store, or use this material for a purpose other than personal, in-house or non-commercial use, you must obtain permission from the NSW RFS by writing to the following address:

Commissioner
NSW Rural Fire Service
Locked Bag 17
Granville NSW 2142

You must also obtain permission from the NSW RFS if you wish to:

- charge others for access to the work (other than at cost);
- include all or part of the work in advertising or a product for sale;
- modify the material; or
- use any trade mark from this publication, including the NSW Rural Fire Service crest, MyRFS logo, or the Firewise logo.

Disclaimer Statement

While the material within this Bush Fire Bulletin is current at the time of writing changes in circumstances after the time of publication may impact on the accuracy of the material. Individuals are responsible for ensuring they have the most current version of this publication.

The information and material contained herein is general in nature and is intended for your use and information. The NSW Rural Fire Service (NSW RFS) disclaims, to the extent permitted by law, all warranties, representations or endorsements, express or implied, with regard to the material contained herein. The NSW RFS does not warrant or represent that the material contained herein is free from errors or omissions, or that it is exhaustive. Users should exercise their own skill and care with respect to its uses. You must not assume that this material will be suitable for the particular purpose that you had in mind when using it.

The NSW RFS disclaims any liability (including but not limited to liability by reason of negligence) to the users of the material for any loss, damage, cost or expense whether direct, indirect, consequential or special, incurred by, or arising by reason of, any person using or relying on the material and whether caused by reason of, any error, omission or misrepresentation in the material or otherwise. Users of the Website will be responsible for making their own assessment of the material and should verify all relevant representations, statements and information with their own professional advisers. All photos, unless otherwise stated, taken and owned by the NSW Rural Fire Service, Corporate Communications.

The views expressed in articles in the Bush Fire Bulletin do not necessarily reflect the views or the policies of the NSW RURAL FIRE SERVICE.



Foreword

During the autumn and winter season we saw three times as many incidents than in the same period last year. This relatively high level activity shows just how important it is to prepare our communities for any event. The 2016/17 Bush Fire Danger Period has started in some areas and we have seen a number of grassfires.

Fire agencies and land managers took advantage of the dry conditions in April and May by implementing a large number of hazard reduction activities right across NSW. A considerable amount of planning and preparation goes into each of these activities, to ensure they're safe for the community and also for the firefighters who are conducting the burns. You may have seen some media coverage about the smoke from these planned hazard reduction activities. We do need to be mindful about the impact of smoke on communities, while maintaining our steady approach to ensuring these important works get done when the conditions are right. I would like to thank all volunteers and crews for taking advantage of the window of opportunity we've had, and also for being flexible when we have rescheduled activities to limit the smoke impact on communities.

Researchers are now claiming that teaching children about bush fire safety is one of the best ways to build resilience within communities. In June 2016 I joined NSW Premier the Hon Mike Baird MP and Minister for Emergency Services the Hon David Elliott MP at Warrimoo Public School, to officially to launch the new NSW RFS Working with School Communities Guide. The Guide is a valuable new tool for our volunteers who deliver school fire safety programs and is based on the latest research to help children gain an understanding of bush fire preparation and safety, and gives them skills to be safe around fire.

The location of this event in the Blue Mountains was particularly significant given that the area was affected by a bush fire in November 2014, with the children of Warrimoo Public School safely placed into lockdown within the grounds, a testament to the school's emergency planning processes.

While the bush fire season itself was quiet in NSW, a long and extensive deployment to Tasmania involved a large number of NSW RFS volunteers as well many of our interagency colleagues. This issue of the *Bulletin* features some of the behind-the-scenes elements of the NSW RFS deployment to Tasmania. I am proud to say that our crews made a significant contribution to protecting some of the spectacular World Heritage Listed Areas in remote Tasmania.

As we prepare for the 2016/17 bush fire season, the Service has been dealing with important changes to the Local Government Areas which were announced by NSW Government in May 2016. A Working Group has been established to determine the impact on brigades. It is a big undertaking and consultation with local brigades is a high priority. Updates on these changes will be rolled out over the coming months.

Regards

Shane Fitzsimmons, AFMS
NSW RFS Commissioner

@RFSCommissioner

facebook.com/rfscommissioner

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

Pomp and ceremony



There is nothing like the sound of bagpipes to mark a special occasion. At this year's St Florian's Day awards held at NSW RFS Headquarters in Lidcombe, Pipe Major of the NSW RFS Pipes and Drums Brigade, Jeremy Rampant, led the official guests into the presentation event. While active for many years within the Service, the Pipes and Drums officially became a brigade in September 2014. They are available for events at state.protocol@rfs.nsw.gov.au.

2016 Cadet of the Year



In May 2016 the Minister for Emergency Services the Hon. David Elliott, MP and Commissioner Shane Fitzsimmons presented the NSW RFS Cadet of the Year Award at NSW Parliament House. Sixteen-year-old NSW RFS Cadet Sophie Cox from Hay War Memorial High School was this year's winner. Sophie was nominated by her teacher, with the endorsement of District Officer Michael Borg. By all accounts Sophie is an exceptional role model, who volunteers with community organisations and displays an excellent understanding of firefighting techniques and its technical language. Congratulations Sophie!

Never forget



"Members of Wamberal Brigade played an integral role in The Poppy Project: Never Forgetting The Sacrifice. It was run by local historian Merrill Jackson as a way to commemorate the ANZAC Centenary and involved 60,000 poppies on the Terrigal Skillion. Wamberal Brigade pledged to make at least 1,000 poppies and dedicated a crew to install the full 60,000 poppies. Our members came together and worked through the night until we met our target. Our involvement went international through social media, with one of our posts reaching over 60,000 people in a matter of days." Tanya Shepherd, Deputy Captain, Wamberal Brigade.

Local government changes



The NSW Government recently announced changes to local government arrangements across the state. This includes the formation of new councils in some areas. As the NSW RFS has a long-standing connection to local government, including through funding contributions and the areas in which we operate, the changes will have impacts on the Service. These changes are required as legislatively, rural fire districts are based on local government areas. If local government areas change, so must rural fire districts. To ensure a clear transition to the new arrangements, a working group has been established with representatives from all affected NSW RFS directorates. This working group has now met on a number of occasions to assess the key areas of impact, which include:

- Potential changes to district operating and staffing arrangements where local government boundaries have changed;
- Significant changes to NSW RFS systems including SAP, ICON, MyRFS and NSW RFS website;
- The need to continue to consult with staff and volunteers on the changes and their impact.

There will be ongoing updates as the implementation continues, and opportunities for volunteers and staff to provide input. Monitor MyRFS and the NSW RFS intranet for updates and Frequently Asked Questions. Questions about the local government changes can be emailed to lga.questions@rfs.nsw.gov.au.

The future is looking bright



In early May, Deputy Commissioner Rob Rogers (right) invited some young NSW RFS staff to a CEO & Young Professionals Breakfast held in The Westin, Martin Place. The theme this year was 'Collaboration is the new competition'. The Breakfast is a chance for 'the boss' to spend time with those under 34 in the Service. Project Officer Rochelle Rodgers (centre right) from the Corporate Planning, Risk and Policy Unit was thrilled to be involved. "I think the event broke down certain barriers between us and helped us see how, whatever our role, we are all making a significant contribution to the purpose and mission of the Service." As they were preparing for the group 'selfie' Fire and Rescue Commissioner Greg Mullins (back row) popped his head in too.

Region North Exercise



Over 460 personnel attended the 16th annual Region North Exercise in Glenn Innes in March, 2016. A total of 12 strike teams (60 tankers) made up of crews from Region North, Region West, Region East, FRNSW and QFES took part in the annual exercise. This record number of appliances was supported by 16 command vehicles, making the event the biggest Region North exercise ever. Over 130 personnel supported the event through catering, Incident Management Teams, ground support, casualties, registered observers, communications and RFS representatives. This was the second year the exercise has gone back to basics with an Explain, Demonstrate, Imitate and Practice methodology. To provide practical refreshers for members there were 10 simulated scenarios spanning over two divisions including an MVA, a tanker over run, an aircraft incident, counter terrorism exercise, basic skills and first aid. Photo by Alan Brinkworth

Smoke signals

The timing of hazard reduction burns may be changing



LEFT: A hazard reduction burn on Middle Head saw smoke drifting over the city. Photo by Ryan Todd. OPPOSITE: 30 May 2016: The 'Letter A' Hazard Reduction in the Mangrove Creek Catchment Area on the Central Coast was essential to protect the water catchment and surrounding community. Photo by Rolf Poole

The number and size of hazard reduction burns conducted was higher than average in autumn 2016. This was due, in part, to low rainfall across NSW.

Every year about 56 percent of hazard reduction burning takes place in autumn, and in 2016 it is set to be a higher percentage of the overall area hazard reduced.

In the three months of autumn, land management agencies in NSW completed more hazard reduction than in the previous two years. It is all to do with the weather and climate trends.

Climate and fire experts say the longer-term trends point to a lengthening bush fire season. Early signs suggest autumn and perhaps even winter will take a larger share of the controlled burning in the future.

The Bureau of Meteorology and CSIRO's State of the Climate reports indicate autumn may be the more favourable time for burning off in south-eastern Australia in the future. The 2014 State of the Climate Report notes a drop in rainfall across southern Australia during the cooler half of the year. The reduction is in the order of 10-20 percent over the past 25 years.

"Autumn and early winter rainfall has mostly been below average in the southeast since 1990," the report said.

A drying out of these months could give brigades greater opportunity for hazard reduction burning throughout these months in the future.

The dry autumn of 2016 was particularly welcome for those

planning and conducting hazard reduction burns. Autumn in 2014 and 2015 had been damp and not favourable for hazard reduction burns. In fact the number of successful hazard reduction burns in autumn 2015 was 474 while in 2016 1,011 burns were completed.

Early in May 2016 the National Parks and Wildlife Service (NPWS) and NSW RFS conducted two large hazard reduction burns in the Blue Mountains National Park near Leura and Glenbrook. One was a 3,000 hectare operation and the second was around 1,200 hectares. The Blue Mountains are some of the most bush fire prone areas in the world and these burns were designed to protect the mountain villages from summer bush fires. In the Hawkesbury area a further eight burns covering nearly 17,000 hectares were conducted. The number of homes protected by these burns directly and indirectly is in the thousand's, in addition, these burns provide strategic advantages to firefighters during wildfire events.

Smoke from these and other successful burns did impact Sydneysiders and many others in NSW. While every effort is made to manage the potential impacts of smoke, weather effects, such as temperature inversions within the Sydney Basin can trap smoke low to the ground.

While the smoke impact on large numbers of people in the Sydney Basin may have grabbed the news, it was in areas away from Sydney where

the largest areas were burned. A total of 9,894 properties were protected by burns in March and April 2016 reducing hazard on 98,700 hectares. Much of the activity was focused on the Bega Valley, Lower Western Zone and Singleton areas.

Superintendent John Cullen, Far South Coast Manager, said that several hundred homes would directly benefit from the strategic value of the burns in the Bega Valley.

"We did have a back log of burning to complete," he said, "January and February were wet months but we have not had any significant rain since March and so conditions have been good for burning since then.

"Over the past two years fuel loads have grown particularly in marginal country and destocked country. Throughout April and May it has been dry and we have had a couple of early frosts so the Love Grass and native pastures have cured. Added to this, in the previous two years we have not had the right burning conditions due to wet autumns. Availability of volunteers was also hampering planning and implementation of burns.

"We had been missing rare opportunities to burn by waiting until the weekends to conduct burns," John Cullen said, "So through consultation with the Captains and Senior Management Team we formed crews to complete mid-week burning.

"This change was helpful to all by reducing brigade and

member frustrations along with complaints from the public. Staff would plan and resource the burns a week in advance. All brigade members in the district were invited to be involved in the prescribed burns and plan their activities accordingly.

"This successful change could not have occurred without the dedication and commitment of the volunteers."

Currently, about 90 percent of hazard reduction burns undertaken by NSW RFS volunteers are completed on weekends due to the higher availability of members on weekends. This trend to mid-week burning is happening across NSW.

An enhancement to the state mitigation crews program was announced in April 2016. This will allow more hazard reduction to take place. The NSW RFS will establish an additional 10 mitigation crews to work with local volunteers to increase the amount of mid-week burning.

These crews will assist with the preparation of control lines, and if volunteer availability is low during the week, they can assist with burning activities.

It is important to remember that this enhancement is to support and supplement volunteer brigades, and not replace their function in hazard reduction.

A Tasmanian devil



ABOVE: Central Plateau fireground in north-west Tasmania.
Photo by Nicole Bordes

In early 2016 Tasmania faced some of the largest fires the small state has seen, with 300 fires burning more than 120,000 hectares. Overall, in the summer of 2015/16 Tasmania recorded 15 total fire ban days, five more than any previous year. Due to the hard work of firefighters from Tasmania and around Australia, not a single life or property was lost. About 1.3 percent of World Heritage Area, however, was affected.

The deployment coordinated by NSW RFS was significant. Here we take a look at the detail of the NSW RFS deployment through the eyes of NSW RFS members involved in the deployment. Professor David Bowman from the University of Tasmania also considers what might have been the cause of this especially fierce fire season faced by our southern neighbours.

The measure of NSW RFS assistance

From January to March 2016, the NSW RFS coordinated the deployment of over 1,300 firefighters and specialist personnel to Tasmania, the largest interstate deployment since the 2009 Black Saturday bush fires in Victoria. Of these deployments 793 personnel were NSW RFS members.

A formal request for assistance was received from Tasmania on 21 January 2016, due to large bush fires burning across the state.

The initial deployment of NSW resources consisted of RAFT personnel and equipment, and in following days was supplemented by more frontline firefighters, aviation personnel, incident management personnel and logistical support. Liaison officers were also placed in Hobart and regional locations.

In a significant logistical operation, 30 personnel carriers, 20 tankers, a base camp, five aircraft, four RAFT trailers, portable automated weather stations (PAWS), radio repeaters and radios were also dispatched to Tasmania.

Interstate support to Tasmania consisted of two streams, one managed by the NSW RFS and a second managed

by Emergency Management Victoria. The NSW RFS coordinated the multi-agency response on behalf of the following agencies:

- National Park & Wildlife Service (NPWS)
- Fire Rescue NSW (FRNSW)
- Forestry Corporation NSW (FCNSW)
- ACT Rural Fire Service (ACT RFS)
- South Australian Country Fire Service (SA CFS)
- Queensland Fire & Emergency Services (QFES); and
- NSW Ambulance (NSWA).

A total of 546 RAFT deployments were undertaken – 256 from NSW RFS, 219 from NPWS and 71 from ACT RFS.

During February, the NSW RFS also developed an Arduous Firefighter capability, following a request from the Tasmania Fire Service. These firefighters were to work in remote locations, but not be winched into or out of locations, or camp overnight.

The Arduous Firefighter program involved the development of a process for volunteers to undergo medical assessments, followed by arduous pack tests.

The NSW RFS coordinated the largest interstate deployment of NSW and ACT Remote Area Firefighting Team personnel and equipment.

**SIMON TOPP
NSW RFS Rapid Aerial Response
Team (RART) Operations Officer**

Tasmania experienced widespread lightning storms on 13 January 2016. These storms started a number of fires across the state. A number of the new ignitions were burning in the Central and Western Areas of the State in some very remote areas of Tasmania. Over the following week a number of these fires grew under hot, dry and windy conditions.

While at first the fires threatened some homes, very quickly the focus of the fire effort moved toward protecting Tasmania's World Heritage Listed and unique vegetation. Given the inaccessible nature of many of these fires and the

impact on local resources, the Tasmania Fire Service requested interstate assistance on the afternoon of 21 January. The NSW RFS coordinated the largest interstate deployment of NSW and ACT Remote Area Firefighting Team (RAFT) personnel and equipment. RAFT often work with helicopters and are winched into remote locations. Once on the ground it was arduous work using hand tools, leaf blowers and chainsaws to construct containment lines and mop up smouldering tree trunks or peat. The teams also work with waterbombing helicopters to direct their drops onto the smouldering trunks or hot spots.

The original deployment was staggered over two days and included a total of 100 remote

area firefighters comprising of 60 from the NSW RFS, 20 from NSW National Parks and Wildlife Service (NPWS) and 20 from ACT RFS. To support their operations a mammoth logistical process began – involving a collection of 4x4 vehicles, firefighting equipment, trailers, radios, ration packs and both NSW RFS medium-sized helicopters!

NSW RFS RAFTs worked with their interstate and international colleagues across a number of major fires. They assisted in vital roles, often needing to be flown by helicopter, and in some cases winched into remote bushland to work on the fires. These huge bush fires had hundreds of kilometres of fire edge burning in wilderness forest and alpine scrub.

Over the period from the 23 January to 9 March, the NSW RFS sent 149 volunteer remote area firefighting personnel to Tasmania, with a number of these members heading back for two, three and even four rotations.

**DAVID BOWMAN
Professor of Environmental
Change Biology
School of Biological Sciences,
University of Tasmania**

On the night of 13 January 2016 an extraordinarily intense electrical storm crossed western Tasmania, leaving behind some 80 fires that would eventually burn over 120,000 hectares, including around 1.3 percent of the Tasmanian Wilderness World Heritage Area (TW WHA).

The lightning strikes ignited tinder dry vegetation desiccated by a record-breaking spring and consistently warm temperatures. The capacity to detect and control the fires was limited because they were burning in a rugged and remote area with few tracks. In such terrain it is very difficult, and sometimes impossible, to safely insert crews quickly enough to stop the fires spreading before they reach a point where it is no longer practical to put them out. On some days aerial or satellite surveillance was impossible due to the low cloud and reduced visibility.

The fires burned for over two months, and during this time there was concern that should weather conditions deteriorate, tracts of vegetation found nowhere else on earth would be destroyed. This vegetation is of enormous scientific interest being the last surviving fragments of ecosystems that once dominated the gigantic Gondwana supercontinent made up of Africa, Australia, Antarctica and South America. Magical pencil pine forests and woodlands, tangles of fagus, Australia's only winter deciduous tree, and numerous other plant oddities, were all threatened because they are restricted to cool, wet, fire free environments. More concerning, the landscapes of western Tasmania are characterised by a surface layer with organic soil that is combustible if dried out. These peat soils take thousands of years to develop, and are unlikely to form in future hotter and drier climates.

Despite continuous occupancy of the Tasmanian landscape for over 30,000 years, Aboriginal fire use caused limited damage to this fire sensitive vegetation. It is likely that skilful patchy burning practiced by Aborigines protected fire sensitive vegetation through the control of fuel loads and creating mosaics that limited the occurrence of large-scale destructive fires except under extreme fire weather conditions. By contrast, changed fire regimes following European settlement, in conjunction with associated broad scale grazing in subalpine areas, have caused the destruction of fire sensitive

species and peats in the western half of Tasmania.

The TW WHA has successfully reduced the incidence of human-caused fires, particularly through the 'fuel stove only' policy that prohibited campfires. There has also been a steady reduction in arson. However, since the 1990s there has been an increasing incidence of dry lightning storms that have become the predominant cause of large fires in western Tasmania.

During the two month long firefighting campaign in 2016 there was much discussion and debate about these fires in Tasmanian, national and international media. Had the 2016 fires escalated, iconic places like Cradle Mountain and the Walls of Jerusalem would have been torched. Environmentalists were concerned that their hard won environmental battles to save the wilderness could all unravel because of uncontrolled fires. They were concerned that the firefighting authorities had exacerbated this crisis using outdated tactics, limited aerial fire suppression and a tardy response. Alternatively, some scientists, myself included, understood these fires as the result of human induced climate change. Currently there are Tasmanian Government and Senate Inquiries exploring these issues. An AFAC independent operational review has already been completed.

The reason I believe the fires are the result of climate change is because they fit a global pattern of anomalous 'megafires' being driven, in part by extreme and historically unprecedented fire weather conditions. I am concerned that there is a naïve belief that aerial suppression can quell every fire – experience from Canada and the USA shows this is not the case. Because the TW WHA is largely trackless I think the most effective way to reduce fire risk is through elective planned burning of treeless buttongrass moorlands that are adapted to landscape fire. There is evidence that fires burning under moderate fire weather conditions will stop on recently burnt buttongrass moorlands. Targeted burning of buttongrass moorlands is therefore a critical preventative methodology to reduce

the extent of large fires. However, this approach requires care, flexibility, and an acknowledgement that under extreme fire weather conditions this technique may not effectively limit the spread of fires. There is also the risk some fires may escape control.

**ANDREW MACDONALD
Group Captain, Macarthur Zone**

Location: Gordon River Road fire (near Strathgordon)
Dates: 23 to 27 January 2016
Position: RAFT team leader/liaison

I was part of the first team of NSW RFS remote area firefighters deployed to Tasmania in 2016 to assist with bush fires in the west of the State.

We departed on Saturday 23 January 2016 from Bankstown airport on a chartered flight to Launceston where we met up with other remote area firefighting specialists from the NSW RFS, ACT RFS as well as two NSW Ambulance Special Operations Team officers. We were given a briefing at the Tasmania Fire Service regional office in Launceston where we learnt that we were being deployed to the Gordon River Road fire in south west Tasmania. We were given an overview of the unprecedented fire situation in Tasmania, provided with a detailed safety briefing and finally advised that our accommodation and base was in Strathgordon - a five-hour drive from Launceston.

The Gordon River Road fire had burnt in excess of 4,000 hectares of the Southwest National Park. This Park forms part of the Tasmanian Wilderness World Heritage Area. As well as destroying endangered flora and fauna, the fire also posed a risk to critical powerline infrastructure. The Gordon River hydro electrical power station supplies much of the electricity to Hobart and the powerlines supplying power to Hobart passed through the fireground.

Vegetation included buttongrass, thick tea tree and eucalypt forest. Much of the terrain was extremely steep and in many places inaccessible which made 'walking the fire line' impossible. Due to the sensitive nature of the environment, heavy machinery could not be used to construct



ABOVE: Photo by Dwayne Graham

fire trails. Instead, control lines were to be hand cut using McLeod tools, shovels, pulaskis, super tools, brush cutters and chain saws. We would then light back burns from these lines, supported by water bucketing helicopters. All personnel and equipment were transported between our accommodation at the Pedder Wilderness Lodge and the fireground by helicopter, as roads were non-existent.

Overall it was a unique experience in challenging terrain with magnificent scenery.

NICOLE BORDES, VIC ZHUKOV AND BRUCE COOMER
Blue Mountains District

Location: Central Plateau Conservation Area (Bravo deployment)
Dates: 26 January - 1 February 2016
Position: RAFT team members

When we were driving towards Mole Creek for our first day of deployment, we could see a distinctive feature on the mountains: a flat area on which smoke was billowing. Little did we know that later 50 of us would be ferried by helicopter there, to fight a fire that had been raging for several days. The locals told us: "it's going to be cold up there!"

The cold and the 'foreignness' of the landscape were what struck us first! There was a strong steady wind, no trees and just low-lying plants and strange flowers that we had never seen before. One of the remote area firefighters told us it reminded him of his native Scotland.

There were many fires burning on the plateau (the visible area being approximately 5km x 10km), each with a smoke trail blown horizontal by the wind - a scene very reminiscent of a war zone in a Middle East oil field. We were dropped in a flat area not far from a line of fire, with Kerosene bushes flaring up now and then (as the locals warned us they would).

The fire was burning in peat and advancing slowly, except when impacting a Kerosene bush. We tried several tactics. We started with a containment line but abandoned that quickly: you had to dig deep, the roots were a problem and it was too slow. Then we used rake-hoes,

boots and branches to smother the flames and dig with the pulaski tools at the interface of the burnt-unburnt ground to open up the peat. The blowers used by another team seemed to work quite well. When helicopters became available, bucketing along the fireline did the job. Eventually the fire was extinguished two days later when it rained.

JANELLE CLARK
NSW RFS Project Officer

Location: Mole Creek
Dates: 12-16 February and 5-8 March 2016
Position: Base Camp Manager

Discussions were held with the Tasmania Fire Service in late January in relation to the capability of NSW RFS to

provide a base camp. An officer was then deployed to scope and pre-plan for a base camp in Tasmania, within 48 hours a plan was developed and given to the Tasmania Fire Service.

Two and half weeks later at approximately 1400hrs Thursday 11 February 2016, a request was received by the NSW RFS to supply a 150 person base camp to support



ABOVE: Central Plateau Conservation area. Crews used a variety of methods to smother in the peat fires. Photo by Nicole Bordes



ABOVE LEFT: Bruce Coomer, Blue Mountains RAFT, and the owner of the service station at Mole Creek R&D Motors, modifying the rake hoes. Nicole Bordes explained: "The McLeod tools had six teeth and the handle was too long to fit in the winch bag so Bruce had them 're-engineered'. The owner of the service station at Mole Creek cut one tooth on each side, making the tool a four tooth rake hoe. It was then lighter, smaller and more maneuverable around rocks and trees... and it fit into the winch bag!". ABOVE RIGHT: Located in this picturesque area of Tasmania, the Mole Creek Base Camp was put together in four days and housed 150 firefighting and support personnel. Photo by Janelle Clark

the ongoing bush firefighting effort in Tasmania. At the time of the request there were 76 active fires around Tasmania.

The picturesque site chosen was the adjacent to the Mole Creek Football Oval in Mole Creek, approximately one hour west of Launceston. The oval was also used as a heli-base and staging area for firefighters.

On Friday 12 February, myself and another forward planning officer were deployed to Mole Creek to execute the plan to establish the base camp. We remained onsite from this point working with the property owner, staging area manager, suppliers and contractors to ensure the establishment of the camp remained on schedule.

Back in NSW, the State Warehouse Logistics team loaded equipment including 19 tents, a mess tent, sleeping bags, pillows, blankets, towels, electrical cords, tables, chairs, lighting, a generator and an all-terrain forklift into containers and then onto the semi trailer for transportation to Tasmania. One NSW RFS semi trailer, two NSW RFS tilt trays and five contract heavy tilt trays departed Glendenning

in the early hours of Friday 12 February bound for Port Melbourne. The vehicles and containers then faced a barge trip across the Bass Strait. Vehicles and equipment began arriving on site at Mole Creek from mid-morning Saturday 13 February.

That same morning a NSW RFS team of 16 State Mitigation Support Services personnel arrived on site to establish the base camp. The team established the tents in just over 24 hours, amenities such as toilets and showers were connected over the next few days. The camp was initially established for 75 personnel and was soon expanded to the requested capacity of 150 personnel. The establishment team faced some challenging windy conditions while erecting the tents and some rain arrived a few days later, however the infrastructure installation had already been completed. Approximately 20 NSW National Parks and Wildlife personnel were the first guests of the camp on Sunday evening.

Due to the forecast for cold temperatures, air-conditioning was installed in the tents, providing some comfort from

the elements. On-site caterers provided meals and laundry services were also provided to everyone staying in the Base Camp.

The multi-agency base camp was used for more than three weeks and was managed by the NSW RFS throughout. At its peak it had 181 RAFT and arduous firefighters staying in the camp on one night.

MARK CASPER
Deputy Captain,
Warringah-Pittwater District
Location: Pipeline Fire
Dates: 17-22 February 2016
Position: Alpha Strike Team Leader

The strike team consisted of seven heavy tankers, three light tankers, two Ambulance NSW paramedics and myself. For most of the deployment we were at work on a ridge in the high country, only accessible via a narrow dozer trail rose sharply out of a gully.

When we first arrived I wondered what the purpose of our tasking was. Once at the top of the ridge however, it became clear. To the east of the ridge lay a vast area of plantation timber. If the fire was to impact it, there

would be substantial damage and it would be difficult to control. Our job was to build containment lines along the ridge.

In order to access areas of extreme fuel loading, including areas of old growth forest, local dozer operators were brought in to construct access trails for us and the other tanker crews. The terrain was often elevated and steep. We were amazed to see the skill of these dozer operators and the positions they could get their machines into!

The area we worked in was not only steep and hard to access, it also had in excess of 15cm (six inches) of peat across the surface of the ground. This dramatically increased the fuel loading, smoke and risk to members. In some cases our crews had to return to the same area a number of times to extinguish the same spot - due to the peat reigniting.

Other risks to members included dangerous century-old trees which had almost totally burnt out their base. On the final afternoon our crews were relieved and satisfied to make the final trip down the steep dozer trails and return to the Base Camp in Stanley.

In March 2016 the Tasmanian Government announced a research project to examine the impact of climate change on the wilderness, and strengthen Tasmania's firefighting techniques in wilderness areas. The Tasmanian Fire Service also initiated an independent review into the fires conducted by the Australasian Fire and Emergency Services Authority Council (AFAC).

Fire behaviour in grass

— do we tend to underestimate it?

The CSIRO has issued results of a recent study that will change the way we predict fire behaviour in grasslands.

The study has found that existing methods for incorporating the effect of grass curing on fire behaviour overestimate the effect of green grass. Experiments were held in partnership with fire agencies around Australia, including the NSW RFS, throughout 2014 and 2015 and have shown that fire potential when grasses are not fully cured is higher than previously thought. This means that fires can spread faster in greener grass than scientists had predicted.

As a result of these findings, a new mathematical relationship that better captures the effect of partially cured grasslands on the rate of forward spread of fire has been developed and is now being incorporated into NSW RFS calculators.

Throughout 2015 the NSW RFS worked alongside researchers from CSIRO and the Victorian Country Fire Authority conducting experimental burns to look at how fire reacts in grassland during different weather conditions and in different types of dry or 'cured' grass. As grasslands dry out or 'cure', the way they interact with fire changes. Carefully planned and executed experimental burns were conducted in Tamworth and Braidwood during March and December 2015. These burns, held in conditions of elevated fire danger, enabled the research team to use the data to improve the models we use to predict fire behaviour. The experiments were carried out in a wide range of conditions with the aim of providing a better understanding of what it means for fire behaviour prediction in NSW and to assist with planning for hazard reductions.

The CSIRO published the following paper in early 2016 explaining the findings in detail. This and other bush fire science bulletins from the CSIRO are available from <http://research.csiro.au/pyropage>.

Improving the prediction of rate of fire spread in partially cured grasslands



The state of curing of a grass sward has long been known to have a direct effect on the speed of a fire, with fires spreading faster in more fully cured swards than those that are less cured. A research partnership between CSIRO and the Victorian Country Fire Authority has shown that current systems for incorporating the effect of grass curing on fire behaviour under predict fire potential when grasses are not fully cured. A new mathematical function to describe this effect has been developed for incorporation into grassfire rate of spread predictions.

Grass fuel dynamics

The lifecycle of annual grasses (i.e. germination, growth, flowering, setting seed, drying out (curing) and death) controls the flammability of grassland fuels. The onset of senescence following flowering and setting of seed initiates an irreversible process that increases the proportion of dead material in the sward (a reflection of the degree of curing) and decreases its overall moisture content. This results in an increase in the amount of fuel available for combustion and significantly impacts the ease of ignition and ensuing behaviour of a fire.

Annual grasses and their lifecycles vary considerably across Australia, influenced by species, soil structure and moisture, and climate. After the growth stage, grasslands are at their lowest curing level, i.e. uniformly green and with the highest fuel moisture content levels. Flaming combustion

cannot be sustained in such fuels and fires will not spread. Once senescence commences in individual plants, the overall condition of a sward becomes quite complex with a mix of living, dying, drying out and dried out fuels. Fire spread also becomes similarly complicated. Understanding just how a fire behaves in such fuel conditions is critical to predicting its behaviour, particularly under more potent burning conditions.

Estimating grass curing

Operationally, the degree of curing is usually obtained from visual estimates based on expert assessment supported by photographic field guides or through analysis of remote-sensing satellite imagery. Despite the effort that has gone into developing these methods, it is important to recognise that none of these yield the true curing level, which requires time-consuming

destructive sampling of grasses and partitioning into live and dead components.

Our sampling protocol in the current research project expanded the fuel component groups from two (live and dead), to four: green (i.e. live), senescing, recently dead and old dead fuel (previous year's growth).

We found that visual curing assessments resulted in an over-prediction bias of curing level and failed to capture the effect of senescence on fuel availability due to misclassification of fuel components. For example, discoloured senescing fuels were classified as dead even though they were still partially alive and had relatively high fuel moisture content.

This result highlights the need for comprehensive visual curing assessment training that enables accurate and unbiased determination of the degree of curing in grasslands.

A new curing relationship

The findings of the field-based experimental burning program to quantify the effect of the degree of grass curing on fire propagation were surprising.

Firstly, it was found that sustained fire spread occurred at quite low curing levels—down to 20-30%, where previously it has been assumed that sustained spread required curing values greater than 50%.

Secondly, it was found that the current systems used in Australia to incorporate the effect of grass curing on fire behaviour resulted in significant under-predictions of rate of forward fire spread in partially cured grasslands. Fires in fuels at curing levels between 50 and 80% were observed to spread up to ten times faster than predicted.

A new relationship between degree of curing and fully cured rate of fire spread that better captures the effect of partial curing has been developed.

This relationship has a significant effect on predicted rate of spread when compared to previous models for grass curing coefficient. It results in sustained fire spread at lower curing values and faster fire spread at values less than fully cured.

Next steps

The soundness of the new curing function is currently being evaluated against the experimental burns conducted in NSW. Rigorous testing is required to determine the impact of the new function on the operational prediction of fire behaviour and danger. Within the NSW RFS, the new mathematical relationship that better captures the effect of partially cured grasslands on the rate of forward spread of fire is now being incorporated into NSW RFS calculators.



ABOVE and OPPOSITE PAGE: Twenty NSW RFS members worked alongside CSIRO researchers in Tamworth in March and in Braidwood in December 2015 to conduct experimental grassland burns to help understand the impact of grass curing on the behaviour of fire in NSW. Photos by Laurence McCoy

Best truck ever built?

New features for Cat 10 pumper

There is great excitement about the new Cat 10 pumper. Engineering Services Manager, Andrew Canderle here explains some of the reasons for the excitement. The technical name for the pumper is the 'urban appliance Category 10' and it was developed to replace the old Category 11 truck. Those familiar with the Cat 11 will feel very at home on this new and improved version, given the layout is almost identical, however, that is where the similarities end. Innovative and useful new features have made their way onto the Cat 10 and are sure to impress those lucky enough to use it. The improvements were incorporated following a comprehensive review of the Cat 11. The new Cat 10 has been broadly accepted as one of best trucks ever developed by Engineering Services and many are eagerly awaiting their chance to jump on board. It is being built in mid-2016 and is available for brigades to order.

Roof mounted ladder



Roof mounted ladder gantries give easy access to the rescue and roofing ladder from the ground.



Rescue ladder with gantry lowered

More room for CABA



There is storage for four CABA sets and spare cylinders. The body is fitted with a retractable awning next to the CABA stowage.

Lighting improvements

The usability of the truck has been vastly improved by some illuminating features. Both the electrics and lighting are leagues ahead of the Cat 11. Lockers now feature effective LED strip lighting and the body has been fitted with proximity lighting so the area surrounding the truck can be lit up when needed. The icing on the cake is a centrally mounted lighting mast to help illuminate incidents at night.

Pumping and capacity

The tank can hold 2,000 litres of water and is fitted with a power take-off pump capable of delivering 2,000 litres per minute at 1,100 kPa with an electric primer.

The Cat 10 is fitted with a 100 litre foam tank filled using the Hale ez-fill foam transfer pump and an electric rewind hose reel (with auto hose lay) has 40 metres of high pressure hose.

With no shortage of useful features, the new Cat 10 may indeed have earned the label 'best truck ever built'. You be the judge.

Cab Chassis

Members will find the new cab easier to access because it sits closer to the ground. This also means firefighters will have safer access to the cab and better access to the body stowage than the previous 4 x 4 version. For those interested in the finer engineering details: the new cab chassis is a 4 x 2 Isuzu FTR 900. This also makes for safer on-road manoeuvrability and handling.

Auto transmission

The engine and transmission are matched to provide better use of the available torque and horsepower. It is fitted with an 'Allison five speed automatic transmission' and those familiar with a Cat 6 will recognise the hydraulic transmission retarder.

External power

Another impressive feature of the new truck is an external power supply and on-board wiring for charging portable devices and radios. This will be an excellent addition when crews are on the road, or even at the station.

Body

Members asked for flexibility in the body so shelving and partitions could be tailored to meet brigades' unique needs. Constructed of aluminium and with increased storage - it's widely agreed amongst those that have seen it - the Cat 10 delivers.

Slide out shelves for easier access

Slide out steps make the upper shelves much easier to reach. The lower locker shelves also slide out providing clear access to stowed equipment. Slide out stowage trays also provide quick and easy access to the portable pump, generator, positive pressure ventilator, extinguishers, standpipe and access ladder.



Easy access to Positive Pressure Ventilator



Slide out to access standpipes



Generator and Portable pump access



Extinguishers on slide out mechanism



Access ladder on slide mount



Fire on water

A light Category 15 fire boat has hit the water in the Shoalhaven District.



LEFT: Designed to transport crews of up to six or equipment up to 1,000kg. ABOVE: In March 2016 the new Category 15 (Light) was on display for observation and assessment at the Annual Combined Districts Fire Boat Exercise on the Hawkesbury River. Commissioner Shane Fitzsimmons and Marine Rescue NSW Commissioner Stacey Tannous, are seen here on the Cat 15 (Light) while the exercise was underway. Photo by Jason Gower

The NSW RFS has a long history of operating water-based brigades and fire boats through necessity; they are often the only way to provide fire assistance to isolated communities. Today marine brigades operate in 10 districts and 26 boats assist with firefighting and other operational duties.

A NSW RFS Marine Working Group has been tasked with ensuring consistency across the fire boats consulting with Marine Rescue NSW on vessel design, safety, procedures and training protocols. The Marine Working Group consequently has identified three standard classifications for new boats (Category 15) – light, medium and heavy.

The light Cat 15 prototype vessel was completed in September 2015 and following testing, changes were made to the design to make it easier to operate. The first boat is now in service with the Christians Minde Brigade in the Shoalhaven District.

Lightweight but strong, the brand new light Category 15 is designed to assist larger vessels or vehicles in firefighting operations. The vessel can transfer crews of up to six people or provide equipment and supplies up to 1,000kg. The two piece bi-fold ramp and electric winch allow straightforward delivery of supplies and equipment on shore.

The light Cat 15 also has firefighting capabilities with two pumps on board. A Class

7 pump is mounted in front of the helm and a portable Class 9 pump is kept within the hull for immediate deployment.

Capable and registered for night operations, this vessel will be a handy addition to the firefighter's arsenal.

Light Cat 15 specifications

The light Cat 15 vessel is designed to assist operation of the medium and heavy vessels, with its primary workload consisting of crew transfers and equipment supplies.

- Overall length 6.7m and beam 2.46m
- 2 x 60hp 4 stroke motors
- Boat, trailer and motors weigh 2,800kg

Standard features:

- Full aluminium dual axle trailer with wireless electric braking system
- Communication and electronic package including radar for night operation
- 12 inch touch screen with 3D mapping
- Sonar with side imaging
- Full safety equipment

With two operators on board the vessel can load up to 1,000kg or seat six people.

The light Category 15 is constructed from marine grade aluminium in various thicknesses, delivering a lightweight, yet strong structure. The hull is made of transverse frames and bulkheads with a plate keel on the hull centreline and

longitudinal stiffeners running between the frames.

The vessel has a fully sealed work deck with buoyancy foam in the hull. Additional foam boxes sit under the gunwales to help right the vessel if it capsizes.

Fitted with a two piece bi-fold ramp, the light Cat 15 is ideal for delivering equipment. The ramp features a main section attached to the hull and a piece that folds forward. The two sections are controlled by an electric winch that raises and lowers the main section and deploys the forward section.

While firefighting is not its main role, the vessel is also equipped with two pump-sets. The first is a Class 7 pump, the same as a portable pump on a Cat 1, semi-mounted in front of

the helm. The pump is coupled to a suction manifold which can draft from a twin sea chest arrangement, or suction via one of the four 38mm standard lightweight hoses. A Class 9 pump, the same as a portable pump on a Cat 9, is retained within the hull for immediate deployment.

Fleet standardisation in process

Since 2014 the NSW RFS Engineering Team has been standardising water-based infrastructure within the service. Over time this will see the Category 15 vessel standardised to three subcategories of vessels: light, medium and heavy.

In November 2014, the Engineering Team engaged the

NSW RFS Marine Capability Working Group to help gather the operational requirements for the three vessels. The requirements were then implemented and the prototype light Cat 15 vessel was constructed and delivered to the Shoalhaven District in early September 2015.

Consultation is also underway for a final design of the medium prototype vessel, to be constructed for the Woronora Brigade in the Sutherland District in 2016/17.

This medium vessel will be largely designed for firefighting operations with greater maneuverability than the large vessels currently in service.

Lightweight but strong, the brand new light Category 15 is designed to assist larger vessels, or vehicles, in firefighting operations.



The Young ones

The top honours in the town of Young this year went to active members of the NSW RFS. Both 2016 Young Citizen of the Year, Samuel Tout, and 2016 Young Junior Citizen of the Year, Lizzie Butt, were recognised for their contribution to the community of Young, particularly through their involvement in the NSW RFS.

2016 Young Citizen of the Year Samuel Tout

Samuel Tout, firefighter and Murrungo resident, has made a significant contribution to the community through the NSW RFS.

In his role as South West Slopes Fire Cadet team coach and NSW RFS youth committee advisor to other teams, Sam has exhibited commitment to youth leadership within the Service. His involvement with the NSW RFS cadets in the South West Slopes Zone began in 2007 when his son Alex became a cadet. As a keen parent Sam regularly assisted the cadet team coach at the time, Trevor Reeves. When his son ended his involvement with the cadets four years ago, Sam's commitment never wavered and he continues to

coach the team on a regional, state and national level. In 2013 he took over as lead coach and set up training programs and timetables for local cadets to learn safety, teamwork and individual skills. This training regime paid off when three of the six team members he trained came second in the 2015 National NSW RFS Cadet Championships.

2016 Young Junior Citizen of the Year Lizzie Butt

Lizzie Butt is one of Sam's former cadets and this year was named Young's Junior Citizen of the Year for her volunteering duties with many local organisations, as well as excelling in the sporting arena.

Lizzie is a Junior NSW RFS Member who trains with the South West Slopes Cadet

group and is a member of the Bendick Murrell Brigade. She joined the Service in 2012 at the age of 13, and has been a regular competitor at both State Championships and Cadet Championships ever since. In 2015 Lizzie was officer-in-charge for the South West Slopes Zone Cadet team who came in second at the recent National Cadet Championships held in Lake Macquarie. As the only female team member, she is well respected and has encouraged teamwork, pride and mateship within the team.

TOP: 2016 Young Citizen of the Year, Samuel Tout, and 2016 Young Junior Citizen of the Year, Lizzie Butt, at the Australia Day celebrations. Photo by Elouise Hawkey, The Young Witness.



Preparing children for disasters

This article first appeared in the Summer 2014-2015 edition of Fire Australia magazine. By Nathan Maddock

A Bushfire and Natural Hazards CRC project is examining how educating children on how to be resilient in the face of a natural disaster can flow on to mobilising an entire community.

Enabling kids to become active participants in disaster resilience and education programs could not only reduce their fears, it could also have a potential motivational role in mobilising wider community preparations.

That's according to Bushfire and Natural Hazards CRC project leader Kevin Ronan, a Professoriate Research Fellow at CQ University.

Professor Ronan is leading the *Building best practice in child-centred disaster risk reduction* study, which also involves researchers from RMIT, Monash and Massey universities, Risk Frontiers and Save the Children Australia. The project will carry out research on current policy, practices and evaluation frameworks. In building on research conducted in Australia, New Zealand and other countries, the research will also increase the attention given to children and their families' needs in disasters.

"There are hundreds, if not thousands, of disaster-resilience education programs for kids worldwide, including many in Australia, which are

not evaluated," Professor Ronan said.

"Most of the research on these programs is short term—we do not know if these programs translate into saving lives, reducing injuries or reducing the psychological consequences of disasters. Nor do we know if these programs can save governments money.

"Our research is examining if programs do translate into saving lives, reducing injuries and other consequences, while saving government money, how can we get them to be part of policy and scaled up in a large way?"

Professor Ronan notes that there are two main reasons why educating children about disaster-risk reduction is important.

"It reflects the societal value we have around protecting children. In any given disaster worldwide, according to the World Health Organization, children represent 30–50 percent of the deaths. They are also the most at-risk group psychologically. Kids can carry impacts for a long time, and

this can have an immense effect.

"The second reason is about children's right to increasingly participate in their own and their community's life. Preliminary research has shown that kids are motivated and get benefits for themselves and their families from learning about disaster-risk reduction. We think this is because disasters typically rank in the top ten major fears of childhood. When you help equip human beings with tools to deal with fears, and turn threats into challenges, people typically respond well. This includes children and youth.

"In other words, when you can turn a fear on its head and say that it is a problem with solutions, kids are interested and get excited about that."

Professor Ronan said educating kids about disaster-risk reduction can have flow-on effects within communities.

"Kids are an untapped community motivational reservoir. Prevention and preparedness for a disaster is usually at a very low level

in most communities, so we need to increase motivation for preparedness. We feel like kids are one such source."

Research published over the past decade has shown that children are better equipped to deal with an emergency if they have been active participants in disaster resilience and education programs.

"This study is designed to evaluate the extent that education can equip children and families to prepare, respond and recover more effectively from some unanticipated event, including its potential flow-on effects for the larger community," Professor Ronan said.

"The goal is to make a policy and practical difference. We want to know what works and then help to get it implemented on larger scales."





Working with school communities

Children across NSW have long delighted in the sight of the red fire trucks and firefighters in yellows at their local fetes and community events. Now the NSW RFS is following this long tradition by becoming more involved in the school curriculum, providing educational resources that teachers and volunteers can use.

The NSW RFS Guide to Working with School Communities

In June 2016 the NSW Premier Mike Baird launched the NSW RFS Guide to Working with School Communities at Warrimoo Public School in the Blue Mountains. He was joined by the Minister for Emergency Services David Elliott and NSW RFS Commissioner Shane Fitzsimmons.

Many brigades are already working with their local school community, and the Guide to Working with School Communities program will support those relationships with a structured learning plan aligned with the school curriculum. It will also encourage other schools to introduce the lessons into the classroom.

Providing educational value can be the gateway for brigades to become more involved with the schools in their area. By having a comprehensive educational bush fire safety program across primary schools, more communities will gain an understanding of their bush fire risk and know what they have to do to be prepared.

As part of the three-step program, students will learn the information and its context within their own lives; they practice the skill in scenario-based exercises; and finally share their new knowledge with family and friends.

Commissioner Fitzsimmons encouraged NSW RFS members to familiarise themselves with the resource and work with brigades and district offices to deliver the program locally.

Dr Briony Towers of the Bushfire and Natural Hazards CRC, contributed to the research behind the program and will be part of monitoring and measuring the success of the program. A 'practice evaluation' is going to be undertaken in the Lower Hunter Zone with the support of local volunteers to determine how well the program works.

All primary schools across NSW already have access to the Li'l Larikkins Bush Fire Safety Program which equips teachers and NSW RFS members with bush fire related classroom resources, this Guide and the suggested content for classroom Sessions

complement the Li'l Larikkins program by supporting its key messages and delivering further bush fire safety information.

The NSW RFS Guide to Working with School Communities was developed to provide members with ideas and supporting material to assist with actively engaging with school communities.

The Guide is based on the Primary School Education Framework:

• Lower Primary

Help students gain an understanding of bush fire safety and develop personal skills to ensure their own safety during a fire.

• Middle Primary

Help students to increase their personal fire safety awareness and develop an awareness of the safety of others during a fire.

• Upper Primary

Encourage students to reinforce and further develop personal skills to use in a bush fire or other emergency. Students should also develop knowledge and skills that will

enable them to contribute to their community's bush fire preparedness.

Once the students have gained a knowledge and understanding of what it means to be bush fire prepared, members or teachers delivering the sessions are encouraged to introduce the decision-making and problem-solving activities, to help reinforce what has been taught.

This Guide is considered the first step in effective engagement with school communities and is a great way to introduce the local NSW RFS and bush fire awareness into the community.

Many of the ideas contained in the Guide directly reflect and relate to the creativity and experiences of NSW RFS members already working effectively within schools, and it has been developed to consider the differing needs and delivery styles of NSW RFS members.

All of the printable resources to support the delivery of the sessions, such as flashboards and activity sheets are available for download on MyRFS.



OPPOSITE PAGE: Premier Mike Baird talking to children at the launch of the Working with School Communities Members Guide held at Warrimoo Public School. Photo by Ben Shepherd. ABOVE: The Working with School Communities Guide is designed to engage students in the classroom using the support of the existing school curriculum

Hidden Treasures

Celebrating NSW RFS women who give so much to their rural communities



ABOVE: Helen Fenning from Buxton Brigade. Photo by Sam Venn, Wollondilly Advertiser

The Hidden Treasures Honour Roll is a NSW Department of Primary Industries Rural Women's Network initiative that has celebrated women's contribution since 2011. Every year many women from local NSW RFS brigades have been singled out for acknowledgement. In 2015, 14 deserving NSW RFS volunteers were honoured. The following stories, submitted by appreciative community members, celebrate female volunteers from rural parts of NSW.

You are invited to nominate a brigade member or any rural woman who you believe makes your community a better place. For more information contact the Rural Women's Network at rural.women@dpi.nsw.gov.au or check the DPI website.

**Carrol Baker
Mt Ramornie Brigade,
Clarence Valley**

Carrol Baker joined the NSW RFS in July 1994 as a member of the Mt Ramornie Brigade. During her 21 years of service she has been an active firefighter and held a range of roles within her brigade including Secretary, Treasurer and President.

Carrol is currently Deputy Captain for Mt Ramornie Brigade, and has previously held the senior leadership roles of Captain and Senior Deputy Captain. As a frontline firefighter she has been involved in major bush fire campaigns in the Clarence Valley, including Section 44 operations. Carrol is extensively trained in all aspects of firefighting and is more than happy to share her wealth of knowledge with members of her brigade and district.

**Linda Cook
Coramba Brigade,
Mid North Coast**

Linda Cook became an honorary member of the Coramba Brigade in 2002 after spending several years mowing the lawns and keeping an eye on the station as a neighbour. Since then she has become an invaluable member of the Coramba Brigade and the greater Mid North Coast team through her involvement in catering, community engagement, firefighting and fundraising.

Linda is an active firefighter and currently holds the position of Crew Leader. She has previously held the position of First Aid Officer for the Coramba Brigade. In addition to her firefighting duties Linda is the Mid North Coast team's primary catering officer, giving

up most of her weekends to cater for training, exercises and events – often single-handedly. She has many strings to her bow and is a most valued member.

**Francis Crown
Canyonleigh Brigade,
Southern Highlands**

Francis Crown has been a member of the NSW RFS since first joining the Canyonleigh Brigade in 2006. Since that time she has been instrumental in planning and delivering successful community engagement programs at Canyonleigh, with a particular focus on increasing women's resilience to bush fire.

Francis Crown's enthusiasm goes a long way to making the local community stand up and take notice of the bush fire preparation message. She is well-respected for her methodical approach and absolute dedication in Canyonleigh and beyond.

**Megan Davies
Narrabri Brigade, Namoi Gwydir**

Since 2009 Megan Davis has been an active and knowledgeable member of the Narrabri Brigade, with her broad range of skills being formally recognised in May 2013 with a NSW RFS Unit Citation for Service.

Her commitment to the Service often sees her attending incidents day and night, while also holding down a full time job. As a conscientious member and regular meeting participant it comes as no surprise she has also held the role of Brigade President for the past three years. Megan is a true asset to the NSW RFS, the Narrabri Brigade and her community.

**Elizabeth Ellis
Penrose Brigade,
Southern Highlands**

Elizabeth Ellis became a member of the NSW RFS in 2009, when she made the decision to join the Penrose Brigade.

Since that time she has worked to increase the resilience of the Penrose community, through organising regular street meetings, women's and horse workshops as well as contributing articles to the local newsletter.

Elizabeth's professional approach to her volunteer duties are held in high regard within the NSW RFS community.

**Roxayne Felton,
Eastbank Brigade,
Mid North Coast**

Roxayne Felton began her volunteer firefighting career as a member of Eastern Dorrigo Brigade in 1990. Ten years later she transferred to the Eastbank Brigade and currently juggles the roles of Deputy Captain with Treasurer and Health and Safety Officer.

Previously Roxie has been Brigade Captain, Senior Deputy Captain and First Aid Officer for her brigade. In addition, she is an active firefighter who consistently responds to incidents including several major fires and out-of-area deployments. In 1994 she did what no firefighter should have to: fight a fire impacting on their own home. The fire at Lowanna also reached many of her friends' homes, making it a very personal incident.

Roxie likens the Eastbank Brigade to a second family.

**Helen Fenning,
Buxton Brigade,
Southern Highlands**

Helen Fenning is a highly committed volunteer who works tirelessly within her local community.

With almost 30 years of service behind her, members are often quick to say they wouldn't be able to do their job without her. Helen makes herself available, whether the need is physical or emotional. She is a wonderful sounding board and has proved particularly invaluable for firefighters struggling to process what they have seen at confronting incidents.

**Judith Fountain,
Crookwell Brigade,
Southern Tablelands**

Judith Fountain is an important member of both the Crookwell Lions Club and Crookwell Brigade. Through both of these groups she works tirelessly to fundraise for the community and cater for events.

Many cadets and members in the area have been lucky enough to eat Judith's food and sincerely appreciate her dedication and catering skills, particularly when the chips are down. Furthermore, she is reliable and always makes herself available. Judith is a valued member of both organisations.

**Peta Luke,
Merriwa Brigade,
Liverpool Range**

Peta Luke was born in Melbourne and started volunteering in 1996 as a NSW RFS member.

She must have got a taste for it because two years later she also trained as a NSW SES volunteer. In 2006 Peta

moved to Merriwa and joined the Merriwa SES Unit whilst maintaining her involvement with the Merriwa Brigade.

In 2011 she was promoted to Brigade Captain and afforded the opportunity to take part in the graduate leadership program. Since that time she has used her leadership skills to benefit the Merriwa community

**Elizabeth Philpott,
Repton Brigade, Mid North Coast**

Liz Philpott has been a valued member of the Repton Brigade since 2001.

She is an active firefighter whose volunteering CV features the roles of Captain, Secretary, Permit Officer, Training Officer and First Aid Officer within her brigade.

Liz also has a passion for Learning and Development and is a member of the Mid North Coast Team Training Committee.

She takes great pride in her role as coordinator, instructor and assessor for courses in her local area, including first aid and firefighting.

In 2012 the Rural Fire Service Association awarded Liz a scholarship giving her a kickstart to pursue her natural ability and love of teaching.

She has recently been given Life Membership of the Repton Brigade.

**Robin Sevenoaks,
Rocky Plain Brigade, Monaro**

Robin Sevenoaks has made a significant contribution to the quality of life in many parts of the Monaro through her dedication to the environment, social and community issues.

Robin served on the Snowy River Shire Council from 1991 to 1999, including three years as Deputy Mayor. Robin has been a long-term, active

member of the Rocky Plain Brigade, and also served as Secretary for a period.

Robin has been particularly dedicated to restoring the landscape to cope with severe eucalyptus dieback on the Monaro. Her community mindedness is invaluable to the local area.

**Merryn Twemlow,
Armidale, New England**

Merryn joined the NSW RFS when she retired from her job in 2010 and since then has been an active member of three brigades. She has held a range of roles including Duty Communication Operator, Secretary of Lyndhurst-Dumaresq Brigade and more recently a member of New England Logistics.

Typical of Merryn, she went out of her way to obtain a Medium Rigid licence to help the team move vehicles around

the New England Zone when necessary.

In 2012 a major fire at Carrai burnt through 6,400 hectares of forest. Merryn, who had never worked at the New England office, received a phone call asking if she knew how to handle a Commander Phone system and regardless, could she make her way to the office immediately? Merryn, of course stood up to the challenge and has been a volunteer member of the team ever since. She is well known for her 'can do' attitude.

**Sue White,
Riverina Zone Communications
Brigade, Riverina**

Sue White was born and raised near Wagga Wagga. She has been a member of the NSW RFS for 26 years since joining the Eunony Brigade in 1989. In 2002 she took on the roles of Permit Officer and Communications Officer within the brigade.

Sue has been actively involved in the Riverina Zone Communications Group and in 2013 was a founding member of the Riverina Zone Communications Brigade. She now captains the brigade.

Sue's expertise in the communications field is extensive and she willingly shares her knowledge, experience and enthusiasm with new brigade members. Sue is a valued member of the Eunony Valley community and is held in high regard for her kind-hearted and generous nature.

**Lesley Wood,
Mandemar Brigade,
Southern Highlands**

Lesley Wood has been a member of the NSW RFS since 1999 when she first joined the Mandemar Brigade. Since that time she has spearheaded numerous community engagement programs for the Penrose community; including regular community meetings, women's workshops, horse workshops and coordinating articles in the local newsletter.

Lesley shows great enthusiasm when working together with her local community to improve their resilience to bush fire. She is well-respected by her peers for her tireless efforts.



ABOVE: Elizabeth Ellis from Penrose Brigade. Photo by Josh Bartlett of Southern Highland News

PROPERTY ASSESSMENTS:

Property assessments are a key part of engaging with your community about bush fire safety. Many brigades are actively and regularly visiting homes to help residents to identify and mitigate potential risks to their home and to guide them in developing a personalised bush fire survival plan.

FIRE HAZARDS AND RISK

STEP 1
BUSH FIRE THREAT
What is the threat from a bush or grass fire for the area and the particular property?

STEP 2
FIRE HAZARDS AND RISK
Assisting residents to identify and mitigate fire hazards to reduce their risk.

STEP 3
PREPARING A BUSH FIRE SURVIVAL PLAN
Assist people to start discussions around preparing a Bush Fire Survival Plan specific to their family and property risk.

STEP 2 OF 3 STEPS
IDENTIFY AND MITIGATE HAZARDS AROUND THE HOME

THREE STEPS:
The role of NSW RFS members who conduct property assessments is to identify hazards, ensure the householder understands why it is a hazard and then assist them on ways to mitigate that hazard.

1. Identify potential hazards
2. Explain why it's a hazard and the level of risk associated with the hazard
3. Discuss how to mitigate the hazard

Identify HAZARDS

IDENTIFY AND MANAGE HAZARDS AROUND THE HOME



CASE STUDY

Westleigh Brigade members visited this house before the fire season to help the residents identify and mitigate potential hazards

HAZARD #1: LEAF LITTER. WHY IS THIS A HAZARD?



Explanation Either direct flame contact or embers can set this litter alight. Loose leaf litter is generally aerated and therefore easily flammable. Wind will cause a burning leaf to spread fire to other parts of the property.

Management Regularly rake up and remove leaves from wherever they accumulate.

HAZARD #2: LEAF LITTER ON THE ROOF. WHY IS THIS A HAZARD?



Explanation Either direct flame contact or embers can set this litter alight. While the leaf litter is loose, it is aerated and easily flammable. Burning leaves can get under the tiles and into the roof space and spread fire to other parts of the building and property.

Management Regularly remove leaves from roof lines and gutters.

When there is the threat of fire nearby, wet down the roof prior to the fire approaching. Ensure that residents are aware it is important NOT to climb up onto the roof to complete this task.

HAZARD #3: HANGING VINES/VEGETATION. WHY ARE THEY A HAZARD?



Explanation Direct flame contact or embers can ignite vines, shrubs and plants.

Radiant heat could also dry the moisture out in the plants, making them susceptible to fire.

Management Vines, shrubs and gardens should be kept away from building walls, verandas and posts wherever possible.

Plants that are well-maintained and have a high moisture content are less susceptible to fire.

HAZARD #4: HEDGE: WHY IT COULD BE A HELP OR A HAZARD



Explanation Hedges that go right down to the bush, are dry and have fuel beneath, can act as a wick – drawing a fire from the bushland directly up to the house.

When hedges are thick, well-maintained and kept moist, they can act as an ember screen and protect the house.

Management Keep all gardens tidy and well maintained.

During the summer, watering plants regularly will help them maintain their moisture levels which will make them less susceptible to fire and more effective as ember screens.

Identify HAZARDS

HAZARD #5: GARAGE DOOR AND DOOR MAT



Explanation Door mat: Embers can be trapped by the mat causing it to catch fire. Flame and embers from the burning mat can penetrate under the door, introducing fire to the inside of the house.

Garage door: The gaps above, underneath and down the side of garage doors are susceptible to ember attack. The embers can penetrate the gaps in the door, introducing fire to the inside of the house.

Management Door mat: Take the door mat and other flammable items inside on days of high fire danger or when on away on holidays.

Garage door: Check that the rubber seal goes along the bottom of the door to ensure that embers cannot get in underneath. Fit a good quality ember seal to the sides and top to minimise the opportunity for embers to penetrate.

HAZARD #6: OUTDOOR FURNITURE



Explanation It can catch on fire from embers. Strong winds present ahead of a fire could result in it being blown up against the house or into window causing it to break.

Management On days of high fire danger, when away on holidays, or when fire is approaching, outdoor furniture should be put inside.

HAZARD #7: WINDOWS AND GLASS DOORS



Explanation Sustained radiant heat can crack windows and glass doors, allowing flames or embers into the house.

Management Use a high quality duct tape to tape up the inside of glass windows and doors. This will help to prevent cracking, or in the event of cracking help stop parts of the glass dislodging and creating an opening for embers to enter the house.

If a fire is approaching close curtains or blinds to reduce the opportunity for embers to enter the home, if the glass breaks remove flammable objects from around windows and glass doors.

COMING UP

In an upcoming issue of the *Bush Fire Bulletin* Liftout we will look at Step 3 on helping residents to have a discussion about making a Bush Fire Survival Plan

LEADING PEOPLE WORKSHOP



COURSE OVERVIEW

Leading People (LDP) is a new internal course that has been developed to provide members with skills in leadership practices used within the NSW RFS.

It is designed to enable suitable members to supervise and develop a team of people, taking into account the diverse nature of our membership and flexibility of our workforce.

The Leading People facilitator training workshops in the 2016 NSW RFS State Training Calendar are aimed at members that will become the local facilitator and assessors teams.

Nominations will be reviewed and prioritised by District and submitted to State L&D. State L&D will review all nominations to ensure fair representation across DTZs. Nominations where the above entry requirements are not met will not be accepted by State L&D.

Course structure

- > 2.5 day workshop commencing 1830hrs Friday evening and concluding at 1500hrs on Sunday

Qualifications awarded

- > PUATEA003B lead, manage and develop teams

Pre-requisite

- > Advanced Firefighter (PUATEA002B)

NSW RFS entry requirements

- > Rural Fire Instructor certification

For further information regarding the Leading People workshop, please contact State Learning and Development on 8741 5210 or ld@rfs.nsw.gov.au



St Florian's Day

The NSW RFS Internal Bravery and Service Awards

Acts of bravery and outstanding service are recognised each year on St Florians Day in a ceremony at NSW RFS Headquarters. The annual ceremony is held on the fourth of May; the Feast Day of St Florian, patron saint of firefighters, and International Firefighters' Day. This year's St Florian's Day Ceremony saw many deserving recipients recognised by The Commissioner and Minister for Emergency Services, the Hon. David Elliott MP.

COMMISSIONER'S COMMENDATION FOR SERVICE (INDIVIDUAL)

Awarded for service of a meritorious nature, or for outstanding actions relating to fire service duties, administrative leadership, or for exemplary performance of a specific difficult project or task, not involving bravery.

DEPUTY CAPTAIN DEREK COLEBROOK Nelligen Rural Fire Brigade, Far South Coast Team, Region South

Thanks to decisions made in the blink of an eye Deputy Captain Derek Colebrook saved his family from a potentially fatal house fire that engulfed his home in January 2014.

Woken in the middle of the night, Deputy Captain Colebrook and his wife were greeted by thick smoke and flames. Unable to get to his children's rooms, he was forced to smash their bedroom windows with just a star picket. In the most challenging of conditions Deputy Captain Colebrook saved his wife and two children.

FIREFIGHTER RUDY SCHUETT, AFSM Moonee Brigade, Mid North Coast Team, Region North

Firefighter Rudy Schuett, AFSM constantly goes over and above the call of duty for the Service. As well as responding to hundreds of incidents and acting in the role of Crew Leader, he also maintains the station and equipment.

It is not unusual for Firefighter Schuett to start work at 4.00 am and still be toiling after dark. Firefighter Schuett's work ethic is complemented by an easy-going nature and wonderful sense of humour; a powerful combination.

COMMISSIONER'S CERTIFICATE OF COMMENDATION (INDIVIDUAL)

Awarded to recognise service or outstanding actions in relation to fire service duties, administrative leadership, or exemplary performance of a specific project or task. The Certificate of Commendation may be awarded to an individual or unit for service beyond the

scope of responsibility normally expected of that person or unit in their assigned duties.

CHIEF SUPERINTENDENT ALAN BRINKWORTH, AFSM NSW RFS Headquarters

Chief Superintendent Alan Brinkworth, AFSM is well known within the Service for his near encyclopaedic knowledge of NSW RFS history and field operations. In 2003, Chief Superintendent Brinkworth developed a handbook for use on the fireground; making operational information easily accessible for the first time. The Firefighters' Pocket Book was introduced in 2004, ticking all of the boxes for firefighters: relevant, easy to understand and durable. In 2014 the book was transformed into a handy smartphone app. The Firefighters' Pocket Book has been a resounding success and leaves a wonderful legacy for Chief Superintendent Alan Brinkworth, who retired in 2011.

CAPTAIN MICHAEL BROWNE Forbes Central Brigade, Mid Lachlan Valley Team, Region West

A member since 2003, Captain Michael Browne not only heads up the Forbes Central Brigade, he also ensures Forbes Airbase Operations function smoothly. Under Captain Browne's watchful eye members know that water supplies and retardant at local airports will be ready-to-go when needed. It's a common sight to see Captain Browne cleaning trucks at the Forbes Central Brigade, no task – big or small – is a problem for the Captain.

DISTRICT OFFICER ALEX CHESSER Warringah Pittwater District, Region East

On the 1 October 2013 District Officer Alex Chesser responded to a fuel tanker crash on Sydney's Mona Vale Road. On arrival he was faced with a devastating scene: downed powerlines, several vehicles on fire, burning bush and fuel gushing from the overturned tanker. The fire had already claimed one life, burnt numerous others and posed a clear, direct and imminent threat to more than 100 members of the public downhill. To ensure a coordinated response effort,



ABOVE: Commissioner Shane Fitzsimmons, AFSM addressing the St Florians Day Award recipients and their families at NSW RFS Headquarters in Lidcombe



ABOVE: Sitting in her grandfather's lap and under the watchful eye of her grandmother, this young girl's grandparents, Chris and Sue Talbert, received awards this St Florians Day.



ABOVE: Deputy Commissioner Rob Rogers, AFSM, Minister for Police and Emergency Services the Hon. David Elliott, MP and Commissioner Shane Fitzsimmons, AFSM at the St Florians Day ceremony



District Officer Chesser established clear lines of communication with agencies on scene to effectively manage a complex incident.

FIREFIGHTER BRENDON LEWIS
Pacific Palms Rural Fire Brigade, Gloucester Great Lakes Team, Region East

On Monday 17 August 2015, Firefighter Brendon Lewis was on his way to school to sit a trial HSC exam when he saw an elderly woman crash into a tree. He stopped immediately to perform first aid, all the while working to keep the woman calm until the ambulance arrived. Firefighter Lewis then carried on to school and sat his exam just like any ordinary day. The school has always been proud of Firefighter Lewis' community service and they were particularly proud of his actions on this day.

FIREFIGHTER BARBARA MCMILLEN AND GROUP CAPTAIN MAURICE MCMILLEN
Eglington Rural Fire Brigade, Chifley Zone, Region East

It was during the State Mine Fire of October 2013 that Firefighter Barbara McMillen and her husband Group Captain Maurice McMillen proved they would do whatever it takes to get the job done. For eight days straight they expertly managed the incident response and strike team deployments from the Chifley Fire Control Centre. Group Captain Maurice McMillen and Firefighter Barbara McMillen can often be found at the Fire Control Centre day and night. Their dedication

demonstrates the passion of our NSW RFS senior volunteers to take on challenges and seek leadership roles in extraordinary circumstances. Group Captain Maurice McMillen and Firefighter Barbara McMillen each received a Commissioner's Certificate of Commendation.

MICHELLE WAKKA
Professional Standards Unit, NSW RFS Headquarters

On 14 February 2015, Ms Michelle Wakka was acting Manager of the Professional Standards Unit when the NSW RFS was served with a search warrant by the Independent Commission Against Corruption (ICAC). It was alleged two employees and one volunteer had committed fraud. Ms Wakka played a lead role in the Service's response to ICAC's investigation. At the conclusion of the public hearing, the ICAC Chief Investigator acknowledged Ms Wakka's efforts. "I would like to express our gratitude for the cooperation and professionalism of RFS personnel... We are especially grateful to you and everyone in the Professional Standards Unit for your hard work and patience".

COMMISSIONER'S UNIT CITATION FOR SERVICE

Awarded for service of a meritorious nature, or for outstanding actions in relation to fire service duties, administrative leadership, or for exemplary performance of a specific difficult project or task, not involving bravery.

JEREMY WONG, PAUL MORONEY, NICHOLAS SAMAAN, NATHAN BOWER, WILLIAM SHEARMAN, MARK UNWIN, LACHLAN CRAMMOND, GRAHAME MCLEOD, PETER NIXON AND TIMOTHY STOCKER
Kellyville Rural Fire Brigade, The Hills District, Region East

On Sunday 1 March 2015, brigades in the Hills District were assisting at the annual Tour de Hills bike ride when a cyclist and motorbike had a devastating collision early in the race. On arrival at the scene, a crew from the Kellyville Brigade found the injured cyclist was unresponsive. The crew immediately performed CPR on the cyclist, ensured a defibrillator was ready and requested urgent ambulance assistance. The crew worked tirelessly on the injured cyclist until paramedics arrived declaring the patient deceased. The whole crew acted with professionalism throughout the event, something that was later acknowledged by the NSW Ambulance Inspector on the scene.

BILL DUNCAN, OAM, CHRIS TALBERT, SUE TALBERT, RAY HANCOCK AND JENNY HANCOCK
Kenthurst Firewise Resident Awareness Program Coordinating Group, Kenthurst Rural Fire Brigade, The Hills District, Region East

The Firewise Resident Awareness Program was developed in response to the

harsh lessons learnt in the Victorian fires. The Program aims to make the community more resilient to bush fire by arming local residents with practical skills and fire knowledge. More than 500 residents have completed the program, including a new version tailored to women and mothers. The success of the program is evidenced through residents' firefighting equipment, asset protection zones, well maintained properties and commitment to Bush Fire Survival Plans.

VIC FISCHER, DAVID ABERDEEN AND CODY RUNCIMAN
Kyogle Rural Fire Brigade, Northern Rivers Zone, Region North

On Thursday 18 September 2014, a crew of four from the Kyogle Brigade responded to a house fire. On their way to the incident the crew realised one of their members, Deputy Captain Witton, was growing increasingly unresponsive. As they pulled over, Deputy Captain Witton was lapsing in and out of consciousness. They got him out of the truck, prepared the defibrillator unit and administered first aid. The paramedics and NSW RFS crew worked together for 25 minutes to stabilise Deputy Captain Witton who had gone into cardiac arrest. Unfortunately, he did not regain consciousness and passed away on the way to the hospital. The actions of the crew reflect the NSW RFS traditions of mateship and dealing with extreme adversity.

KEN THORNTON, JUSTIN HONNER, BRADLEY FEDDERSEN, SONIA BROADBENT, NIKOLAUS RAMIN AND TIM HONNER
Willow Tree 2 and Willow Tree 7, Willow Tree Rural Fire Brigade, Liverpool Range Zone, Region North

The Willow Tree Brigade responded to a fire at an unoccupied antique store at around 8pm on the 9 May 2015. The intensity of the fire meant the antique store couldn't be saved. The Willow Tree crews requested additional resources and focussed on protecting nearby properties and residents. The Willow Tree crews worked alone at the fire for 45 minutes doing an outstanding job to preserve life and limit property damage in challenging circumstances. They were dealing with gas cylinders connected to the neighbouring cafe, potentially hazardous materials inside the store, downed powerlines and a major highway closure.

COMMISSIONER'S CERTIFICATE OF COMMENDATION (UNIT)

Awarded for service of a meritorious nature, or for outstanding actions in relation to fire service duties, administrative leadership, or for exemplary performance of a specific difficult project or task. The Certificate of Commendation may be awarded to an individual or unit for service beyond the scope of responsibility normally expected of that person or unit in their assigned duties.

Braefield/Dury 1, Wallabadah 1, Big Jacks Creek 1, Currabubula Rural Fire Brigade and Merriwa River Rural Fire Brigade, Liverpool Range Zone, Region North

This Commissioner's Certificate of Commendation was also awarded for the response to the antique store fire in Willow Tree. Secondary response crews arrived on scene 45 minutes after the Willow Tree Brigade, following a call for back up from Incident Controller Group Captain Ken Thornton. These crews included Braefield/Dury 1 and Wallabadah 1, with Big Jacks Creek 1 operating as a bulk water carrier. Currabubula and Merriwa River members also provided valuable support. The timely and professional assistance provided by the secondary responders helped save important buildings and infrastructure for the township of Willow Tree.

Kenthurst Rural Fire Brigade, The Hills District, Region East

The Firewise Resident Awareness Program was also awarded a Commissioner's Certificate of Commendation (Unit). More information about the program can be found on the previous page (pg. 42).

Lithgow District Brigades, Region East

Two major bush fires struck the Lithgow District on the 17 October 2013. The State Mine Gully Fire travelled 30 kilometres to claim six dwellings and 18 sheds in just one afternoon. On the same day, a second

fire started in Mt Victoria destroying many kilometres of fencing and threatening 100 rural properties. Every brigade in the district fought the fires. Battling extreme conditions with winds of 120 kilometres per hour, all crews demonstrated service above and beyond the call of duty to successfully contain both fires. Responding brigades: Clarence/Dargan, South Bowenfels, Marrangaroo, Hartley, Kanimbla, Wallerawang, Portland, Cullen Bullen, Lowther/Hampton, Tarana, Rydal, Capertee, Sunny Corner/Meadow Flat, Dark Corner, Palmers Oaky, Lithgow Communications and Hartley Catering.

Lower Hunter Zone, Region East

Cyclonic winds and torrential rain pummelled the lower Hunter area on Monday 20 April 2015 resulting in flash flooding and massive damage to buildings. Tragically, four residents lost their lives in floodwaters. Local NSW RFS crews responded to more than 1,000 Requests for Assistance for the NSW State Emergency Service (NSW SES). The Lower Hunter Zone also provided the NSW SES with strike team crews, liaison officers, aviation support, media liaison, and assistance to NSW Police and Ambulance Service of NSW. Some Lower Hunter Brigades were also isolated themselves, cut off from communication systems and without power. These brigades remained in their communities and assisted residents where they could, often as the only emergency service on hand.

Professional Standards Unit - Operation Vika Response NSW RFS Headquarters

In February 2015, a team was formed within the Professional Standards Unit to prepare the NSW RFS response for 'Operation Vika' run by NSW ICAC. Team members included Ms Michelle Wakka (Team Leader), Ms Jane Hollier, Ms Stacey Weston, and Mrs Tania Marelic. The work was complex and challenging; vast quantities of documents needed to be collected and catalogued. The team worked professionally and efficiently in a high pressure environment, whilst maintaining strict confidentiality and consideration for those around them.

The Lakes Team Brigades, Region East

The day after the April 2015 'Super Storm' hit the lower Hunter area local brigades responded to an urgent call from the Broadcast Australia site. Their access road was blocked by fallen trees and they urgently needed to get a generator into the site to continue broadcasting. Important infrastructure for the government radio network, television and radio equipment used by emergency services is all kept at the site. Local brigades and specialist chainsaw crews from Seahampton, Cameron Park, Wakefield and Dooralong cleared the road, supported by Communications volunteers. In less than five hours the crews cleared 34 large trees from the road and the crisis was averted.

A long engagement

Set in an idyllic spot south of Coffs Harbour is a large multiple occupancy community (commune) which is at extreme risk of bush fire. The Bundagen community was formed 34 years ago and since that time the nearby Bonville Brigade have made it their business to ensure the community is well-prepared against bush fire. The relationship between the Bundagen community and the Bonville Brigade has flourished over time. Narelle Swanson, from Bonville Brigade explains.

As the crow flies, the Bundagen community is 15 kilometres south of Coffs Harbour on the Mid North Coast. The 313 hectare Bundagen Cooperative hugs the land at Bundagen Heads. The population is currently sitting at around 300 people housed in nine settlement villages including 70 dwellings

and other community buildings, as well as a fire station. The gorgeous setting, once farmland, is now surrounded by the Bongil Bongil National Park with the great eastern firebreak, the Pacific Ocean, to the east. There is just one access road - a gravel road through thick forest.

In 1980, the year before the community was established, the area was subject to a legendary bush fire. Locals still vividly recall the speed of the fire and the damage it left in its wake. The fast moving bush fire started near the Pacific Highway, gathered speed, crowned in the tall eucalyptus forest and burnt a pathway all the way to the beach. By the time the Bonville Brigade reached the fire it was too late, and they made a wise decision to retreat. The fire had travelled five kilometres in just 15 minutes. Or so the story goes.

The fire left a scar on the land that was still apparent the following year when the Bundagen Cooperative was formed. It is unknown if the fire affected the sale price, but it has certainly affected the occupants ever since.

The founding members of the community wisely made fire protection planning a priority. Within the first year of their arrival, they elected a Fire Coordinator who, along with six others, attended a Bonville Brigade meeting in 1982. At the time these 'outsiders' were unexpected visitors at the brigade meeting and their alternative lifestyle was not understood by the locals. However, brigade members quickly realised their urgent need for fire protection and knowledge of fire behavior.

Brigade records show that in November 1982 the Coffs Harbour Fire Control Officer at the time, Perc Bulley, issued the Bundagen Cooperative with its first firefighting equipment: two knapsacks and four Mcleod tools. Some years later the Bonville tanker trailer was also relocated there.

Basic firefighter training was still a new concept in Coffs Harbour in 1988. So when a crew from Bundagen volunteered for night patrol at a forest fire in Bonville, they were bravely fronting up to their first fire with no formal training. Following that experience, the Bundagen people developed a real thirst for structured firefighting training.

After another fire to the north of the property in 1991 the

Bonville Brigade offered a Basic Firefighter training course to interested members from Bundagen. An old Leyland tanker, transferred to Bonville Brigade for use at Bundagen, was a surprise handover at the completion of the course.

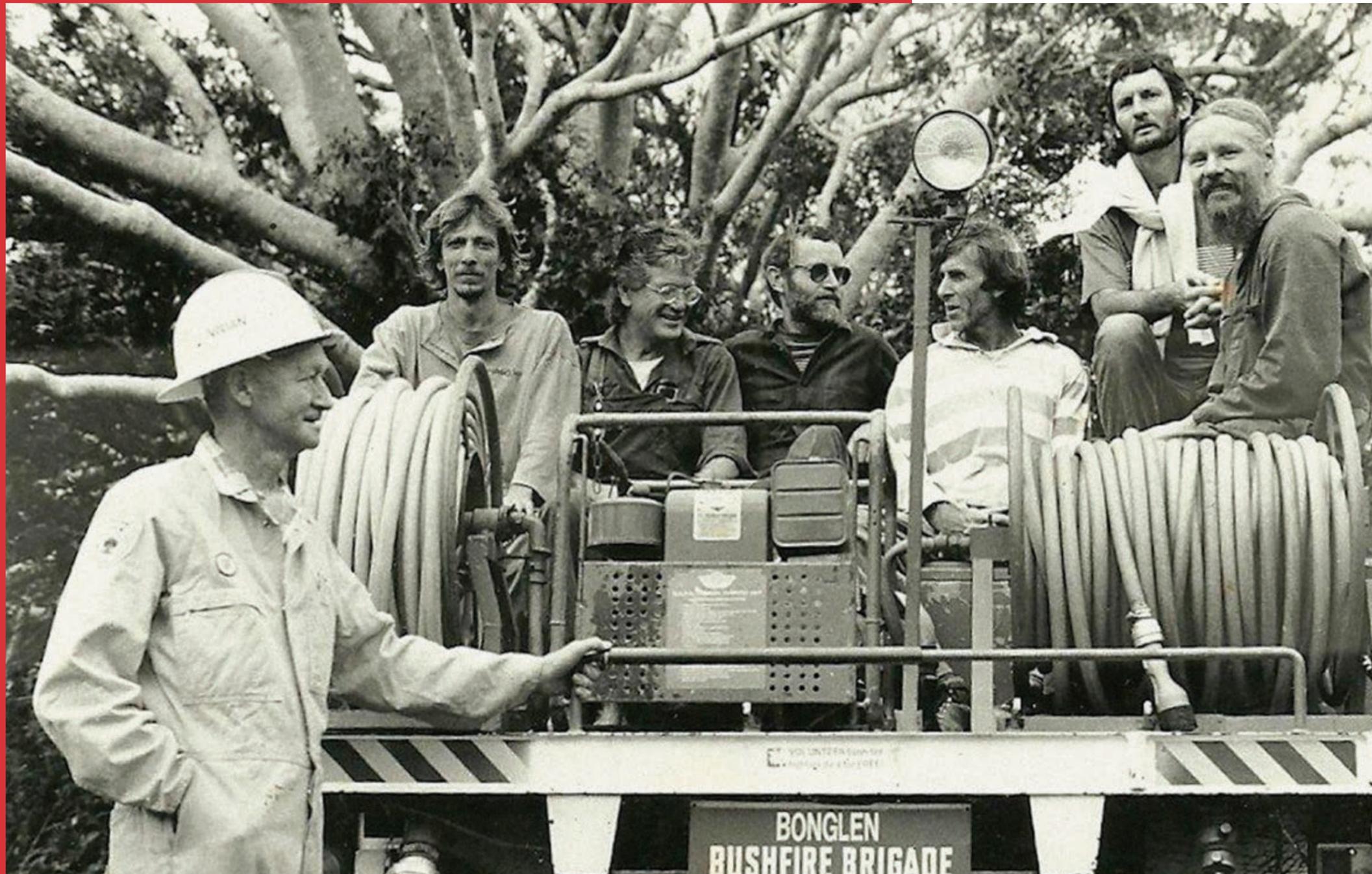
Deputy Captain Viv Gill was happy to provide further training on the Bundagen property, including drafting water from a dam on the property. By now there was a proud crew of eight members with 'blue spots' in the Bundagen community.

It was the following fire season, in 1992, that the Bundagen Cooperative crew faced their first real fire test. Working with State Forestry tanker crews and the local bush fire brigades, they fought an extensive forest fire on the outskirts of the Bundagen land. Unpredictable weather resulted in an unpredictable fire. All the crews involved, including the Bundagen crew, worked hard to contain the out of control blaze. This fire was a success story; they prevented the fast moving fire from entering inaccessible swamp and more importantly the Bundagen property.

Following this challenging bush fire, Rajiva, a Bundagen community member with exceptional leadership skills, completed the Crew Leader course and was elected a Deputy Captain of Bonville Brigade. The Bundagen crew was now complete.

In 1997 the first joint training day was held by the brigade on the Bundagen property. This saw a further 12 Bundagen Coop members complete basic training.

At this stage the Bundagen Coop had a wealth of trained firefighters but their opportunity to attend callouts was limited by communications. Even when a landline phone cable was established in the community, they had very few telephones to take advantage of it. There were no answering machines or mobile phones and pagers were not an option. As a solution, the Bonville Brigade purchased Citizen Band



ABOVE: 1991: Some of the original Bundagen-Coop members with their newly acquired Leyland tanker and Bonville Brigade Captain Vivian Gill. Photos by Narelle Swanson, except where indicated

Throughout the years the brigade continued to welcome new members from the Coop. For many it was simply a way of accessing basic fire training, others became more fully involved in brigade life; driving bush fire safety mitigation activities in the Bundagen community.

(CB) radios for their trucks, the station and a base at Bundagen. The CB radios were useful, but the signal was often blocked by forest.

As the Bundagen population grew and expanded their property holding, the community purchased their own replacement truck, sourced with the help of the local fire control officers.

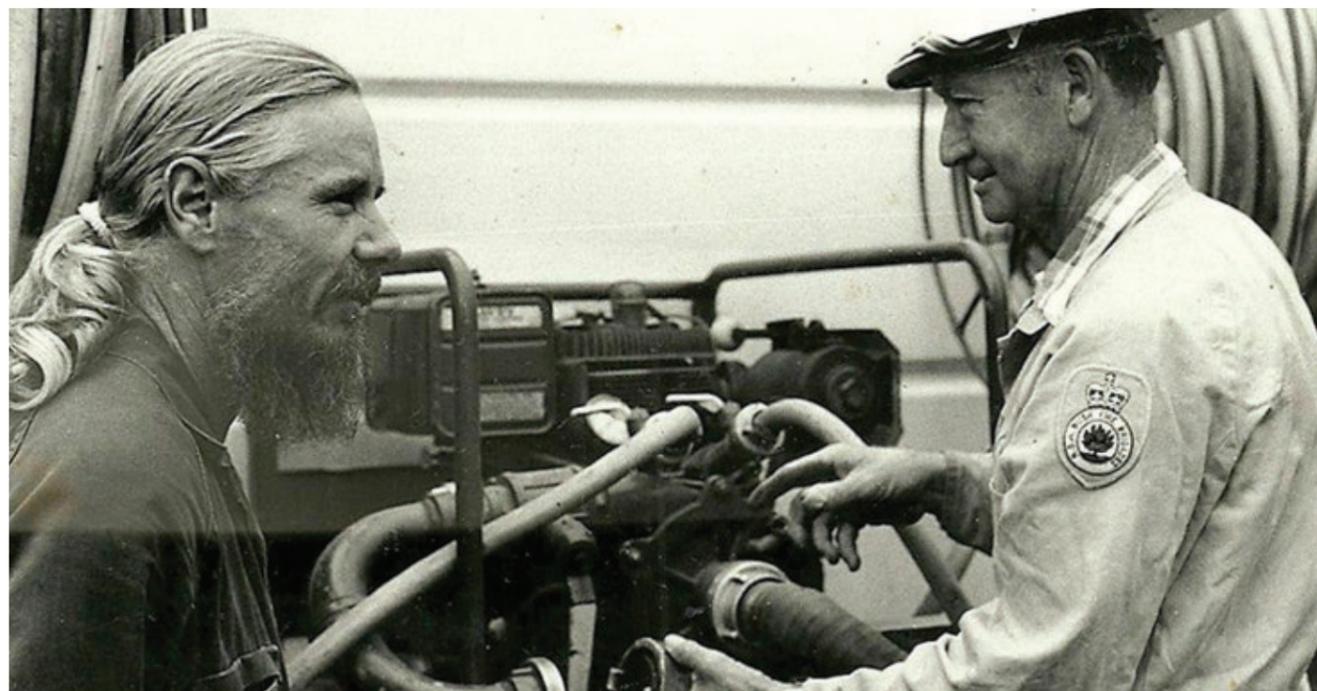
Throughout the following years the brigade continued

to welcome new members from the coop. For many it was simply a way of accessing basic fire training in order to better defend their community. Others became more fully involved in brigade life; driving bush fire safety mitigation activities in the Bundagen community.

In 2007 permission was granted for the Bonville Brigade to visit and inspect the Bundagen property. A grand tour of the land commenced.

Water sources and vehicle access were inspected and members looked around the many villages on foot. The visit revealed potential access issues for the bigger fire trucks due to overhanging trees, these were soon cleared.

Over the years, access to water has been markedly improved with the installation of an underground tank to the main house, new dams and each villages' water tank now had storz fittings.



TOP RIGHT: Basic Firefighter training in 1991 was completed on Bundagen land. The five members pictured from Bundagen and Bonville Brigades were proud winners of the Black Stump Trophy. Wendy Crampton (second from right) is current Senior Deputy Captain of Bonville Brigade. Photo by Narelle Swanson. ABOVE: The two leaders who helped develop fire awareness and training over many years: Rajiva from Bundagen (left) became a Deputy Captain of Bonville Brigade and Bonville Captain Viv Gill (1991 and 1997) offered multiple training sessions to the community over the years



In 2014, the Mid North Coast NSW RFS proposed that a Community Fire Unit (CFU) be established on the Bundagen Coop land, thus fulfilling the desire of the community to have their own autonomous fire unit.

Local community members responded enthusiastically to the CFU training, held in August 2015 alongside a joint training day. This provided a valuable opportunity to build relationships between the Bundagen Coop members and the neighbouring brigades of Boambee and Repton.

The joint exercise began with brigades assembling at the Repton Brigade Station. The Cat 1 and Cat 2 tankers took the main access road to Bundagen and the Cat 7, 9 and Group Officer Vehicle were sent to do a recce of the bumpy southern access road.

On arrival brigades were met by community members who familiarised them with the layout and resources in the community. It was a new experience for many brigade members to see entire villages with no fences or gates.

Community Safety Officer Jamie Bertram guided

Bundagen CFU members through their training at the main house, where they also took delivery of their new CFU trailer.

Later both groups gathered at the north dam for exercises with pumps and hoses. Twenty CFU members, resplendent in their new blue PPE gear, proficiently worked their portable pumps. It was great to see a few of the original Bundagen firefighters still actively participating! A similar number of crew in yellows practiced drafting water from open water sources and relay pumping.

A valuable discussion about equipment and resources continued over a fabulous lunch provided by the Bundagen Coop. The exchange of local knowledge and fire awareness was exceptionally valuable to both groups.

At the conclusion of the day it was clear this new generation of Bundagen community firefighters had the same pride and enthusiasm for their role as the very first group in 1991.



TOP LEFT: 2007: The Bonville Cat 1 checking access to Bundagen via an alternate north access gate through the Bongil Bongil National Park. CENTRE: 2015. NSW RFS officers were happy to answer questions for Bundagen CFU members. ABOVE: AUGUST 2015: The freshly minted Community Fire Unit at Bundagen Coop. Photos by Jamie Bertram



Fire in the mallee woodlands

A history of troublesome fire suppression



ABOVE LEFT: Spotting ahead of the fire front is a common danger in mallee fires. Occurring quickly and in several directions at once, this is the main cause of fire spread. Photo by Bill Britt. ABOVE RIGHT: A lot of litter fuel within 'mallee clumps' can lead to intense localised burning. BOTTOM RIGHT: The Mallee Bushfire Prevention Scheme includes an extensive network of fire trails totalling 1,500km. National Parks and Wildlife Service staff, John Brickhill and Brett Pengilley, who have worked alongside the NSW RFS to reduce hazard and maintain fire trails in the area. Photos by Robyn Favelle

ABOVE: It is the discontinuous fuel that makes fire behaviour in mallee areas so different to forests and grass fires. PAGES 38-39 This photo of the mallee fire near Menindee in March 2015 shows a low-intensity fire spreading in discontinuous fuels, characteristic of mallee shrublands. High-intensity fire is required to overcome the areas of patchy fuel. Photos by Bill Britt

The area south of Menindee in Far West NSW is known locally as 'mallee country' due to the unique shrub and woodland found in the area. Mallee is some of the most flammable vegetation found in semi-arid Australia. Fires burn intensely and behave erratically due to the sheer amount of surface fuel mallee gums produce and because the nearby porcupine grass and speargrasses are also quick to burn.

In early March 2015, lightning sparked a fire on a large grazing property in the Far West of NSW, south of Menindee. The fire burnt with great intensity, easily jumping a road four metres wide and spotting ahead of itself in two directions. It was a good example of the challenge firefighters in the area have faced for many years. The photos on these pages, taken by Inspector Bill Britt, clearly show the heat and intensity of fire in mallee country.

Here Inspector Robyn Favelle, Operations Officer, NSW RFS Far West Team, explains the history of bush fire suppression in mallee country, while Research Scientist Dr Miguel Cruz explains why reducing hazards in this kind of vegetation has proved challenging.

Far West Team Operations Officer, Robyn Favelle

Vegetation in the mallee is composed of a continuous stand of many trees up to 15 feet high, and following abnormal winter rain, a heavy growth of corkscrew grass over a metre tall. This fuel can mature and cure rapidly encouraging large, dangerous fires in the mallee, where fuel is otherwise patchy.

Ignitions from natural causes such as lightning account for well over half of the recorded fires. Usually, strikes occur from dry thunderstorms approaching from the west, so we most often see fires running from west to east.

Experience has taught us that the most effective way to control major fires in the area is to steer fires into natural barriers or prepared trails. The trails need to be wide enough to give firefighters a chance to control the blaze. Alternatively,

burning back from these areas is also an effective tactic.

A program of complete fire protection for the area is unfortunately not considered possible.

Because of the unique characteristics of the mallee area, in 1972 councils in the region encouraged local bush fire brigades to form an organisation focused on protecting pastoral land adjacent to mallee areas. The organisation was tasked with constructing fire trails and undertaking hazard reduction work.

The Mallee Bushfire Prevention Scheme was developed with active support from the Western Lands Commission and the Bush Fire Council of NSW. The National Parks and Wildlife Service and State Forests also became involved as land and resource managers. Expertise was also provided by the NSW Department of Land and Water Conservation

and Commonwealth Scientific and Industrial Research Organisation (CSIRO).

The Mallee Bushfire Prevention Scheme encompasses an area of approximately 23,800 square kilometres in far western NSW. Local government administration is divided between three local government areas; Cobar, Carrathool and Central Darling Shires. Currently there are approximately 1,500km of maintained fire trails within the Mallee Bushfire Prevention Scheme area.

The extensive wildfires recorded throughout the past century illustrate just how volatile fires in the mallee area can be. Records date back to large wildfires in 1917/18 and 1921/22, with huge fires burning from Menindee to Cobar recorded in 1931/32. Further large wildfires were recorded in the Cobar, Mt Hope, Hillston and Roto areas during 1939/40, 1956/57, 1969/70, 1974/75 and 1984/85

Dr Miguel Cruz, Research Scientist at the CSIRO Bushfire Dynamics and Applications

Mallee is a common name given to eucalypts that sprout stunted, multiple stems from an underground tuber, as opposed to the more common eucalypt trees that grow tall and proud with a single trunk. Mallee woods and shrub-lands are located in semi-arid areas of southern Australia. They are particularly common where the borders of South Australia, NSW and Victoria meet, as well as in southern Western Australia. This vegetation often sees multi-stemmed eucalypts in the canopy and hummock grasses, such as spinifex and shrubs closer to the ground. The mallee woods are characterised by low fuel loads, a high proportion of dead fuel and patchy growth. It is common to see shrubs and grasses separated by patches of bare ground, often referred to as 'fuel discontinuity'.

All of the dead vegetation on the ground feeds fires, particularly intense fires, enabling them to

easily jump across bare ground and quickly move between trees, high and low. Fire burning in this vegetation is particularly susceptible to wind changes, adding to the erratic fire behaviour.

The patches of bare ground do successfully slow the spread of low-intensity fires. In order for a fire to keep spreading for a long time, a solid, self-sustaining fire front needs to develop, enabling a fire to jump the patches of bare ground.

The moisture content of dead-fuel has been found to be the key factor that determines how long a fire will continue to burn. Research has found that fuel moisture lower than around eight to 10 percent allows a solid flame front to develop. Other influencing factors such as wind speed and fuel cover also have a noted impact on how long the fire will burn – after a self-sustained and continuous front has taken hold. Wind also plays a big part in fire behaviour.

If a fire really gets going in mallee country and burns for

any length of time, it is likely to crown. These fires are particularly hot and dangerous.

In order for a fire to spread across the surface of 'mallee clumps' a particular flame structure is required. When this type of flame reaches the litter and hanging bark ribbons - underneath the mallee clump canopy - crown combustion usually occurs.

It is the discontinuous fuel that makes fire behaviour in mallee areas so different to forests and grass fires. When you are faced with a situation where the flame front reaches a certain size, it can turn a broken flame front into a dangerous, fully-fledged crown fire – capable of abruptly changing direction. In these circumstances fires will cross discontinuous fuel gaps with ease.

This is particularly challenging when planning hazard reduction burning, because it limits the window of acceptable burning conditions, compared to fires in other types of fuel.



GET READY WEEKEND

10-11 SEPTEMBER, 2016

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

PREPARE. ACT. SURVIVE.

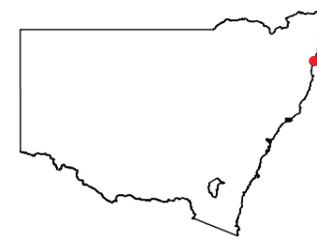
INTERESTED IN PARTICIPATING? VISIT MYRFS



Volunteer in profile



Name: John Davison
Year joined: 1983
Current role: Group Captain
D/T/Z: Mid North Coast



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

I started in 1983 following a move from Canberra onto a rural property. I struck fires that first year. All the farmers in the area got together, but we weren't particularly organised when we fought the fires and I thought there had to be a better way. That was the catalyst for me to join the NSW RFS.

Your current role is Group Captain in the Mid North Coast. What does this role entail?

I help manage 52 brigades and 10 Group Officers across two districts: Hastings and Manning. It's important to have a clear chain of command. Management sit at the top and Group Officers are middle management. We act as a conduit between staff and volunteers. We focus on managing volunteers in their everyday work, training and

managing crews in the field during fires. At incidents we are always looking at the bigger picture and operating tactically.

What are some of the qualifications you've obtained since becoming a NSW RFS member?

Everyone starts with the basics so you can get out on a truck and work under officers' supervision. Then there are multiple training options right through to Advanced Firefighter, Crew Leader and Group Leader.

I also value my role as Chairman of the Bush Fire Management Committee. We liaise with other departments such as National Parks, Councils and Forestry in the Mid North Coast area. We make plans for the year ahead for important fire mitigation activities like hazard reduction. I also sit on various sub-committees, such as the Operations Sub-committee and Disciplinary Committee, of which I'm Chairman. In addition to this I enjoy my role as a training assessor and coordinator, helping train people in specialist areas such as chainsaw operations and prescribed burning.

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

This can vary from a few hours a week, to all week, depending on fire activity. Every five to six

weeks we do a stint at the Fire Control Centre. We can also be deployed interstate at any time to assist with fires.

What inspires you to keep volunteering and what is the most rewarding part of your personal involvement with the NSW RFS?

Working with the other firefighters. Firefighters come from a cross section of society, from Prime Ministers to 16 year olds who have just left school. There's great camaraderie, and you meet people from a range of fields. In the last few years we have had a rewarding relationship with local councils through regular communication.

Of course I also relish the challenge of working out how to 'stop the beast from running!'

You have travelled to many parts of Australia fighting fires. Tell us about an experience that had a profound impact on you?

The Victorian fires of February 2009. I was on the first shift after the fires had run through; we were deployed to Marysville, where many lives were lost. The utter devastation was shocking.

Also, on a personal note, there was an ACT firefighter in our division who was struck by a tree and killed while fighting the fires, so this has certainly stuck in my mind. He was in the wrong place at the wrong

time. There were lots of trees coming down around us - it's one of the gambles we take out in the field.

Why would you encourage community members to become involved with their local NSW RFS?

The NSW RFS is for everyone who has time. Don't think that because you come from an urban area, you won't be useful. There's a job for almost everyone, whether its first aid, radio operations, firefighting, logistics, or support brigades. We have people from 16 up into their 80s who come into the control rooms, operate efficiently, and do their bit. The training you get is nationally accredited, so you can take it with you wherever you go in life.

You were recently the joint winner of Rotary's second annual Emergency Services Volunteer of the Year Awards 2015. Congratulations! What are your thoughts on winning this award?

It was an honour to win, but I'm just one of many people who could have been nominated and won. I'll just keep doing what I'm doing.

Interview by Jo Atkins. Photo and story published with permission from Greater Port Macquarie Focus magazine

From the inside out

BUILDING COMMUNITY WITHIN A CHANGING WORLD

Many brigades have become an integral part of their community because they know the secret to driving change must come from within. Community engagement means something different to each brigade, and so it should; there is no 'one size fits all' approach guaranteed to make a difference.

What we do know, however, is that working together with your individual community 'from the inside out' is a sure-fire way to yield results. Whether it is street parties, working with young people, making yourself available at community events or inviting locals to the station – you know your community best and you know how to get the conversation started. And if you don't, read on for 11 practical tips from a community development specialist on how to mobilise your community into action.



ABOVE: "Relationships take time. Build friendships with your community first," says Peter Kenyon. Photo by Sharon Quandt

Over the last 30 years Peter Kenyon has worked with over 1,600 communities in Australia and overseas to create fresh and creative ways to stimulate the community and create economic renewal in the process. Peter is a passionate social capitalist. Many NSW RFS members may remember him as a popular speaker at the 2014 Australian Community Engagement and Fire Awareness Conference.

I believe, after family, there probably isn't any other social institution as important as community.

Community is just so valuable. It is the glue that gives context to our lives and it certainly gives us that context of place. But community 'aint what it used to be!

Most communities can be compared to a rugby game where 30,000 people who need the exercise turn up to watch 36 players who don't. What we have seen in the last 50 years is a killing off of community.

For eight years I headed the Employment Department in Western Australia. I was a senior bureaucrat that had a cavalry under me who used to go into communities to try and build communities from the top down and from the outside in. I have come to the conclusion that you can never build communities from the top down and the outside in.

The only way to build communities is from the inside out.

The consequence of many practices in community development over the past 50 years has led to the majority of people becoming spectators in their community.

I am one of those people looking to reignite the spirit of community, where people stop waiting for the cavalry to arrive and start taking local responsibility.

Here are 11 quick tips based on my experiences that will hopefully be of value to you:

KEY #1 Believe in the power of community

This is a necessity. For 50 years we have held a belief that

we can create communities from the top down. If you read stories in the media you would think we live in an economy, not a community. That is how little is mentioned about community.

"I work from the firm belief that whatever the issue, community is the answer."

Margaret Wheatley

I have continually seen this in operation.

Ernesto Sirolli wrote an amazing book called *Ripples from the Zambezi*, and in it he talks about facilitating this incredible power that lies within community, he said:

"The future of every community lies in capturing the passion, imagination and resources of its people."

Ernesto Sirolli

That is the simple message I want to leave with you. We need to realise that within our communities there are amazing resources and it is worth the effort of trying to unlock that potential.

To me effective community building starts with the acknowledgement that the people who live in these communities have insights and an understanding of place that we, or anyone from the outside, will never have.

Key #2 Start with what the community cares about

So often we come in to a community with an agenda. We come with the fact that we want everyone to become more aware of fire danger for example. Well, maybe our agenda might not be the starting point. Maybe we need to start with other people's

agendas and look at how we might weave in with what the community cares about.

"There is no power for change greater than a community discovering what it cares about."

Margaret Wheatley

So how do we adopt these methodologies for increasing resident participation in bush fire awareness?

KEY #3 Start where people are

Why do we come in and dump a whole bunch of new activities on the neighbourhood and attempt to create our own networks? Maybe we need to start where people are already.

I have learnt there may be smarter ways to engage people than information stalls and meetings. Maybe the good old street party is where we need to start?

Relationships take time. Relationships take engagement in normal things. We are so keen to get the engagement that we want, we often don't commit to building friendships first.

KEY #4 Have fun

"Why call a meeting when you can have a party?"

Jim Diers

I cannot understand this pre-occupation with calling meetings where everyone sits facing the front. Then we call that consultation. We need to look at doing things in ways that get people excited. Food is a great place to start, something that is not lost on many NSW RFS members! We need to become a lot smarter about the way we do things.

Christchurch Earthquake Disaster Recovery

I spent the last few years working in Christchurch after the devastating earthquakes in Canterbury. The impact on that population is something I have never seen anywhere on the globe.

The response overall from Government, I think, has been pathetic. But what it has taught me is how community can respond to these challenging circumstances. The day of that first earthquake, there was an amazing mobilisation that came from within the community. There was, for example, the Rangiora Earthquake Express: this was one woman who saw what was happening on TV in the morning and by late afternoon had mobilised two helicopters and a whole pile of trucks delivering blankets, food and everything else she sensed affected people would need.

One of my jobs has been to facilitate 'cafe conversation' nights in suburbs around Christchurch and to get people to reflect on what they want their community to be in future. What I have found really interesting is that so few people want to talk about physical stuff. They want to talk about how to retain the sense of community that they have discovered through the disaster. Since the earthquakes the streets have come alive, people now know the names of their neighbours, there is a whole new life going on in their neighbourhoods. Now they are asking themselves: why didn't we have this sense of community prior to the disaster? We would have coped so much better.



ABOVE: "Why call a meeting when you can call a party?" says Peter Kenyon. Food can help make Community Engagement fun. Photo by Rob Van Elven

KEY #5 Start with conversation, not information

"A community is not a community without conversation.

"The two words information and communication are often used interchangeably, but they signify quite different things. Information is giving out; communication is getting through."

Sydney Harris

We often give people booklets and brochures and consider it communication. We need to go back to basics. The oldest tool we have in the toolbox of

building community is a thing called conversation. It is the way we have always related as human beings, it is the way we have always made decisions, it is the way we have planned action.

The one thing we need to learn in our community is how to find creative ways to create conversations that resonate.

What do the French Revolution and the Arab Spring have in common? They both started in coffee shops.

Our success will come back to our creativity in being able to structure effective conversation spaces.

#KEY 6 Communicate with stories not concepts, figures and spreadsheets

"Storytelling is the most powerful way to put ideas into the world today."

Robert McKee

People do not relate to the abstract! Stories help to demystify. They inspire and motivate. They help people identify what they have got and above all, they help to celebrate.

What is your story collection? What is it that you are able to share about why people should get interested in bush fire

Get to Know the Neighbour

One of the events we have organised in our local community is called 'Get to Know the Neighbour'. If you are willing to invite over at least six neighbours for morning tea, or afternoon tea or drinks in the driveway, the local IGA will give you a \$60 voucher to help you do it! You will get \$200 if you invite the entire street!

It's called bribery, but boy it's actually starting to work. Believe it or not, in a four-month period we have had 45 of these street parties.

safety? It could even be your own story.

If you want to excite people, excite them through story. All of us need to be become story tellers.

KEY #7 Don't sit on your community assets

"Every community has far more assets than any one person knows."

Mike Green

I think one of your first jobs in engaging community is doing an 'asset map' of your community. Begin to discover all of the amazing assets present in each community.

Create your own response

Sam Johnson is a 21-year-old from Christchurch. The day of the very first earthquake he rang the local authority and spoke to the emergency coordinator. He said: "I have seen the stuff on TV and I want to do something". The guy says: "Well, we are not taking everyone. I'll check your skills against our list of requirements. No, Sam, sorry we don't think there is role for you. Thank you for offering."

But this does not stop this young man. That very day he created the Student Volunteer Army. Using his social media skills he mobilised 9,000 young people to conduct clean-up operations around the city. Overall the Student Volunteer Army gave 75,000 hours and moved 36,000 tonnes of silt, sludge and rubble.

Sam is a great example of what is actually possible. He was rejected by our traditional ways of evaluating people but he made an incredible contribution nonetheless.

KEY #8 Recognise and reward involvement and volunteers

"I could live for a whole month off a good compliment."

Mark Twain

Volunteer burnout is usually due to people feeling unappreciated, undervalued and unsupported.

KEY #9 Join the virtual world — use social media

In our community we have spent \$85,000 building a website called 'all we need is right here' and it is the most incredible, interactive website. We all need to get into social media and find creative ways to take action.

Key #10 Move beyond silo thinking and action

"I can't save the world on my own, it will take at least three of us!"

Bill Mollison, founder of permaculture in Australia

We have got to stop thinking we are the only ones 'doing stuff' and start holding hands with other people. We need

to hold hands with other organisations and groups. We need to instigate collaboration and partnership with people. If you want to go fast, go alone. If you want to go further, go together. Isn't that a wonderful proverb out of Africa?

#KEY 11 Excite and mobilise young people

Give a group of young people a task and boy do they turn it on! Recently I have heard young people referred to as 'the leaders of tomorrow'. They are not leaders of tomorrow, they are the co-participants of today.

We have got to engage this group. They bring their own unique talents, as well as fresh perspectives, great collaboration skills, ability to stretch the dollar, passion about issues, impatience, idealism, media savvy skills and they know what other young people think and want.

Stories help to demystify. They inspire and motivate. They help people identify what they have got and above all, they help to celebrate...

If you want to excite people, excite them through story. All of us need to be become story tellers.

"Just one thing..."

A 35-year-old attends her first Parents and Friends Group at her child's local Catholic school in a little community in central Queensland.

You know those annual meetings when you happen to be the only person not staring at your shoes when they call for nominations for President. Well she is the only one staring forward and she ends up as the President! She turns up at her first meeting to discover there are only four others on the board.

In 2012 only five percent of families at the school contributed to the Parents and Friends Group, which is pretty typical of most P&C Groups in our schools. Last year 85 percent of parents contributed. How did she move from five percent engagement to 85 percent?

Sometimes success comes down to the simple stuff. This woman said there was no way the group was going to cope with the range of demands expected of them, the list was long and included support for classroom teachers to fundraising. So what did they do in that first meeting? They simply divided up everything that a typical Parents and Friends Group did into these categories: Social; Pastoral; Resourcing; Financing; Fundraising; Environmental and Education.

She wrote to every family saying: "Just one thing: engage with your child's school and do just one thing to help us." Believe it or not, within two weeks, 45 percent of parents had responded and more than half of them chose more than one activity to be involved in. People engaged in what they cared about.

Two weeks after that, she wrote to the 55 percent who hadn't responded saying: "Listen, you must have missed my first letter, I am writing to you a second time. How about doing just one thing for your child's school?" Believe it or not another 20 percent signed up – so she is now up to 65 percent.

Two weeks after that she rings the 35 percent who hadn't responded and said: "You must have missed my two letters; I am now ringing you". And she gets another 20 percent engaged.

This year 85 percent of families are doing something in that school.

Young people on the move

Have you been to the little town of Tumbarumba? Well here is a group who really understand how to interact with and engage their young people.

For the past five years, in a joint initiative between the Bendigo Community Bank, the school, the local Shire and the Chamber of Commerce, they have raised money to send every Year 11 and 12 student on the Kokoda Trail for two weeks.

Could you imagine the impact of every one of your young people having the chance to walk the Kokoda Trail? In the past

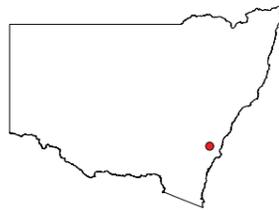
five years, more than 150 of their young people have done that walk supported by over 100 people from the community. In that experience they discover themselves, they discover what leadership is about, they discover what teamwork is about and they discover something about making a difference.

They then come back and boy do they get engaged in their community! I believe this is one community that does not struggle to find volunteers.

BRIGADE IN PROFILE

Bundanoon

Name of Brigade: Bundanoon
Year brigade formed: 1940
Current Captain: Craig Rowley
Current President: John Brock
District: Wingecarribee/
 Southern Highlands



Can you give us a brief history of your brigade?

It all started in 1939 when the area was hit by disastrous bush fires that swept through Bundanoon to claim 12 homes. The fires propelled locals into action and a loose group of volunteers formed – each of them committed to combatting the fires. Their equipment consisted of beaters made of hessian bags and old boot leathers screwed to a wooden handle. These rudimentary tools were stored in the lock-up of the local Police Station, where a large brass bell was mounted on a pole. The bell was tolled when bush fire hit and could be heard all over the village. This same bell now hangs proudly in the Bundanoon Brigade station.

The first vehicle the group had was a 1924 Garford. When the bell rang the driver would often stop by the pub to pick up his crew!

In 1946, after much fundraising and voluntary labour, a fire station was built on Anzac Parade in Bundanoon. The brigade was expanding and a second vehicle was required. A GMC was purchased and fitted

with a water tank and pump, knapsacks, rakes and shovels. A small Rugby car was the third vehicle purchased to complete the fleet.

In 1959, the NSW Board of Fire Commissioners acquired the fire station and a Town Brigade was formed. At that point the Bush Fire Brigade relocated to a large shed in Birriga Avenue.

Another notable bush fire swept through the area on the 6 March 1965. The Chatsbury Fire started outside Goulburn and raced towards Bundanoon, devastating Tallong and Wingello, on the way. Burning on a wide front, the fire reached the outskirts of Bundanoon later that day. All available resources were on deck and local firefighters were glad of help from Holdsworth Army Camp troops. The fire burnt for eight long days. A wedding scheduled for the Saturday was delayed because the vicar was fighting the fire; the local paper later noted the bridegroom's mother wore 'burnt-brown' accessories. Meanwhile terrified kangaroos, trapped on cliff tops, drank water from firefighters' helmets.

In 1976 Bundanoon Brigade Captain Peter Mangold suggested an Auxiliary be formed to raise funds for a more suitable building. Once again a huge fundraising drive ensued. This resulted in a fantastic station being built that boasted two vehicle bays, a meeting room, toilets and a shower. The same station is still in use today on Burgess Street in Bundanoon.

Following more exhaustive fundraising by the Auxiliary, another vehicle bay was added in 1994/95 to house the new,

bulkier, Cat 1 Isuzu tanker. This extension was officially opened in May 1995 together with a memorial plaque dedication for Bob Page who was killed fighting fires in Double Duke State Forest near Grafton in 1994. Since then an office and equipment storeroom have been added to the building.

What types of incidents does your brigade attend?

Bundanoon is situated on the western boundary of Morton National Park with extensive bush on the town's doorstep. Currently the brigade has 22 active firefighters, eight non-active and a 20-person strong Auxiliary. The brigade attends bush and grass fires, car accidents, structural fires and provides backup to the local NSW Fire and Rescue Unit.

Members regularly attend out-of-area fires with crews travelling all over the country to assist their interstate colleagues. They've sent deployments up north to Bundaberg in Queensland and down to South Australia, as well as assisting with hail damage clean-up closer to home in Sydney's eastern suburbs in 1999. Members will never forget the experiences they had when assisting at major bush fires in Canberra, Victoria and the Blue Mountains.

What are some unique skills and features of your brigade?

Bundanoon sent 12 members to the Sydney Olympics in 2000 as part of the 'Olympic Volunteers in Policing' VIP team. This was a truly amazing and infinitely memorable experience.

What vehicles do you have?

Currently the brigade has a 2003 Cat 1 Isuzu tanker and a 2013 Ford Ranger PC that was fitted out by the brigade. A 21-seater Nissan bus is also garaged at the station.

What training do you conduct and how do you go about it?

Training is very important. Comprehensive training sessions are held every Wednesday night with occasional weekend exercises, often including neighbouring brigades. These courses are run by two training officers, supported by other members and staff from the Wingecarribee Fire Control Centre.

What community events does your brigade participate in?

The brigade has been heavily involved in community engagement programs since 1994, including visiting schools, Rotary, Probus and garden clubs, as well as running town and street meetings. The brigade also offers the Secondary School Cadets program and welcomes the local pre-school at the station. Members enjoy getting out and about in the community to take part in events such as Brigadoon, the Highland Fling Mountain Bike Race, Anzac Day March and International Carriage Club Championships, to name a few.

Bundanoon is an incredibly supportive community and its brigade is proud to have protected the village from fire for the past 75 years.

Written by Rosemary Page

A major milestone

On Saturday 5 September 2015, Bundanoon Brigade members and special guests joined together to celebrate the Brigade's 75th Anniversary. The date was chosen to coincide with Bundanoon's sesquicentenary (150th) anniversary. More than 80 people attended the event and Inspector David Stimson from the Southern Highlands Team did a great job as MC.

Special guests included NSW RFS Region East Inspector Kerry Parkinson, who unveiled a plaque to mark the occasion; the Hon. Pru Goward, MP for Goulburn; Mr Angus Taylor, MP for Hume; Clr. Joanna Gash, Mayor of Shoalhaven, and Clrs. Ian Scandrett and Jim Clark, both from the Wingecarribee Shire Council.

Guests also included past Captains and Life Members

and representatives from a range of important community organisations. Special mention was made of Mrs Betty Shipway and her sister Mrs Mary Quigg, both original members of the Brigade Auxiliary when it was formed in 1976.

Inspector Parkinson presented a commemorative plaque from Commissioner Fitzsimmons to Captain Craig Rowley and Brigade President John Brock.

A special cake was made by Bundanoon Auxiliary member Val Rooke and beautifully decorated by her young friend. A wonderful painting by local artist Ken Evans was donated as first prize in a raffle, with a basket of luxury items as second prize.

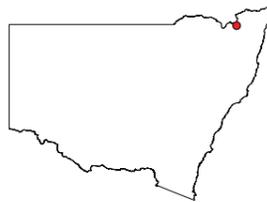
After the official ceremony and cutting of the cake by Ms Goward and Mr Taylor, guests enjoyed a lovely afternoon tea provided by the Auxiliary.



TOP LEFT: Bundanoon Brigade members: Ron Redfern, Ken Rooke, Tim Stirton, Barry Miller. TOP RIGHT: Captain Craig Rowley with twin brother Senior Deputy Captain Dean Rowley at the 75th Anniversary celebrations. CENTRE LEFT: Life member David Lidgard with wife Kay, and longest serving Auxiliary members Betty Shipway and Mary Quigg. CENTRE MIDDLE: Fire Mitigation Officer Wendy Smith with her husband, Group Captain Andrew Smith. CENTRE RIGHT: Mr Angus Taylor, MP for Goulburn at the 75th Anniversary celebration. BOTTOM LEFT: Superintendent Kerry Parkinson presents a plaque to Captain Craig Rowley and President John Brock



Girl power



The Secondary School Cadet Program has become somewhat of an institution at Tenterfield High School, but the most recent group to graduate looked a little different. All 15 participants were girls. The program was such a resounding success that a number of young women are keen to take their training further and become members in the future.

The 10-week program has been successfully running at the school for seven years but this is the first time they have had a female-only group.

Tenterfield High teacher and program facilitator, Helen Clothier, said the program has numerous benefits. "This year's group of girls have really benefitted from the program. Every year they really enjoy it – it's good for them in a variety of ways. They get in and really click. It gives them an opportunity to learn leadership skills that they might not learn in the classroom. I've seen it bring out the best in some students," Helen said.

The 15 girls have certainly kept the NSW RFS crew on their toes according to Group Captain Wayne Halliday, who oversees the program. He said their involvement was mirrored by the rapidly rising number of women involved in the NSW RFS. "We've seen an increase of women in the NSW RFS right across our state. This program provides a good introduction into the Service and volunteering itself," he said.

Each week five NSW RFS members volunteer their time

to teach the program at the school and really get to know the students in the process. Mr Halliday said it's an added bonus if, at the end of the program, students go on to volunteer. Usually at least a couple of graduates take the next step and become members.

NSW RFS cadet Emily Ryan said the program offers a great combination of fun and education. "Learning about the NSW RFS is a great experience, you are doing something worthwhile that is enjoyable at the same time," she explains.

Fellow Cadet Leyla Campbell agreed and said the focus on the practical elements of the program has her thinking about joining the NSW RFS when she leaves school.

"You learn how to use the pumps and equipment; they are really useful skills," she said. "It would be great to be in the NSW RFS in the future."

Cadet Sonya Campbell-Astruc said that the lessons learnt in program are valuable when living in a rural area like she does and she is thinking about becoming a volunteer in future. "The cadets provide you with

experience and knowledge that would be very useful if you ever found yourself in a bush fire," she said.

The Northern Tablelands Cadet Coordinator, Martin Mooney, is full of praise for the volunteer group who run the program each week. Led by Wayne Halliday and Robert Duff the team include Trevor Hessel, Trevor Vollbon and Dennis Pollard. "They do such a good job, the cadets really come out of their shells. Once they feel comfortable and get hooked on the program, their enthusiasm is contagious," he said.

"There has been a gradual increase in the percentage of girls within the program over the last couple of years, but it was certainly a surprise to end up with 15 from 15 this year."

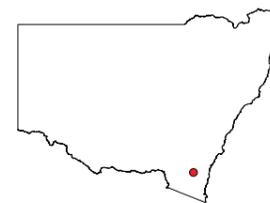
TOP: Tenterfield High School held their first ever all-female Secondary School Cadet program. "Once they feel comfortable and get hooked on the program, their enthusiasm is contagious," said Northern Tablelands Cadet Coordinator Martin Mooney. Photos by Helen Clothier

Volunteer in profile



Volunteers at The Peak View Brigade in Monaro District took the occasion of Ray Barron's retirement from his role of Group Captain to thank him for his steady wisdom and volunteering spirit. Ray Barron had been Group Captain for ten years but has held a range of leadership roles at the Peak View Brigade since 1957. Ray's wife, Margaret was the Brigade Call Out Officer long before this was an official position and has been a patient supporter of Ray throughout. The following is the speech written by incoming Group Captain, Warren Schofield, which he presented at Cooma Monaro Group Captains and Captains post season meeting held at the Cooma Monaro Fire Control Centre in April 2016.

Name: Ray Barron
Year joined: 1957
Current role: Retiring from his role as Group Captain
D/T/Z: Peak View Brigade, Monaro



On behalf of myself, the Peak View Bush Fire Brigade and all the volunteer bush fire brigade members of the Monaro, I would like to thank Ray for his many years of service as a volunteer, Peak View Captain and most recently for the past ten years, Group Captain for the Monaro Region.

The first reference I could find of Ray attending a bush fire was when a bloke called Moses reported a burning bush near Mt Sinai. Shoving a corn beef sandwich in his pocket and a wet potato sack over his shoulder, Ray saddled up his trusty horse called Peak View 7 and off he went.

To me Ray epitomises the word volunteer, he steps out of the shadows when he is needed, he doesn't need lights and sirens, recognition of rank or medals on his chest, he is there because he is needed.

He takes charge of a situation and does what is needed to be done, not for admiration or self-gratification but simply because it was needed to be done. When all the flames and

excitement have died down you still find people like Ray mopping up and blacking out – simply because it needs to be done. He only goes back to his life once the job is complete.

Ray never volunteered or joined the Peak View Brigade. He was conscripted simply because he is part of that community and it is a given that he be there to protect the community. I feel fortunate to live at Peak View where the bush fire brigade is not something you join, it is something you are.

In today's world of bureaucracy and red tape we seem to be losing more and more people like Ray as volunteers because they cannot adapt to the system. I think we could be better situated if the system learned to adapt and accommodate the Rays of our communities.

In 2014 Ray declined to be Div-Com during the Murrumbucca fire and I was asked to take his place. The first thing I did was request that Ray be my scribe. I would have to say Ray would have to be the worst scribe you

could ask for. He hates talking on the radio, can't read a map, never writes anything down and I'm fairly sure he ate all my chocolate biscuits. But I'm glad he was there, because when I had to make decisions on what I thought needed to be done I knew if Ray agreed then those things did need to be done.

Someone once told me "the best way to gain experience is follow those who already have it."

Peak View are not letting Ray retire from his duties, he will still be at bush fires when required - maybe not wearing the same hat, but always in the same capacity, as Ray.

When I am next attending a bush fire, I will seek Ray out for advice because he has over 60 years of knowledge and experience with bush fires and knows what needs to be done.

Written by Group Captain Warren Schofield

Why should your brigade become a Deductible Gift Recipient?

An interview with Andrew Macdonald, Trustee NSW Rural Fire Service & Brigades Donations Fund

What is DGR and how does it impact brigades?

DGR stands for Deductible Gift Recipient which is a legal status given to an entity, like a NSW RFS brigade, by the Australian Taxation Office. Bodies with DGR status can issue tax deductible receipts to people making a donation.

DGR status is different from charity status. NSW RFS brigades don't have charity status.

The current DGR legislation commenced on 1 January 2013. Since then, brigades that wish to issue tax deductible receipts need to have DGR status – either directly, or through the NSW RFS Central Fund.

Who benefits from DGR status?

It is the donors to our brigades that directly benefit from the DGR status. These donors can claim a tax deduction for their donation.

What's in it for RFS brigades?

Usually we find that it is easier for a brigade to attract donations if the donor can claim a tax deduction. I think this would be the case for larger donations and donations from businesses.

So, for example, if someone donates \$100 to a brigade that doesn't have this DGR status, then they cannot claim a tax deduction for their donation?

That's correct. The brigade gets the \$100, but the donor misses out on a tax deduction.

Is DGR status important for any other reason?

Yes. In some cases, only brigades with DGR status can apply for certain types of grants or external funding.

Do brigades have to become a DGR?

No, it is not compulsory.

But why wouldn't a brigade want their financial supporters (donors) to be able to claim a tax deduction?

How does my brigade obtain DGR status?

There are two options available to brigades.

A brigade can establish its own 'brigade managed fund' or the brigade can become a member of the NSW Rural Fire Service & Brigades Donations Fund. More commonly known as the 'RFS Central Fund'.

Establishing a 'brigade managed fund' involves some administrative work in amending the brigade's constitution, holding brigade meetings, setting up a new bank account, obtaining new receipt books and dealing directly with the tax office.

Joining the NSW RFS Central Fund is simply a matter of completing and sending off a short application form.

The NSW RFS Central Fund will then look after the administration and send to the brigade the appropriate documents and brigade specific Westpac Bank login details.

Further information about both options and the NSW RFS Central Fund application form can be found on the MyRFS website.

Is there a cost for a brigade to become a Deductible Gift Recipient?

There is no cost to join the NSW RFS Central Fund.

There may be a small cost for a brigade setting up their own fund in relation to having tax office compliant receipt books printed.

How do brigades access their money held by the NSW RFS Central Fund?

Brigade treasurers have online access to their brigade's money held in the NSW RFS Central Fund bank account with Westpac. Withdrawals are initiated online, with money being transferred overnight directly to the Brigade's general bank account.

The Brigade doesn't need to explain why they are transferring the monies from the NSW RFS Central Fund to their linked general bank account.

Are there any benefits in joining the NSW RFS Central Fund?

NSW RFS Central Fund member brigades have access to the online credit card and direct debit donations portal located on the NSW RFS website. This means donors can donate directly to your brigade through the website, and the money is deposited directly into your brigade account.

I didn't know brigades could get online donations. How do donors access that?

There's a link to the online payment facility under the 'quick link' tab located at the bottom of the NSW RFS homepage. Donations can be made to the NSW RFS Central Fund member brigades by credit card or direct debit. The donation goes directly to the brigade selected.

Are there any restrictions as to what brigades can spend their donated money on?

Yes. Regardless of a brigades DGR status the general rules about spending public donations are the same. All donated money can only be spent on goods and services that are in accordance with

the principle purpose of the brigade and in support of activities that are associated with the brigade's volunteer based fire and emergency service activities. Donated funds cannot pay for brigade Christmas parties and alcohol.

How many brigades have obtained DGR status so far?

219 brigades have joined the NSW RFS Central Fund and about 170 have set up their own brigade managed fund.

Approximately 1,700 brigades haven't got DGR status and may be missing out on receiving donations.

Are there any suggestions that you can make to those brigades that don't have DGR status but still issue receipts for donations?

These brigades should be honest with their donors and tell them that the donation is not tax deductible as well as issue receipts that specifically state that donations are not tax deductible.

How do brigades get further information about DGR?

There is plenty of information on MyRFS. Just go to the 'Info about' tab and select 'Finance' from the drop down listing.

The tax office has general DGR information on its website: www.ato.gov.au/Non-profit/

Alternatively, DGR questions can be emailed to: DGR@rfs.nsw.gov.au

Andrew Macdonald has been the Treasurer of Catherine Field Brigade for the last 20 years and was appointed as a Trustee of the NSW Rural Fire Service & Brigades Donations Fund in 2013. Andrew is a Chartered Accountant and runs his own financial advice business.

BUSH FIREbulletin

THE JOURNAL OF THE NSW RURAL FIRE SERVICE



Are you a new brigade secretary?

Do you distribute the Bush Fire Bulletin to your brigade members?

If you are new to the role, please let us know your name and address via email or using the subscription form below. Unless you contact the Bulletin directly the magazine will continue to be posted to the previous secretary.

REMINDER: anyone can subscribe to the Bush Fire Bulletin and have it delivered directly to your home. Email your address to bush.fire.bulletin@rfs.nsw.gov.au

BUSH.FIRE.BULLETIN@RFS.NSW.GOV.AU
FOR: UPDATES – NEW SUBSCRIBERS – CANCELLATIONS – DEATHS – NEW SECRETARY: NAME AND ADDRESS

BUSH FIRE BULLETIN

SIGN UP TO RECEIVE THE BUSH FIRE BULLETIN DIRECT TO YOUR HOME OR UPDATE YOUR DETAILS



Cut out and mail to:
Bush Fire Bulletin
NSW RURAL FIRE SERVICE
 Reply Paid 67059 Locked Bag 17
 Granville NSW 2142
 (No stamp required)

or email your details to:
Bush.Fire.Bulletin@rfs.nsw.gov.au

Name:.....
 (Please include any post-nominals)

Address:.....

Postcode:..... **Phone:** Home and/or mobile:.....

Email address:

Update

New Subscription

eBulletin (email required)

NSW RFS Member



www.rfs.nsw.gov.au



NSW RURAL FIRE SERVICE

15 Carter Street
Lidcombe NSW 2141

Locked Bag 17
Granville NSW 2142

Tel: 02 8741 5555

Fax: 02 8741 5550

Email: Bush.Fire.Bulletin@rfs.nsw.gov.au

Web: www.rfs.nsw.gov.au

ISSN: 1033-7598

Publisher NSW RURAL FIRE SERVICE Produced Corporate Communications Editor Jacqueline Murphy

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

Cover photo January 2016: Central Plateau fireground in north-west Tasmania. The smouldering fire in the peat proved devilshly hard to put out. Photo by Nicole Bordes.