

# BUSH FIREbulletin

THE JOURNAL OF THE NSW RURAL FIRE SERVICE



## Facing our future

**NSW RFS takes the lead at the International Wildfire Management Conference Australia 2009**



**ADDITIONAL STORIES:**

**LOST IN THE BLUE MOUNTAINS**

**MORE FLOODS ON THE NORTH COAST**

**EUROBODALLA FIRE REVEALS THE DEAD MAN'S ZONE**

**NSW RFS HELPING OUT IN AFRICA**

**PHOTO GALLERY: FIRST COFFEE4KIDS BALL**

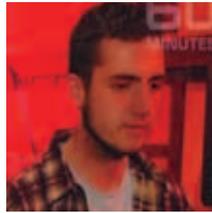
**OAKVILLE JUNIORS SHOW US HOW IT'S DONE**



# CONTENTS



04



10



24



27



52

## 01 FOREWORD

---

## 02 IN FOCUS

---

### 04 INCIDENTS

- 04 North hit with floods again!
  - 07 Heat at the Halfway Roadhouse
  - 08 The Dead Man Zone
  - 10 The manpower behind the search for Jamie Neale
- 

### 12-15 IN THE AFTERMATH OF THE VICTORIAN FIRES

- 12 Recommendations from the Royal Commission
  - 14 Changes to the Fire Danger Ratings and public warnings
- 

## 16 GENERAL NEWS

- 16-23 Facing our Future: The International Wildfire Management Conference Australia 2009
  - 24 C4K Ball: Oh, what a night!
- 

## 26 MyRFS

- 26 MyRFS: Building what you asked for
- 

## 27 OPERATIONS LIFTOUT: HAY CATEGORY 6 TANKER

## 32 GENERAL NEWS cont'd

- 32-35 Region North Exercise
- 

## 36 SPOTLIGHT ON VOLUNTEERS

- 36 In Focus: Volunteers
  - 38 Australian Fire Service Medal: Queen's Birthday 2009
  - 40 Brigade in Profile: Sutton Rural Fire Brigade
  - 43 Officer in Profile: Group Captain Ron Hardy
  - 44 Oakville Juniors: they are a great asset to us
  - 47 Another successful cadet program completed in the Lower Hunter Zone
- 

## 48 RESEARCH FROM THE BUSHFIRE CRC Are children the key to a fire safe community?

---

## 51 BOOKS

- 51 Black Saturday: Stories of love, loss and courage from the Victorian bush fires
- 

## 52 WORLD FIRE

- 52 Botswana: New to fire management
- 

## 54 VALUES PHOTO COMPETITION

- 54 Capturing the NSW RFS Values in action

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.

# FOREWORD



Since the last edition of the *Bush Fire Bulletin* members from all levels of the Service have been heavily engaged in inter-agency, interstate and international cooperation and collaboration.

The professionalism and expertise of the NSW RFS and its members has again been highlighted on the international stage. The NSW RFS hosted the International Wild Fire Management Conference in late June with more than 200 NSW RFS members attending. The positive feedback from members has been overwhelming.

The year 2009 has brought some of the most significant changes to firefighting in Australia for some time. The tragedy of the Victoria fires has sharpened the focus of the general public, as well as governments and fire agencies, on the phenomenon of Australian bush fires. The weather predictions for NSW also suggest that we need to stay on the alert for a difficult fire season ahead.

Since February 2009, stakeholders from all areas of Australian emergency management have come together to draw on the lessons from the Victorian fires and to respond to the Victorian Bushfires Royal Commission's Interim Report. The NSW RFS has acted quickly and confidently and some of the early responses, such as the new Fire Danger Ratings and new public warnings systems are explained on pages 12 to 15.

Equally important has been the launch of the new 'Prepare Act Survive' public awareness campaign. The campaign began airing on television in October and has also included print, radio, outdoor and online advertising across the State. The campaign includes a Bush Fire Survival Plan, new Fire Danger Ratings and Alert levels. As a measure of the Service's commitment to public safety, more than three-quarters of a million copies of the Bush Fire Survival Plan were distributed throughout NSW in November inside the *Sunday Telegraph* newspaper. I would ask you to encourage your family and friends to fill out the Bush Fire Survival Plan as well.

All of these changes and campaigns were launched in conjunction with other agencies and within short timeframes. I want to take this opportunity to sincerely thank all those involved. It is a testament to the flexibility of the Service and the willingness of the NSW RFS to learn lessons from such tragedies as the Victorian fires.

As I write this Foreword we are looking at a difficult fire season ahead. The Bureau of Meteorology measured some unseasonable record temperatures for Spring and is predicting above average temperatures and low rainfall for the rest of the fire season. The Bureau of Meteorology outlook is similar for much of south east Australia and we have already seen days rated as 'Catastrophic' in South Australia and New South Wales. With the possibility of a strengthening El Nino event, 95 percent of the State affected by the drought and with little positive outlook for rain, we are potentially facing one of the most difficult fire seasons we have seen in some time.

I take this opportunity to thank you in advance for your efforts this coming fire season and to impress upon you the importance of your personal safety while you carry out your operational duties.

Shane Fitzsimmons, AFSM  
NSW RFS Commissioner

## 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



## Racing for an emergency

Photo by David Tease

Instead of racing to an emergency, Illawarra NSW RFS volunteers spent Saturday 13 June 2009 at the local horse races spreading the Fire Safety message. Wollongong City Council held its annual Charity Race Day at the Kembla Grange Racecourse with the Wollongong RFS Brigades being the beneficiary of the day.

Volunteers from the local NSW RFS Brigades, Farmborough Heights and Dapto, were at the racecourse along with the Illawarra Community Safety Brigade. While the children were educated and entertained the RFS Firewise board game and the smoke house, parents and racegoers were able to obtain vital information about preparing

their property for the bush fire season as well as take a look at the NSW RFS trucks and equipment.

Some of the Illawarra NSW RFS staff enjoyed the day in style in the AJ 'Bert' Lilly Lounge, with tickets for the lunch raising money for the day. Fashions on the Field was a feature, with the fashion

guru himself, Superintendent Richard Cotterill, Illawarra Zone Manager, fitting right into his role as one of the judges for the competition. Richard is shown above with the winning horse of Race 2 - Illawarra Rural Fire Service Race and jockey as well as Maree Larkin, Illawarra Fire Mitigation Officer and Sally Belo, Illawarra Administration Officer.

## Turning lemons into lemonade



Photo by Sue Hardy

## Reaching out across the ditch

The Year 8 girls at the Carncot School for Girls in Palmerston North, New Zealand were so moved by the tragedy of the Black Saturday fires they decided to take action. Here the Principal of the school, Christine Michalski, explains how it unfolded.



"One of our Year 8 girls was so moved by some of the firefighting stories that she saw on the television news, that she came to me to ask if the school could raise money for the victims. She was particularly touched by the story of two girls who had perished trying to save their horses, probably because she also rides horses. She also suggested that the girls make a quilt for a girl of their own age who had lost everything. It was a way of offering some support,

friendship and hope to that girl in a devastating time.

The projects went ahead and the girls raised over \$1,000 and completed the quilt, as you can see in the attached photograph. Each class applied a different coloured heart in a rainbow and all hearts have been signed by all members of the school. The bottom of the quilt says HEARTS AND HUGS FROM CARNCOT SCHOOL 2009.

Then came the challenge of

finding a girl or a school to give our gifts to! We searched but to no avail, until I spotted an article in the Australian Women's Weekly entitled: Out of the Ashes: Australia Rebuilds. I wrote to the editor, who put me in touch with Adrian Hyland, whose daughter attends Strathewen Primary School, which was destroyed in the fires.

Our quilt was hand-delivered by one of our school's families and we believe that it will hang in the new Strathewen School when it is built.

We are honoured and delighted! We are hoping that we can continue our friendship and support with the people of Strathewen.

This has been a huge learning experience for our girls and it fills me with joy to see that even a 12-year-old from a small school can make a powerful difference in the world."

**Christine Michalski**  
Principal, Carncot School for Girls  
Photo by Kevin Bills Photography Ltd

A bank of 'ugly' lockers in the bay of the Blackheath Brigade Station became a feature of its 50th Anniversary celebrations this year.

The Blue Mountains are one of the most fire prone areas in the world, and many of the brigades in the area are this year celebrating their 50th. There were two days of celebrations planned for the Blackheath/Mt Victoria Brigade with a Presentation Day on the Saturday and an Open Day for the public on Sunday.

Brigade Captain Larry Howard said they decided to freshen up the station in preparation for the 50th and the many special guests due to visit. Among those invited

were Commissioner Shane Fitzsimmons, Local Member for Blue Mountains, Phil Koperberg and the Federal Member for Macquarie, Bob Debus as well as past and present members of the brigade.

"We saw those ugly lockers just sitting there and thought it'd be good to paint them," Larry said. "Then someone else came up with the idea of a mural."

The brigade approached the local Youth Centre street artists to design a mural.

"We left it up to their imagination," Larry said. "They are really getting a lot of work

in the area, so we were lucky to get them."

A team of five young men from the local Youth Centre submitted a drawing which was approved by the brigade members. After that the execution of the artistry took only a few hours!

Once the lockers had been painted with gloss paint Larry noticed that they could now see names engraved there by previous members.

"On the Presentation Day we kept the mural wrapped up in plastic," Larry said. "At the end of the ceremony the new mural was unveiled."

"Everyone thought we were just hiding the ugly lockers, then they saw what we had done!"

"In fact we were able to take some of the older members and show them: Look! Here is your original locker with your name still engraved there."

The Commissioner later commented that he was very impressed with Blackheath's ingenuity and the links they had established with the local community in creating the mural.

Lorraine Norley, pictured here standing in front of the lockers, has been active in the brigade since 1978.



Flood waters in Kempsey, May 2009

# NORTH HIT WITH FLOODS AGAIN!

By Keiran Smith, NSW RFS Internal Communications

While the 2008/09 fire season may have been relatively benign, for the members of Region North a series of major flood events on the Mid North Coast in the first half of the year once again tested the versatility and resolve of Service members.



The Minister for Emergency Services, Steve Whan, flying over Kempsey in May 2009

Large areas of the northern coastline were affected by floods in February and again in late March and April. In fact, due to heavy and persistent rain falls throughout the early part of 2009, most of the major regional centres across the NSW north coast had already been subject to flood warnings.

Worse was yet to come, however, with the Bureau of Meteorology forecasting a severe low pressure cell developing across northern NSW and Southern Queensland in May. With the forecasts indicating severe rain and wind for the Tweed Local Government Area, the SES placed a request with the NSW RFS on Wednesday 20 May that brigades be placed on standby for rapid deployment in the following days.

Within a day the Service had identified 160 units able to respond at short notice into storm and flood-affected areas. All brigades from Tweed in

the north to Port Macquarie in the south were placed on a heightened level of standby, with immediate response units pre-identified to ensure timely action when required.

NSW RFS Liaison Officers were also deployed to SES HQ at Wollongong and various SES command posts across the north coast to assist in coordination between the agencies and ensure resources were sent where most needed.

By Friday 22 May, Tweed, Byron, Ballina, Lismore, Kyogle, Richmond Valley and Clarence Valley areas were all subject to natural disaster declarations.

This day also saw the largest response by NSW RFS units in Region North with over 230 personnel in 76 appliances working in partnership with the local SES units to assist in clearing scores of felled trees and building sandbag retaining walls to protect assets from flooding.

With the high clearance of their Cat 1 and Cat 2 appliances, NSW RFS personnel also engaged in rescue operations of people on isolated properties as well as delivering food, fresh water and medical supplies to people cut off by the rising water levels.

During both the emergency phase of the operation, NSW RFS personnel undertook significant pumping operations to remove localised water from the affected townships.

The town of Maclean was saved from the flood waters by an incredible effort by four brigades and five tankers pumping water 24 hours a day for three days.

Gulmarrad, Ashby, Woombah and Broomshead Brigades from Clarence Valley used their five Cat 1 appliances and four portable pumps to move an estimated 98 million litres of water back into the Clarence River. While the river swelled dangerously and the levy threatened to break or overtop, NSW RFS crews, pumps and trucks worked flat out for 72 hours right next to the levy bank of the river.

"It was an eerie feeling to be there knowing there was just an earth wall between us and millions and millions of gallons of water," Clarence Valley Operations Officer Brian Williams said.

"We'd see water bubbling out of the grass wall of the levy and there were concerns that the levy would breach. I thought to myself: 'If this breaches, we are gone.'"

The other concern was that the levy would 'overtop'. In Maclean where NSW RFS firefighters were working, the water level reached 15 centimetres from its limit.

Crews worked 12 hour shifts and with their pumps running continuously, crews spent their time topping up oil levels, keeping all the strainers cleaned and removing grass and weed to keep the pumps from overheating.

"The trucks had to be running the whole time as well," said Brian, "We'd drop one of the trucks off the line and race down to the nearest service station which was still open and fill her up. Then we'd take another truck

**"We'd see water bubbling out of the grass wall of the levy and there were concerns that the levy would breach..."**

down. Everyone had to work as part of a really good team."

Crews manning the trucks at Maclean were a mix of both experienced and younger members.

"All the schools were closed so we got the high school students – and we had them working," Brian said. "After this experience the boys reckon they could pump anything anywhere."

"These are the kind of exercises where newer guys grow so much. The knowledge they will pick up from this operation is invaluable. They will feel so confident at the pumps. I know that in the upcoming fire season, under pressure, these guys will be brilliant!" (See Andrew Bridge's story, next page)

After their 72 hour stint at the pumps the NSW RFS crews were relieved by crews from Grafton City and Glenugie.

With the storm cell continuing to move south, on 23 May the State Government extended the disaster declarations to cover Kempsey, Coffs Harbour, Bellingen, Nambucca and the Port Macquarie-Hastings areas. By Saturday, one fatality had been recorded and more than 21,500 people were isolated,

including 16,000 in Grafton where flood waters were expected to isolate the town for a further two days. Meanwhile, in Kempsey the town was inundated by two metres of water.

Even the SES headquarters in Coffs Harbour required protection from rising water levels, with NSW RFS personnel dispatched to assist in building protective retaining walls from sandbags. Yorklea FCC in the Richmond Valley did not fare as well, with the floor of the main office submerged in two inches of water.

Rain began to ease over the subsequent days, allowing recovery efforts to begin in the affected areas, after responding to more than 3,400 calls for assistance during the emergency.

Overall, the Service's contribution during the 12-day operation included 1,041 NSW RFS personnel and 338 appliances, which again reinforced the versatility and commitment of its members in providing relief during any emergency.

This was also recognised by the Minister for Emergency Services Steve Whan, who visited the affected areas on several occasions to inspect damage and thank emergency services personnel for their efforts.

Through a letter to all volunteers and staff, the Minister acknowledged the critical contribution of NSW RFS personnel across the Region, many of whom had responded to the call during flooding incidents earlier in the year.



## The Hon Steve Whan MP

Minister for Emergency Services  
Minister for Small Business  
Member for Monaro

1 July 2009

Dear RFS Volunteers and Staff

On behalf of the New South Wales Government and community, I wish to sincerely thank the volunteers and staff of the Rural Fire Service in the State's north for your hard work, dedication and commitment during May's devastating floods in Northern NSW.

This was a natural disaster of great magnitude. The RFS played a critical role in supporting the State Emergency Service, working side by side to assist flooded communities. Overall, the emergency services responded to more than 3,400 calls for help across the region.

I visited the area several times during this flood response operation, meeting many of our emergency services personnel as they worked incredibly hard in atrocious conditions, and observing first-hand the professional manner in which they carried out their responsibilities.

Of course, the May floods followed flooding over large areas of the Mid-North Coast in February and again in March/April, so many of you from this region have been called on repeatedly this year. This sustained effort makes your good spirit and hard work all the more impressive.

You can be assured that both the Rees Government and the community hold your work and dedication in the highest esteem and genuinely appreciate your valuable time, enormous efforts and commitment to helping those in need.

Thank you

STEVE WHAN  
Minister for Emergency Services

Level 11, 52 Phillip Street,  
Sydney NSW 2000  
Phone: 02 9228 3800  
Fax: 02 9228 3804  
Email: office@whan.minister.nsw.gov.au

Parliament House,  
Room 923, Macquarie Street  
Sydney NSW 2000  
Phone: 02 9230 2291  
Fax: 02 9230 2086



## Andrew's Story

*"This is my son Andrew Bridge who is a member of the Ashby Rural Fire Brigade. Andrew was unable to attend school for a week in May when the Clarence River was in flood. Andrew willingly travelled across the flooded river in the SES Rescue Boat each day to Maclean, where he assisted members of the Ashby Brigade and other local brigades in pumping water out of the Maclean CBD.*

*As the water receded he again assisted in washing flood mud off local arterial roads and in the village of Harwood.*

*Andrew has been a member of the Ashby Brigade for the past two years and has recently been accredited as an Advanced Firefighter."*

*Peter Bridge, Deputy Captain, Ashby Brigade*

Photo courtesy of The Daily Examiner

# HEAT AT THE HALFWAY ROADHOUSE

Story and photos by Steve Brown,  
Operations Officer, Hunter Valley Team

For the past 50 years crews from all over the State called to assist with bush fires 'up the Putty' have made a stop for fuel or snacks at the legendary Halfway Roadhouse at Putty, on the way to Singleton from Sydney.

A Triple Zero (000) call at 1920hrs Saturday 1 August 2009 marked the end of an era as crews from Putty, Howes Valley, Broke, Bulga, Darlington and Edinglassie Brigades were responded to a structure alight.

## Saturday 1st August 2009

### 1920hrs:

Hunter Valley Duty Officer receives Triple Zero (000) call for a structure fire, Halfway Roadhouse, Putty Rd, Garland Valley. The Duty Officer advises FCO 5 and Group East who were in attendance at a hazard reduction (HR) burn just south of the Halfway Roadhouse on the Putty Rd. Putty 1 and 7, Howes Valley 7a and 7b responded from the HR burn to the Halfway Roadhouse in addition to Broke 1, Bulga 1 and Darlington 1A and 1B.

### 1936hrs:

The first crews to arrive at the Halfway Roadhouse found the left hand section of the building (the living area) fully involved in fire. Sr Deputy Captain Mark Halton from Howes Valley Brigade was already on the scene. He advised that he had already completed one quick external search of the building with no sign of any occupants. Crews then conducted a full external search of the building and surrounding outbuildings. At this stage, the fire had moved into the centre of the building in the kitchen and front room of the business section of the premises.

Crews planned to isolate the power supply only to discover that the wires had already been burnt away from power pole leading into the main power board.

Crews then checked the rear of the building. They found a small roller door that was locked. At that moment a large flash and bang was seen and heard in the kitchen area. Crews found another locked sliding door in the restaurant area. Smoke and heat had already started to affect the glass in the sliding door.

### 1944 hrs:

The kitchen and front business entry were now fully involved in fire and at the front of the building the fuel bowzers were starting to be affected by radiant heat. New crews arrived and



got to work cooling the petrol bowzers and assisting with the external attack on the building.

### 1955hrs:

Additional Cat 1s arrived on scene and assisted with water supply and manpower.

### 2033 hrs:

Darlington 1B (4 x CABA operators) arrived on scene and conducted an internal search.

### 2200 hrs:

Additional CABA crews from Edinglassie Brigade arrived on scene.

## Sunday 2 August 2009

### 0051 hrs:

Scene declared safe and handed over to NSW Police.

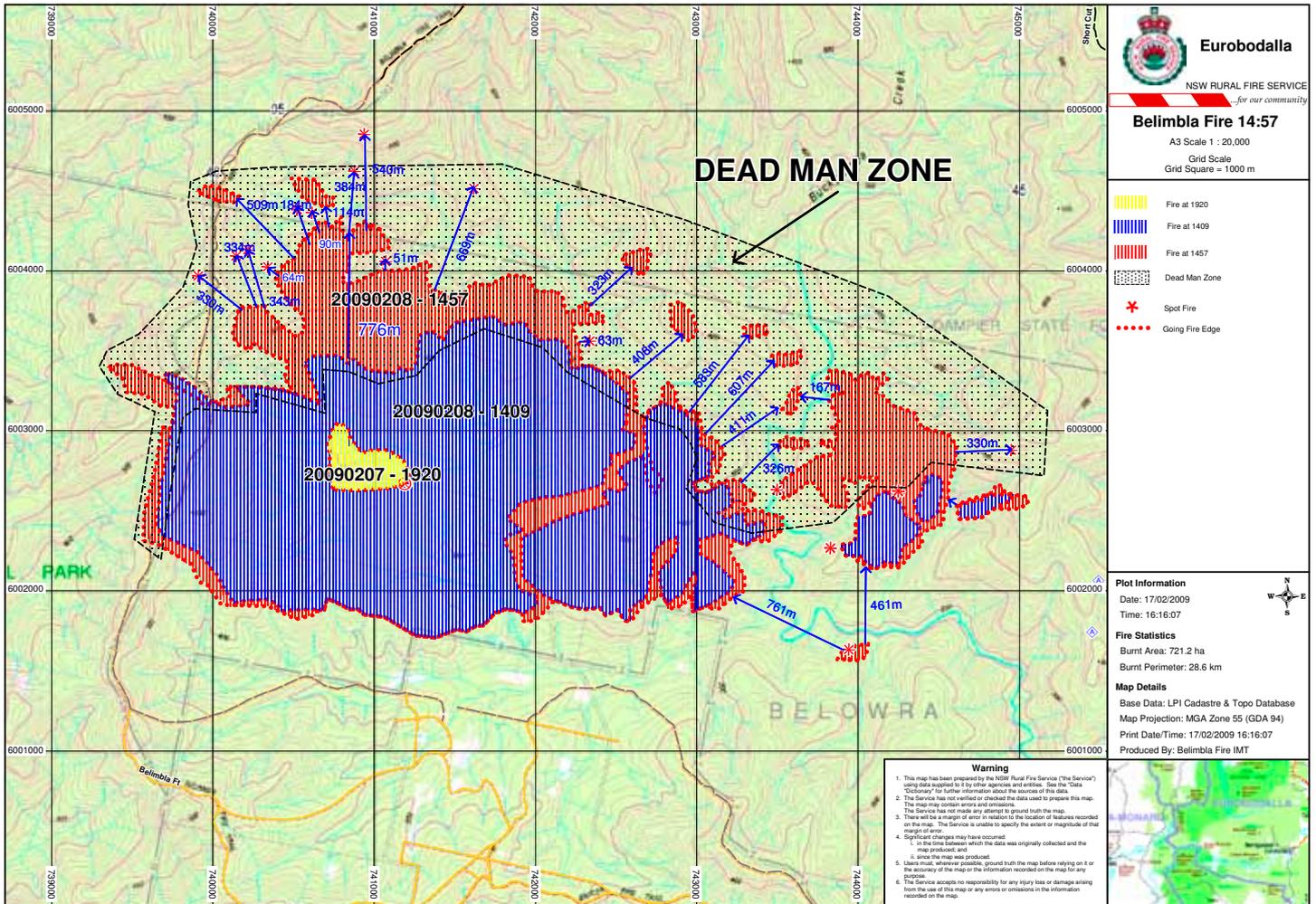
PS: For those who know the Halfway Roadhouse and remember the white cockatoo in a cage near the petrol bowzers. The bird escaped unharmed.



CABA crews from Darlington and Edinglassie brigades douse the remaining hotspots inside the Halfway Roadhouse

# THE DEAD MAN ZONE AT THE 2009 BELIMBLA FIRE

By Andrew Stark, Acting Manager, Region South



"This area would not normally be considered to be dangerous but the line scans show that it would have been fatal for any crews in the area."

The change in direction and behaviour of bush fires under the influence of sudden and strong wind changes has led to a number of tragedies, with firefighters overrun by fire. This dangerous phenomenon is known as being caught in the Dead Man Zone. Earlier this year due to a fluke in timing, firefighters captured the Dead Man Zone on two line scans.

The Dead Man Zone was originally identified in published research in 2001, conducted by Phil Cheney, Jim Gould and Lachie McCaw. Since then it has become a critical area of bush firefighter safety and has become a key factor in all levels of NSW Rural Fire Service training. The Bush Firefighter (BF) Manual (NSW RFS, 2005, p52) describes the Dead Man

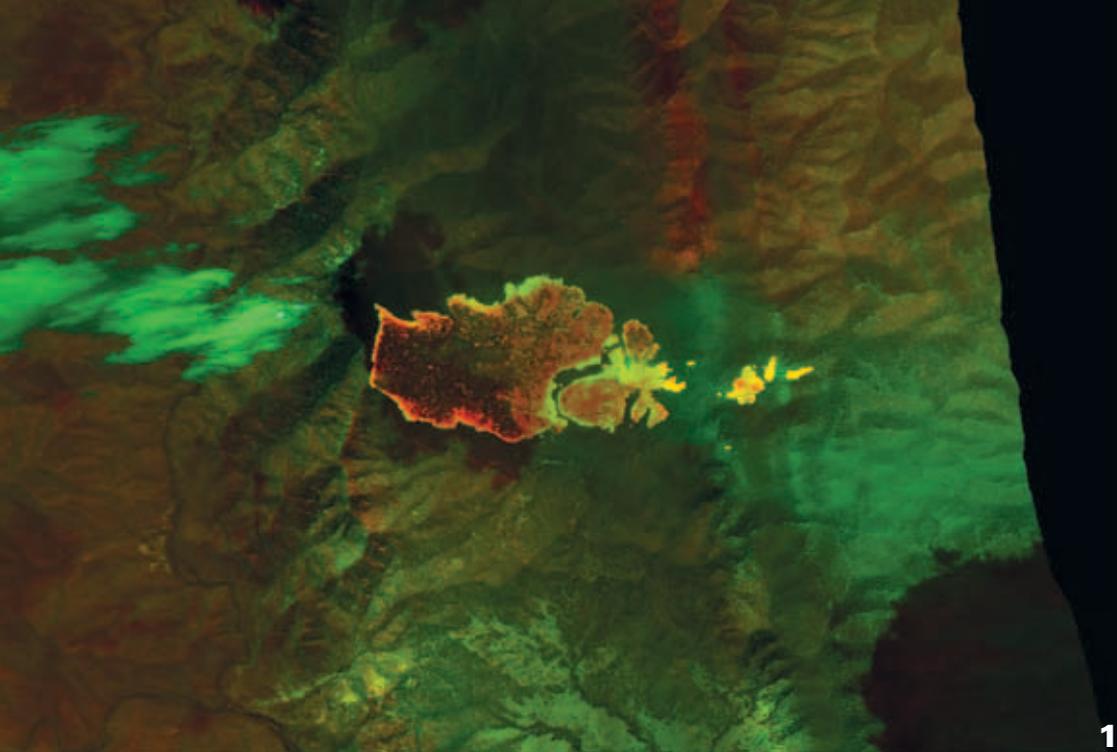
Zone as, 'Any area within about 5 minutes of possible overrun from a fire. If you're operating in this area you need to be able to see or be warned immediately about any change in fire behaviour, have a refuge available close by, and go to it straight away if your safety is threatened. Also refer to page 6 of the Firefighters' Pocket Book (All Editions)

This dangerous phenomenon is often observed by firefighters, but this year it was caught in line scanning images at the Belimbla fire. Due to a fluke in timing and location, the NSW Rural Fire Service Line Scanning and reconnaissance aircraft made two passes over the Belimbla fire at critical times just prior to and immediately after a significant wind change.

The subsequent images and analysis shows clearly the rates of fire spread and associated fire behaviour including spotting, that makes being in the Dead Man Zone so dangerous.

## The Belimbla fire

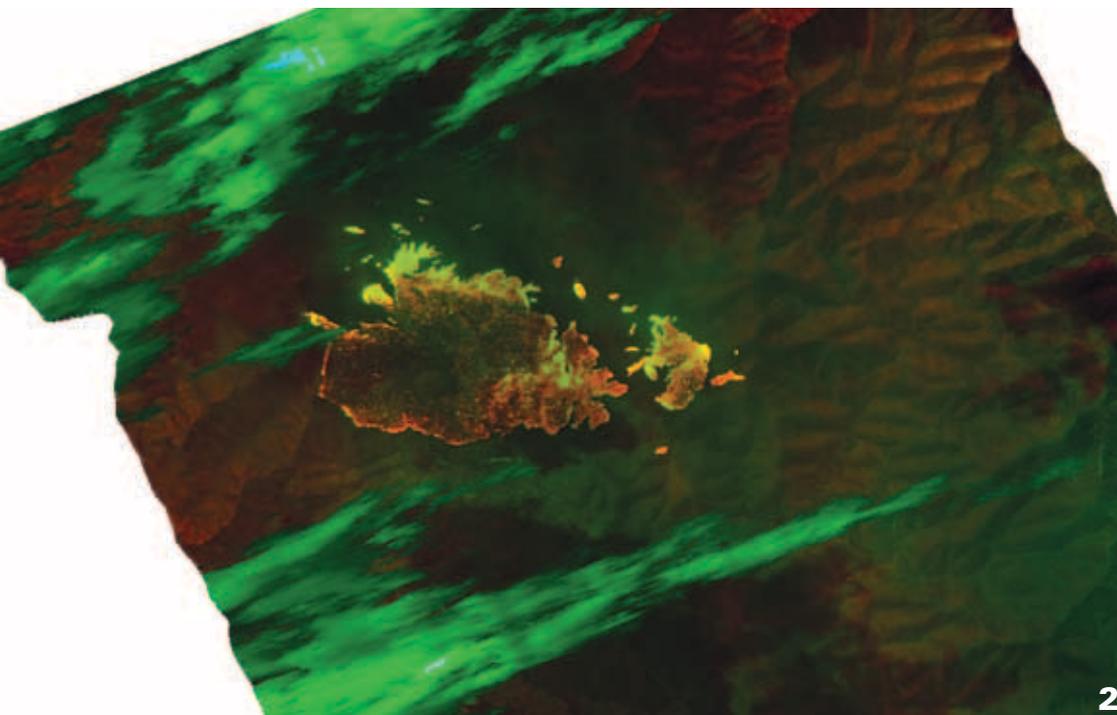
The Belimbla fire was first detected at last light on 7 February, 2009 by a Fire Tower operator. The fire appeared to be in an area that had received a number of lightning strikes during the evening of 5 February. Despite air reconnaissance and vigilance from the surrounding fire towers, no smoke or fire had been detected. NSW RFS crews were deployed to private property south of the fire and preparations were made overnight to deploy heavy plant



**1. Line Scan image taken at 1409hrs:** Spotting was occurring to the east up to 1500 metres in front of the main fire. Under the westerly influence, spotting had been generally in at south-east direction from 90 degrees to 120 degrees.

**2. Line Scan image taken at 1457hrs:** Following the southerly change spotting was observed east to north-west from 90 degrees back to 300 degrees. The most significant spotting occurred in the north-west area of the fire that crossed the Belimbla Fire Trail in a number of places.

The Dead Man Zone exists all around any fire. The second image shows how the fire has rapidly run into that zone around the northern side of the fire due to the sudden southerly wind change.



This area would not normally be considered to be dangerous in wind changes, but on this occasion the line scans show that it would have been fatal for any crews in the area.

While there were stronger winds with the wind change, including gusts up to 40kph, no other weather changes occurred with this wind change; even relative humidity remained the same for another three hours.

This rapid growth of this fire caused the S44 in Bega Valley to be extended to include the local government area of Eurobodalla, but this fire was contained during the next couple of days.

to commence work on the southern and eastern control lines. A section 44 IMT was already in place at the Bega Valley FCC, managing the Jingera Rock Fire and other incidents.

An aircraft was sent to the area and it was mapped at 14.4ha and going, with the pilot reporting very active fire on all edges. By 1409hrs, the time of the first line scan this fire had already increased to 499.4ha under the influence of a strong westerly weather system. Spotting was occurring to the east up to 1500 metres in front of the main fire. This fire activity can be seen in the 1409hrs line scan image. It is important to note that the Fire Danger Index (FDI) was below 20 throughout the morning and up until the wind change.

### The unique data from a second line scan within the hour

The line scan aircraft then continued south to the Jingera Rock area to complete its tasking in this area. The aircraft then flew north and conducted another pass over the Belimbla fire as it returned to Sydney.

At any time an IMT is able to access two line scan images, over a short period, to make a precise analysis of fire spread, it is a fantastic resource. The unique data obtained, with the two images taken on the 8 February only 48 minutes apart and the significant southerly wind change, allow us to observe and measure the fire behaviour experienced with wind

changes and visually see the Dead Man Zone.

### How did the fire change in those 48 minutes

This fire increased in size by 44.4 percent, from 499.9ha to 721.2ha. Spotting activity increased dramatically in amount and direction. Under the westerly influence, spotting had been generally in a south-east direction from 90 degrees to 120 degrees. Following the southerly change, however, spotting was observed east to north-west from 90 degrees back to 300 degrees. The most significant spotting occurred in the north-west area of the fire that crossed the Belimbla Fire Trail in a number of places.

### Don't get caught in the Dead Man Zone

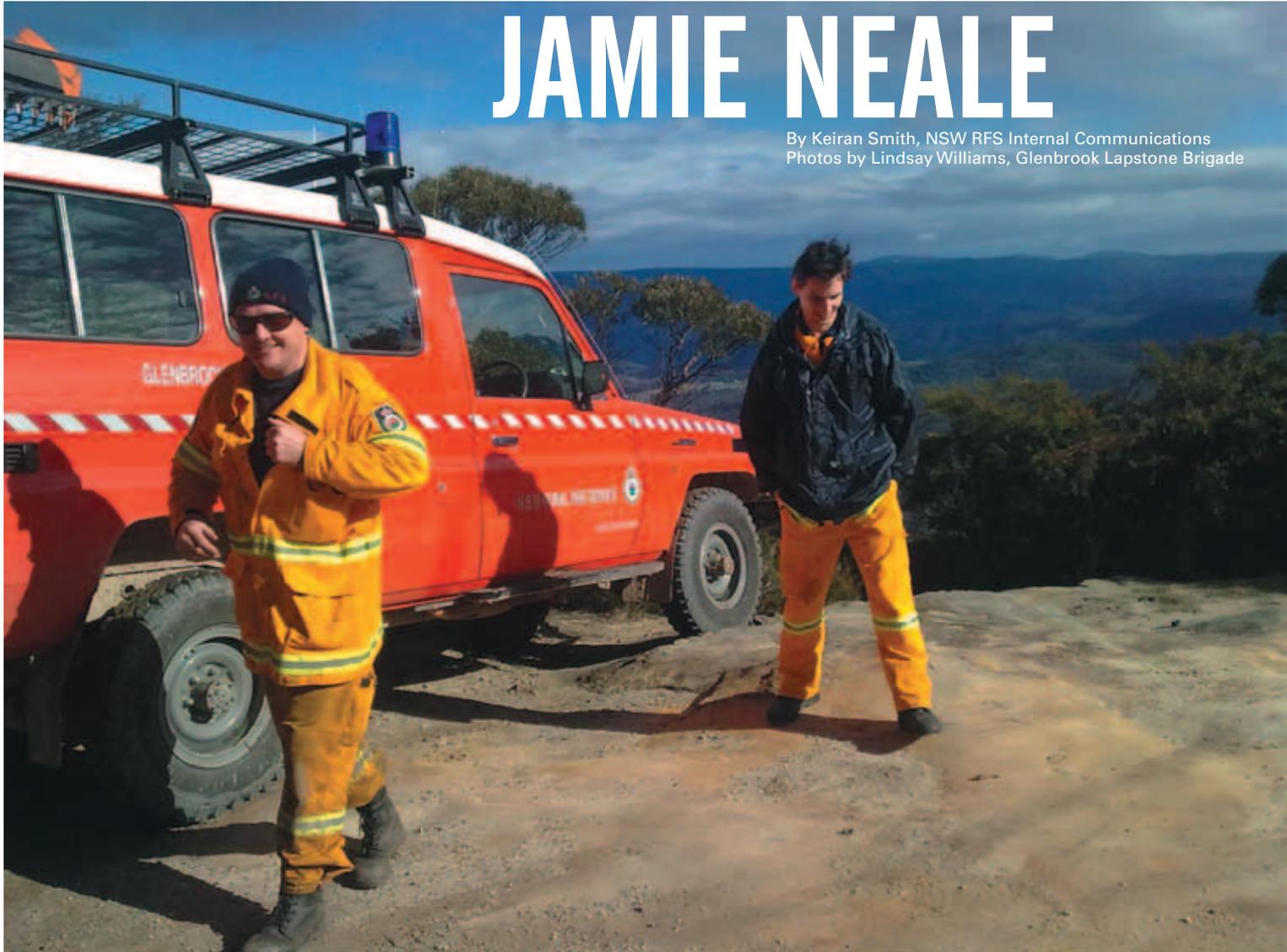
The images of this fire clearly show the Dead Man Zone. All firefighters must be aware that any time they are on a flank and indeed the heel of a fire, that wind changes even under moderate to high FDI's may have significant effect on both the direction and intensity of the fire.

It is essential that crews use their LACES and ensure that when operating near any fire, especially in rugged terrain with limited escape and refuge options, that they should remain aware of the possibility of being caught in the 'Dead Man Zone' and take action to avoid it.

# THE MANPOWER BEHIND THE SEARCH FOR

# JAMIE NEALE

By Keiran Smith, NSW RFS Internal Communications  
Photos by Lindsay Williams, Glenbrook Lapstone Brigade



**It was a story of survival that amazed the world. For 12 days, media crews from around the globe converged on the Blue Mountains to cover the search for Jamie Neale, a 19-year-old English backpacker, who had gone missing on a walk through the Jamison Valley to Ruined Castle on July 3 2009.**

At the heart of the operation were the 200 NSW RFS members who provided the majority of manpower behind the extensive search operation. Police Rescue coordinated the search and called on the help of SES, National Parks and the NSW RFS. NSW RFS volunteers came from 22 brigades across the entire Blue Mountains zone, from Lapstone to Mt Tomah, to search the 100 square kilometre area of the Jamieson Valley.

The conditions for all those involved in the search were certainly treacherous with the search area strewn with steep, slippery cliffs and thick vegetation. The heavy rain, particularly in the opening

days of the search, hampered progress.

"I have never searched for anyone in such steep conditions," said Glen Benson, NSW RFS staff member and Senior Deputy Captain at the Lawson Brigade. Mr Benson searched on the south side of Mt Solitary on Day 11 of the operation.

"It was very cold, especially on the exposed ridge tops and there were no formed tracks," he said, "Four members of our group had to turn back because the terrain was just so steep."

Unfortunately, not all the emergency services personnel returned unscathed. As a result

of the arduous work, two NSW RFS members had to be winched out of bushland.

Mr Benson said that in some areas the canopy was so dense that although they could hear the helicopters, they couldn't see them. When Mr Benson's crew emerged from the bush after 12 hours of heavy effort, Jamie's father was there to greet them.

"He personally thanked everyone in our crew," Mr Benson said, "Of course, we felt rotten because we hadn't found the boy."

As cold days and colder nights passed, it seemed to almost all the hundreds of people involved in the search and the

**TOP AND BELOW:**  
Sunday 12 July 2009:  
A RAFT walking party working  
back from Mt Solitary around the  
Western side of Ruined Castle.



Photo courtesy of Channel 9, 60 Minutes.  
Note the NSW RFS Trauma Teddy in Jamie Neale's hands.

millions following the daily news that hope of survival was fading as quickly as the winter temperatures.

But incredibly 12 days after he first went missing, with his saddened father, Richard Cass, about to board a plane to return home to the UK, Mr Neale emerged from the bush - near Narrow Neck plateau - 15 kilometres from Katoomba. Despite close to freezing temperatures at night and his only sustenance consisting of local berries and seeds, Jamie was relatively unharmed, if not a couple of kilograms lighter.

Blue Mountains District Manager, Tom Shirt who coordinated the NSW RFS search teams during the operation was one of the first to hear that Mr Neale had been found.

"Police command approached me for a NSW RFS four-wheel-drive vehicle to reach the point where the missing man had been found alive," he said.

Mr Shirt said NSW RFS members in the Blue Mountains were well versed in undertaking search and rescue operations, undertaking on average 12 such operations each year.

"It's a function the Rural Fire Service regularly undertakes and our members are very familiar with the bush conditions in the Blue Mountains," he said.

"Unfortunately, it often ends in the retrieval of a body but this time it was a far happier ending for all concerned and a source of a great deal of satisfaction for the members who had given up their own time to participate in the operation."

After his discharge from hospital Mr Neale and his father met with many of the emergency service personnel to thank them for their dedication and hard work during the search operation.

In a good piece of, inadvertent, national publicity for the Service, a NSW RFS trauma teddy given to Mr Neale during the evening featured briefly during the 60 Minutes story into his survival tale. (See photo above)

During the program, Mr Neale said he had survived by eating seeds, leaves and berries as he moved through the inhospitable terrain, sleeping rough under logs and trees, before finally emerging from some of the most rugged and inhospitable terrain in the country almost two weeks later.

Emergency Services Minister Steve Whan thanked the NSW RFS for their swift response to the call for assistance.

"This search was a tremendous effort in harsh terrain and adverse weather conditions by so many of our volunteers, who generously gave their time to help find this young man," Mr Whan said.

"I want to thank each of them for their hard work on this operation and also their employers who allowed them to leave their workplaces to join the search.

"This is a wonderful outcome for Mr Neale and his family and a great relief to all the members of our emergency services who had been mobilised on the search operation."



# RECOMMENDATIONS FROM THE VICTORIAN BUSHFIRES ROYAL COMMISSION



**From the Australasian  
Fire and Emergency Service  
Authorities Council (AFAC)**



Australasian Fire and Emergency  
Service Authorities Council

**Tuesday 18 August 2009**

## **Interim Report Recommendations**

On August 17 the Royal Commission into Bushfires handed down its interim report to the Victorian Government. While there were a range of recommendations made concerning the operation of Victorian agencies, there were some key recommendations made that will have implications for all fire and emergency agencies around Australia.

## **Advice to the Community**

Significant changes were recommended to the delivery and wording of advice and warnings given to the community. This included community education material that highlighted:

- Leaving as the safest option
- Not all homes are defensible
- If a home can not be defended you should leave
- The risk of defending includes death
- There could be psychological impacts of staying to defend a property

**BELOW:** Warren Rees, CFA volunteer, Strathewen is staying put. Mr Rees is living in a temporary shed after his property was razed on Black Saturday.

Photo published courtesy of HarperCollinsPublishers from Black Saturday: Stories of love, loss and courage from the Victorian bush fires, edited by John McGourty. This book is reviewed by the Bush Fire Bulletin on page 51.



The Commission has also recommended a range of measures the CFA should take to be able to provide assessments of the defendability of individual houses to their owners.

### Fire Danger Ratings

Changes to the fire danger rating system have also been recommended to include ratings beyond the current upper limit of extreme and to develop a severity scale for use in bush fire warnings. It is recommended fire danger indices should be published by the Bureau of Meteorology.

An explanation of the new scale of forecasts, warnings and community warnings can be seen on pages 14-15.

### Warnings

During bush fires, the Commission has recommended warnings are founded on the principle of maximising the potential to save human lives. This includes improved information on:

- the severity
- location
- predicted direction
- likely time of impact of bush fires on specific communities and locations.

The warnings should use the principles set out in Commonwealth policy paper 'Emergency warnings – Choosing your words' (2008). A two-tier system of Bushfire Information and Bushfire Warnings is recommended with SEWS used before all community warnings.

The Commission has also indicated that Incident Controllers should be able to give advice for people to relocate as part of official warnings.

### Community Refuges

The use of community refuges has also been recommended as has Victorian agencies prioritising where possible resources to assist in the defence of designated community fire refuges and neighbourhood safer places at times when they are likely to be in use.

Many of the recommendations have matched the projects announced in July by the Victorian Premier John Brumby and work is already underway to implement a number of these recommendations. The Victorian Government will have provided a formal response to the Commission by the end of August and is expected to make major announcements on changes to fire safety strategies in Victoria on 1 October 2009 - the start of the fire season.

The full report can be viewed on the Royal Commission website: <http://www.royal.commission.vic.gov.au>



## The response from NSW RFS

In the first three weeks following the Victorian Bushfires Royal Commission Interim Report the NSW RFS has been working hard to follow up on the recommendations.

Actions taken by the NSW RFS include:

- Developing a web-based self-assessment tool to advise residents on bush fire risk and the defendability of their properties.
- Developing a criteria for identifying 'Safer Places' in the community.
- Prepare. Act. Survive: The preparation of a new media campaign explaining the key changes to the Fire Danger Ratings (FDR) and the new alert levels.
- Discussions held with the State Emergency Operations Controller (NSW Police Force); Department of Community Services; NSW Fire Brigades and Emergency Management NSW with regard to:
  - Dealing with the potential impact of an increased number of people choosing to leave early and/or evacuations;
  - Communicating with vulnerable communities about relocation plans together with preparation; and
  - Implementation of the 'Safer Places' concept.
- NSW RFS 1800 Bush Fire Information Line including an overflow option.
- Developing protocols and systems within NSW RFS State Operations to support community warnings.
- Embedding warning and triggers into Incident Action Plans.
- Introducing a Warning Cell into the State Operations structure.
- Participating in the introduction of the national emergency warning system (NEWS), telephony based warning system.
- Reviewing and refreshing educational materials to align with recommendations

I am proud to say that two of our senior executive officers are playing major roles in the response to the Victorian Bushfires Royal Commission Interim Report.

Assistant Commissioner Rob Rogers is representing NSW on the Bushfire Warnings Task Force.

Assistant Commissioner Dominic Lane has been seconded to the Victoria's Country Fire Authority (CFA) to act as Executive Manager Community Infrastructure working on a number of major projects including: Neighbourhood Safer Places; Advice to Property Owners; on-line self assessment tool and vegetation management. His section is also providing support in reviewing current publications, as well as developing new ones.

No doubt the valuable work Dominic Lane is undertaking in Victoria will have a flow-on effect to the NSW RFS and more broadly the NSW community.

The Black Saturday bush fires will resound in our minds and hearts for many years to come. At this time, as we prepare for the 2009-10 bush fire season, rest assured that the RFS is making every effort to learn the tragic lessons of February 7, 2009 and take effective timely action to protect the community.

**Shane Fitzsimmons, AFSM  
NSW RFS Commissioner**



# CHANGES TO THE FIRE DANGER RATINGS AND PUBLIC WARNINGS

On 10 September 2009 Emergency Services Minister Steve Whan and NSW RFS Commissioner Shane Fitzsimmons announced significant changes to Fire Danger Ratings and introduced new bush fire alert levels for use this bush fire season.

These nationally-agreed changes were introduced following extensive consultation between the NSW RFS, other NSW agencies and interstate counterparts in the wake of the Victorian bush fires and the recommendations contained in the Interim Report of the Victorian Bushfires Royal Commission.

A national position on changes to the Fire Danger Ratings and new bush fire alert levels have been agreed which will be introduced this Summer.

One of the most significant changes is the introduction of a new Fire Danger Rating system as seen above. This is a significant change for the NSW RFS and the NSW community. It will allow us to deliver clearer information, advice and warnings to the public.

The new 'Catastrophic' rating will apply on days when the Fire Danger Index is above 100. This new rating has been added in recognition that these conditions - like those we saw in Victoria - present a significantly greater level of danger to the community. It is on these days, historically, that fires have caused significant destruction.

During these conditions, advice to the community from the NSW RFS will be very clear. On these days, there is the potential for significant loss of life and property and even homes which are well-prepared and specially designed to

withstand bush fires may be destroyed. The safest course of action for people is to leave early.

The 'Extreme' fire danger rating indicates a Fire Danger index between 75 and 100. Fire will be uncontrollable, unpredictable and fast moving with flames in the tree tops and higher than roof tops. Thousands of embers will be blown into and around homes causing other fires to start and spread quickly up to 6km ahead of the main fire.

The 'Severe' rating will apply on days when the Fire Danger Index is between 50 and 75. Fire will be difficult to control, unpredictable and fast moving with flame that may reach the tops of the trees and be higher than roof tops. Expect embers to be blown into and around homes causing other fires to start and spread up to 4km ahead of the main fire.

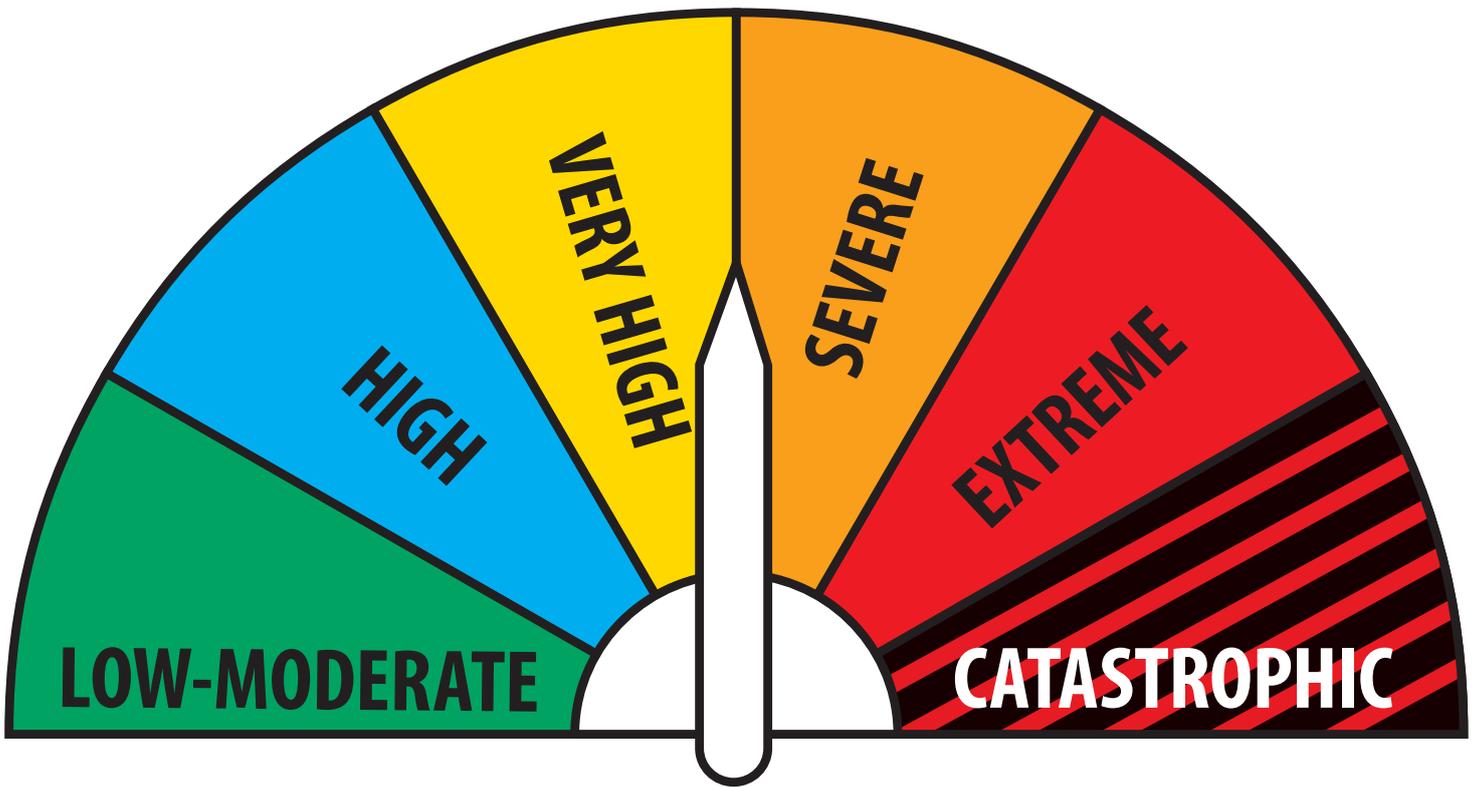
## Warnings to the Community

These new Fire Danger Ratings will also lead to specific alerts and advice for the public, based on the time of impact and the fire's potential. These alerts will take the following form:

**Advice** - a fire has started – there is no immediate danger; general information to keep up to date with developments.

**Watch and Act** - represents a heightened level of threat. Conditions are changing; you need to start taking action now to protect you and your family.

**Emergency Warning** - you are in danger and need to take action immediately. You will be impacted by fire. This message will usually be preceded by an emergency warning signal ( a siren sound played on the radio or TV).



## PREPARE. ACT. SURVIVE.

The launch of the Prepare. Act. Survive public information campaign marked the start of the NSW bush fire season. NSW Emergency Services Minister, Steve Whan and the NSW RFS Commissioner Shane Fitzsimmons announced the hard-hitting statewide campaign at NSW RFS State Headquarters on 1 October, 2009.

“This Summer is shaping up as one of our worst in some years and people right across NSW should be under no illusion that the potential for dangerous bush fires is very real,” Mr Whan said.

“We have already experienced significant fires in NSW in recent weeks, with many areas beginning their bush fire season early.

“We have all seen how destructive fires can be and that’s why people should be taking steps now to Prepare. Act. Survive.”

Mr Whan said the new campaign was strategically targeted at people living in or travelling through bush fire prone areas.

“This campaign will tell people about the new national Severe, Extreme and Catastrophic Fire Danger Ratings and new bush fire alert messages to help them make safe and informed decisions in the event of a fire,” he said.

“It also highlights the need for residents in bush fire prone areas to prepare a Bush Fire Survival Plan.

“To help residents assess their home’s bush fire risk, a new web-based program is now available on the NSW RFS website.”

“With the grim prospect of a long, hot and challenging summer ahead, the State Government has strengthened the resources of the Rural Fire Service, with a record budget of more than \$216 million this year,” Mr Whan said.

NSW Rural Fire Service Commissioner Shane Fitzsimmons urged residents to do everything possible to prepare their homes and families for the Summer.

“With about 90 percent of NSW in drought or listed as marginal and record temperatures across the State in August, I have real concerns for this fire season,” Commissioner Fitzsimmons said.

“The Bureau of Meteorology is indicating that for most of NSW, there is a 75 percent chance of above average temperatures and as high as 80 percent on the southern border.

“That’s why people should be taking the time now to prepare not only their homes, but also themselves, to give themselves the best chance of surviving a fire,” Commissioner Fitzsimmons said.

More information on how to **Prepare. Act. Survive** is available on the NSW RFS website [www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au) or people wanting further help and advice can call the NSW RFS directly on 1800 NSW RFS (1800 679 737).

# INTERNATIONAL WILDFIRE MANAGEMENT CONFERENCE: FACING OUR FUTURE



Wildfire managers came from around the world and around Australia to participate in the International Wildfire Management Conference and Expo held at Darling Harbour in late June 2009.

Held on 18-20 June 2009 the conference was jointly sponsored by the NSW Rural Fire Service, the Rural Fire Service Association (RFSA) and in association with the International Association of Fire Chiefs (IAFC). Thirty-nine speakers and 550 participants came from Botswana, Turkey, USA, UK, New Zealand, India, Korea, South Africa and every State in Australia.

The conference and expo brought together experts in wildfire management covering concerns about extreme weather to community education programs. The diversity and quality of the presentations impressed participants.

Chair of the organising committee, Assistant Commissioner Keith Harrap said the conference was a great achievement for the NSW RFS.

"The support from the Commissioner Shane

Fitzsimmons and president of the RFSA, Brian McKinlay, were invaluable to the success of the event."

"The feedback would indicate that everyone attended felt it was worthwhile. The speakers and exhibitors felt likewise. The whole atmosphere was one of camaraderie."

Mr Harrap is a member of IAFC and a Director of the International Association of Wildland Fire. He is also an international representative on the IAFC Wildland Fire Policy Committee.

Since 2004 Mr Harrap has presented papers on the work of the NSW RFS every March at the International Association of Fire Chiefs in the US.

He believes Australia and the NSW RFS has a significant contribution to make. Mr Harrap has long been enthusiastic about holding an international conference in Australia.

"As a Service we are doing work in numerous countries around the world and so are the other States in Australia. In many respects we lead on the world stage."

Mr Harrap said that NSW's approach to development control was right up there with the best. He said Australia also excelled at learning from experiences such as the tragic events in Victoria earlier this year.

"Around the world I meet people who think Australia is obviously doing something right."

Australian agencies, and in particular the NSW RFS, had a chance to showcase their work and methods at the conference. Case studies of highly successful community education programs through to innovative council policies, studies of hazard reduction techniques and new technologies available to fire managers were discussed. Podcasts of interviews with several speakers at the conference are available on: <http://www.rfs.nsw.gov.au/podcasts>

The spectre of the Black Saturday fires was certainly present at the Conference and many gave mention of it in their talks. Head of the Australasian Fire and Emergency Service Authorities Council (AFAC), Naomi Brown, gave a summary of the concerns of the Victorian Bushfires Royal Commission.

Director of Emergency Management, Department of Human Services Victoria, Craig Lapsley spoke about recovery systems in the aftermath of the Black Saturday fires. Other professionals shared technology breakthroughs in GIS and spatial technologies used in the victim identification process.

The keynote speaker for the conference was author, scientist and 2007 Australian of the Year, Tim Flannery whose speech was entitled: Facing our Climatic Future - Thoughts Regarding Extreme Events. An excerpt of his talk is included on page 22-23. "Australia," he said, "is the most flammable continent on earth."

Friday night was the time to relax with the Conference Dinner and the String Divas and The Buz Band performing for the guests. Keith Harrap said it was one of the highlights of the conference.

All credit goes to the organising committee for putting on an event without a hitch. Thanks to Keith Harrap, Steve Raymond RFSA, Allan Holly, RFSA, Janine Clarke, Murray Hillan and the team at Tour Hosts headed up by Sarah Foda.



An expo held in a nearby hall proved a popular aspect of the event





Parliamentary Secretary for Emergency Services, Phil Koperberg, officially opened the conference on behalf of the NSW Government



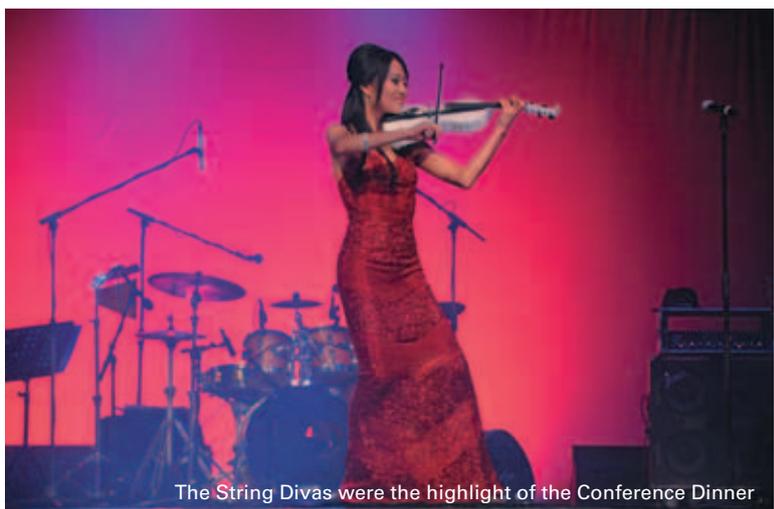
An indigenous ceremony launched the conference



Lark McDonald, Mission-Centred Solutions, USA spoke about Developing the Next Fire Leaders



Lemmi Briedis, Wamboin Brigade, spoke about the successful community engagement program at her brigade



The String Divas were the highlight of the Conference Dinner



**What did you speak about at the conference?**

My presentation was about a planning tool that we have come up with. It's a multi-purpose corridor at the bushland/urban interface so that fire is slowed down or stopped before it gets to houses or businesses.

The way the model works is that we incorporate water-sensitive urban design drainage components with a fuel-reduced area.

To service a water-sensitive urban design you need to have maintenance by trucks and equally if you can fit a truck to do maintenance you can fit a

truck to fight fires. So these two needs can reinforce each other.

**You've won an award recently?**

We won the 2008 Local Govt Shires Association sustainable building development and planning award. It is good to get that industry recognition. We are putting this model out there for other councils or other authorities to have a look at. It's a model that can be applied in very different sites.

**How big a change will this be for residents?**

For residents it means we won't have people backing directly on to the bush any more. So from

David Lemcke, a town planner from the Wyong Shire Council spoke about a policy adopted by Wyong Council designed to reduce risk of bush fires for new suburbs.

a bush fire safety point of view it is a significant improvement. It also means we can get away from some of those problems of people dumping over their back fence. We can keep the bush a bit nicer. The road or fire trail or cycleway in this new multi-purpose corridor also gives more public access to the bush land.

**Is public safety the main concern in this idea?**

The main concern is to integrate the four components - managing environmental impacts; managing bush fire safety; storm water management and managing public access to the bushland.

**Is it a big difference for developers and home-builders?**

People building homes who find themselves in a sub-division like this will find their requirements for construction standards will be lower and that could lead to the costs being lower. They will also be a lot safer and they won't have to do nearly as much maintenance themselves.

The multi-purpose corridor comes across to public ownership and it becomes the responsibility of council to maintain.

 Hear the full interview with David Lemcke on <http://www.rfs.nsw.gov.au/podcasts>



A PhD student at the Curtin University in WA, David Ward, has been studying the history and impact of indigenous burning methods in areas south of Perth.

**What was the key point you wanted to offer to other fire agencies?**

That I think fire breaks in general are ineffective because fires can jump over them very easily. The only way to prevent big fires galloping across the country is to establish some kind of mosaic of burnt and unburnt so that each unburnt patch is quarantined by recently burnt areas. So even if a fire starts by lightning or a vandal it can't go far.

**You mentioned a lot about the aboriginal people of your area, what do you suggest we can learn from them?**

The settler families in WA adopted aboriginal burning habits. They all say the same thing. Burn the bush, the jarrah forest, every two to four years.

**Did you have a message for environmentalists?**

Well I am a greenie. I am an environmentalist. But I don't

agree with some of the more ideological ones who haven't even seen a bush fire and want to tell you about bush fire. They tell you bush fire is bad and destroys biodiversity. If you asked them to define biodiversity they might be stumped.

**Is there is room for change in the fire management in your opinion?**

I think there is a great need for community education on bush fire. A lot of urban people, through no fault of their own, just don't understand the need

for it. They don't understand how dangerous bush fires are until they have been through one.

 Hear the full interview with David Ward on <http://www.rfs.nsw.gov.au/podcasts>



Naomi Brown launched the conference proper with an appraisal of the Victorian Bushfires Royal Commission from the point of view of AFAC. We present here a précis of her talk:  
**Challenges for the Industry – The Case for Working Together.**

## Naomi Brown, CEO of the Australasian Fire and Emergency Service Authorities Council (AFAC).

“Anyone who thinks this is a Victorian issue is quite delusional.

Anywhere in the world where bush fires are an issue they are waiting and watching to see what will happen in the Victorian Bushfires Royal Commission.

There were 550 fires on that day – February 7 - the fire services did a fantastic job. A huge number of the fires were pulled up.

AFAC appeared in the Commission on behalf of the fire management industry. We had three important roles to play in the Commission. The first was leadership and advocacy. This is a time above all others that the industry needs to show leadership. Secondly, we were there to provide information and support to the Commission and to positively influence outcomes. Thirdly, we were there to support the Victorian members who were under heavy scrutiny.

The immediate reaction of the Commission was to look at the national policy of Stay and Defend or Leave Early. It was the first time in an enquiry post a bush fire that attention went to community preparedness and not on the operation of the fire.

In the media this policy was referred to as ‘Stay or Go’. At

worst this descended into ‘fight or flee’. We saw the lack of understanding of this message in the community. Reducing a complex message to a slogan has been to our detriment and we are paying the price for this now.

The Commission was very critical that it had not been our policy to tell people when to leave and that it was not possible to give them a warning. A heavier emphasis on ‘prepare’ is critical to this. This policy should actually be known as Prepare, Leave Early or Stay and Defend.

The Bushfire CRC is validating the AFAC position on this policy. We are continuing with the policy and we don’t see a major departure in the future. The emphasis, however, will be on the triggers for leaving and on preparation.

We saw that throughout the cycle of the Commission so far that the Commission and the media have been looking for a silver bullet. At first this silver bullet was evacuation. Let me remind you that in Sydney’s urban interface alone there are 980,000 people. It is difficult to even conceive of evacuating that number of people.

There were other silver bullets discussed such as refuges,

bunkers and safe places. All of these have their place.

But there is no silver bullet! This is community responsibility. It is a shared responsibility.

Amongst fire agencies there has been the response: ‘But we tell them to prepare but they are not changing!’

It’s time to abandon this immature language. To imply that people are lazy or don’t care. We need to design strategies and programs that work. It’s about us understanding what works for what people in what circumstances.

At this stage, we do know that we don’t know a lot about the Victorian fires. There is a lot more evidence to come in and lot to analyse. We do know that 112 people died inside a total of 52 houses. What where they doing? Let’s not leap to conclusions.

These are tough times. There will be an ongoing tension between the development of the environment and of public safety. Getting the right public policy to meet all those needs is our job. We must go forward with confidence. We owe it to all the people who died.”



Tom Patterson

Some of the latest spatial technology was put to use in the search operations after the 2009 Victorian bush fires. Tom Patterson from ESRI (Environmental Systems Research Institute, USA) joined Steve Forbes, Manager of Risk Management and GIS for the ACT Emergency Services Agency at the conference to explain the startling impact new spatial technology is likely to have on the future of fire management. Steve Forbes spoke to the Bush Fire Bulletin after their presentation.

### What is spatial technology?

Everyone uses maps. All of our fire services use maps and we have a lot of tools at a local level. Now we are trying to get people to embrace the current and future technologies in spatial technology. Tom is travelling around the world trying to showcase the really big uses of spatial technologies in major disasters around the world.

We saw it here in Australia in the aftermath of Victorian bush fires. What policing did for Disaster Victim Identification and the evidence gathering for the Coroner was new ground in spatial technology. A lot of these new systems that were established in the days after Black Saturday were established by spatial volunteers.

### Something quite new happened down in Victoria didn't it?

Yes that's right for us. We deployed eight volunteers every day over 43 days. A total of 53 people were deployed to assist Victoria Police. They were all spatial professionals and all worked as volunteers. It is my understanding that is probably the biggest deployment of spatial volunteers in any disaster in Australia.

After the 2003 fires in the ACT we saw that the adoption of spatial technologies could have been a little better. We also realised that Canberra has a huge concentration of spatial professionals because of its proximity to Federal government departments. So we have leveraged off that. We asked them to volunteer to help us make spatial technologies available to fire and emergency crews.

We've got over 60 volunteers dedicated to that now. They are known as MAPS – mapping and planning support.

The work MAPS did with Victoria Police post the bush fires clearly showed that these volunteers were able to sustain long consistent deployment.

### At what point were those volunteers down in Victoria?

At the end of Day 2 there was a request offered by the ACT. This was absorbed within three hours of the request being made. Within 24 hours of that we had crews on the ground at Williamstown Police Search and Rescue centre getting briefings for deployment. So they were active on the ground with the police on Day 3.

### What was the technological breakthrough in Victoria?

A lot of paradigm shifts came together there. The first was the advent of 3G networks in our mobile phone world. Spatial technology revolves around large graphics - aerial photography or topographic maps. If you want to send those electronically in the field then you need to have big data pipelines. The Next G network introduced that.

So in Victoria we had police officers walking around (in the fire-affected areas) with palm pilots collecting data for Disaster Victim Identification.

They knew exactly where they were because they have a GPS in their palm pilot. The palm pilot was ruggedized, it was dust-proof, it was resistant-proof and more importantly, it was shock-proof - because all emergency workers like dropping things don't we?

The police were able to move from paper to an electronic realm so the incident management teams were able to see exactly where they were and exactly

what they had done. This assisted the planning teams... Rather than going out and collecting wads of paper in manila folders and employing 20-30 data entry clerks that stay up to midnight entering data - because this is what we did on the first few days after Black Saturday.

We were able to have that data integrated into a database instantly, allowing those decision makers to plan forward straight away. That's the advance that has been made.

### How quickly did it happen that you switched from paper over to electronic?

That is probably the most amazing part of the whole story. The fact that those volunteers were there gave us the ability to put together a system for the research of all the properties in the Kinglake/Murrundindi Complex of fires within 24 hours! From zero database and a paper system, to a fully digital backend set up database that was sharing data across the intranet of Victoria Police out to external agencies as well as consuming information from other agencies.

It was all set up in a 24-hour period. As a testament to what they did, they never had to change it after that. It worked, it was solid, it never failed throughout the whole process. It shows us that the technology is there today, it is solid today and we should start to trust it and employ more resources into spatial technology for decision-support in emergency management.

### And this information was being sent in real time?

That's another paradigm shift. The ability to stream data live

from the field into the IMT! It means that you are seeing the information live rather than waiting for the end of the shift or when the crew leader finally gets back to the fire control centre.

### How do you think that will affect firefighting in the future?

It's like that old analogy 'a picture paints a thousand words'.

Well I like to say that new spatial technologies in emergency management change that to 'a picture paints a thousand spreadsheets'. It paints a lot of data!

If we can stream that live stuff back then decision makers can work more effectively.

'Our plan is to put a bulldozer track there.'

'But hang on Sir, the fire has already crossed that area.'

'How do you know that?'

'We've got a live stream of GPS data coming in. We've got a live stream of infrared radar coming in or information from satellites.'

These are all technologies that can be adapted into a spatial environment. This is where we are going in the world. GPS is about inventing data - its location intelligence - not just about where you are standing.

 Hear the full interview with Steve Forbes on <http://www.rfs.nsw.gov.au/podcasts>



# Blue Mountains D.M.P. Enterprises Pty Ltd

Order online [www.dmp.net.au](http://www.dmp.net.au) | Printable order forms available online

**FEATURED ITEM**



AUSTRALIAN MADE 100% Cotton Navy Polo Shirt with pocket. White Screen Print – NSW RURAL FIRE SERVICE – on the back and choice of EMBROIDERED White 'Outline' or Full Colour Emblem above pocket.

Screen printed Australian made Navy T Shirt also available.

Price includes Name OR Brigade with Emblem if requested. For Name AND Brigade add \$4.00 per shirt.

### POLO SHIRTS

	White Emblem	Colour Emblem
Sizes: XS to 2XL	\$31.00	\$33.50
Sizes: 3XL to 7XL	\$34.00	\$36.50

### T SHIRTS

	White Emblem	Colour Emblem
Sizes: Sm to 2XL	\$18.00	\$20.50
Sizes: 3XL to 8XL	\$20.00	\$22.50

Examples of the items available. See web site for the full range with pictures and further information

**Caps** - New Emblem Caps 1 to 24 **\$8.50**, 25 to 99 **\$8.00**, 100 + **\$7.50** • **Polar Fleecy Beanies \$12.50**

**FREE!!**

All garments and bags (excluding headware & Imported Polo) can be embroidered with your Brigade or Name at no extra cost if required. \$4.00 per item if Brigade AND Name required. **Be sure of correct size!**

**Embroidered Name or Brigade Badges** 1-99 orders at **\$3.75** each, 100+ orders at **\$3.45** each

We have not increased the price of these badges since GST arrived in 2000, although our manufacturing cost(s) have risen significantly. Unfortunately, we have to pass on some of these increases to our customers'.

**SALE ITEMS Cricket hats - size small** (55cm) only left. **\$5.50** incl. GST  
**Sloppy Joes sizes 5XL / 6XL** only left. Now a low **\$15.00** incl. GST. Name OR Brigade if requested.

- No exchange or refund on these sale items -

Imported and Australian Made Poly Cotton Polo Shirts with Pocket - from **\$18.50**  
Navy or White T Shirts - from **\$17.75** • Polar Fleecy Vests, Jumpers and Jackets - from **\$35.00**  
Medium and Large Kit Bags – from **\$33.00** • Emblem Caps • Fleecy Beanies  
Light Blue FIREWISE Polo Shirts for Community Education personnel only.

**Full Range on our Website - [www.dmp.net.au](http://www.dmp.net.au)**

**Blue Mountains DMP Enterprises Pty.Ltd** A.B.N. 44 092 928 919 A.C.N. 092 928 919

**P.O. Box 158, SPRINGWOOD, NSW 2777**

**Tel 1300 792 751 Fax 1300 722 792 Email: [sales@dmp.net.au](mailto:sales@dmp.net.au) Web: [www.dmp.net.au](http://www.dmp.net.au)**



## **Tim Flannery,** Thoughts Regarding Extreme Events

2007 Australian of the Year Tim Flannery was the keynote speaker for the International Wildfire Management Conference. A highly acclaimed author and spokesperson for climate change, Mr Flannery took the topic of: Facing our Climatic Future – Thoughts Regarding Extreme Events. The following is a précis of his talk.

"Firefighters, I want you to know how very special you are to me, who lives in the bush. I am very aware of what you are protecting me from.

Humans are a fire-fearing species.

There is a war going on between different species and the weapon of war is fire. One of the most amazing plants is the Brigalow scrub. It knows how to suppress fire. There are no air gaps in its leaf litter and the litter rots quickly. It has adapted to fight fire. You could say there is success for those species which learn how to manage fire.

Australia is the most flammable continent on earth. Most of it burns most of the time.

Climate change is impacting on the behaviour of fire in Australia. I am a palaeontologist so I like to consider the long term perspective on climate and on climate change.

There is an intimate relationship between ourselves and the atmosphere. The air we breathe out today will soon be part of the global atmosphere. We receive our life from the atmosphere.

Burning fossil fuels is changing the air that we breathe.

There has been a 30 percent increase in carbon dioxide in our atmosphere since the Industrial Revolution.

Just yesterday a report was published by the Intergovernmental Department on Climate Change.

On my early reading of the report I can tell you that it says that our predictions for climate change are off track.

Our median measures of climate change are too conservative. The Key Performance Indicators used to measure climate change - carbon dioxide levels, temperatures and sea levels - have all exceeded predictions. We are tracking the worst case scenario.

I used to study possums - the white ring-tailed possum of far north Queensland to be specific. I carry around a picture of one of these possums in my wallet to remind me of what we are facing in Australia.

The population of this little possum has crashed. They live in an area where there are no humans. These are ancient Australians - we have found fossils of these possums that are 54 million years old.

Recently heatwaves have been killing the white ring-tailed possums at a great rate and their population has crashed. That tells me that changes that we are experiencing now have not been experienced on earth for millions of years.

When I was studying the white ring-tailed possums, I didn't predict that climate change might make them extinct. In the same way, I never guessed that there could be fires of the intensity of the Victorian fires earlier this year. The metabolism of the atmosphere is changing - the Victorian fires are a great

example of that. I used to say the next threat for Australia was water security. The ferocity of the fires in Victoria and the heatwaves killing the possums, were not on my radar.

In 1998 there was a shift in the climate in Australia. Dropping water levels have seen the flow of Murray River being choked off. It has become very dry in Victoria and we have seen extreme weather events. Fire prone regions are shifting south and deserts are creeping into wet areas.

When you alter the preconditions, the bush fires that do result become different creatures. These fires are a very different creature from the fires that we have known. Computer modelling shows that there will be an increase in fire frequency with climate change and the intensity of the fires will increase.

There is very little we can do to stop the changes to our climate over the next 30 years, however we can influence the period 30, 40 and 50 years from now.

Next year in Copenhagen, a new global treaty is being brokered to replace the Kyoto Protocol. Global leaders are recognising that change is inevitable.

If we can broker an agreement to reduce carbon emissions, you might well have to fight ever more severe fires in your lifetime, but your children will not."



# THE FIRST COFFEE4KIDS BALL: OH, WHAT A NIGHT!



*"Awesome night" – "Sensational" – "Brilliant" – "Great entertainment. Great band. Great food. And such amazing generosity" – "Worth the trip from out West" – "It was great to be a part of such a worthy cause"*

All these are just some of the comments received from the guests who came along to help raise over \$20,000 for The Children's Hospital at Westmead and the Coffee4Kids Victorian Children's Bush Fire Appeal Fund.

The 2009 Ball has been an enormous demonstration of the support the Foundation has from NSW RFS staff and volunteers, other agencies, the public and its sponsors. Sponsors for the C4K Ball were DATS Environmental Services Group and DATS Skip Bins, Martin & Luscombe Associates and the RFSA.

The Ball ran without a hitch thanks to these sponsors and the support of over 30 helpers and over 25 prize donors!

NSW RFS volunteers had come from as far away as Cobar and all up 254 people attended. People let their hair down and had an absolute ball. Almost everyone called for a bigger dance floor and more time to dance! There was also almost universal agreement that the entertainment - jazz/covers band, the Enormous Horns - were fantastic!

"Worth the trip from out West!" said one group from Cobar.

"On behalf of Charmhaven Rural Fire Brigade, thank you for organising such a fantastic event. The Ball was a huge success. We had a wonderful night and we are all looking forward to coming again next year. Thank you for all of your hard work and time

organising such an event, for a very important cause."

Enjoying the food, drink, dancing, laughter and each other's company was important, but everyone agreed that contributing to children in need through The Children's Hospital at Westmead added an extra element to the night.

"Thanks for a great night," wrote one couple, "Our twin boys are 10 this Friday. Ten years ago, however, they were born eight weeks premature. We lived at Westmead Hospital until they were ready to come home. So we have the greatest respect for them (the hospital). In the future, always contact us and we will be there to help."

Another enthusiastic dancer reported: "Next year please!"

The Foundation is planning an even bigger Ball for March 2010. While many of the details are yet to be confirmed, we do know that The Enormous Horns will be back by popular demand and that the dance floor will be bigger and better.

The Waterview Convention Centre in Bicentennial Park have again offered the Foundation a fantastic deal and in response to feedback, the Ball will be held earlier in the year to make the most of the longer days and the beautiful views.

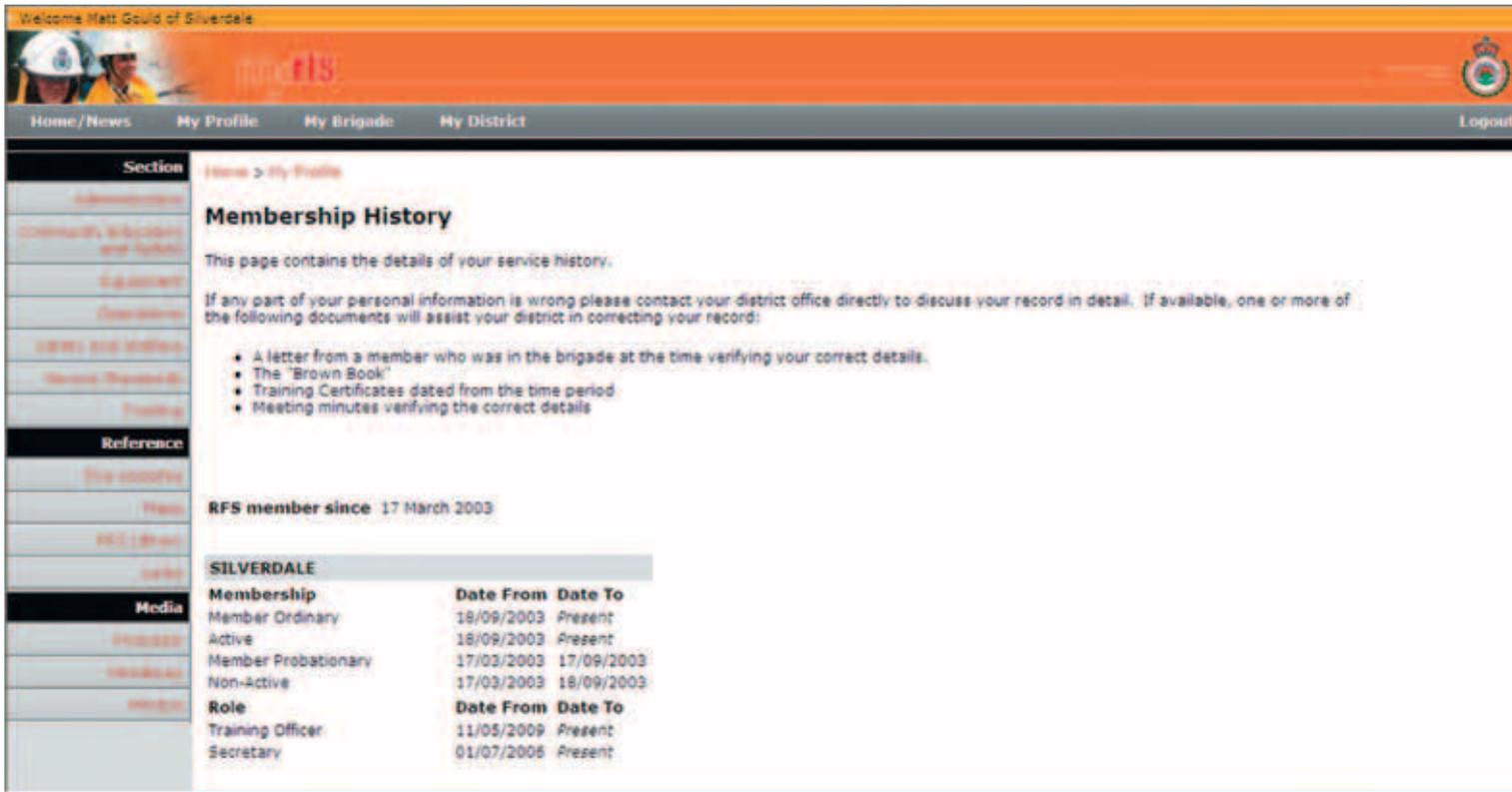


With 600 guests expected and all profits going to the Foundation to support sick children, come along and join in on the fun and help make the 2010 NSW RFS Coffee4Kids Charity Ball an even bigger event.

Would you like to help promote the Ball in your area? Are you interested in being a sponsor or donating items for the auction or raffle? Or would you simply like to know more? If so, please contact the C4K team at [c4k@coffee4kids.org.au](mailto:c4k@coffee4kids.org.au) or call (02) 8741 5555 and ask to speak to a C4K Advisory Committee Member today. To register your interest in the Foundation, please visit [www.coffee4kids.org.au](http://www.coffee4kids.org.au).



# MyRFS: BUILDING WHAT YOU ASKED FOR



Volunteers from right across the State have been sending in some fantastic suggestions for new features and improvements for MyRFS - and we've been listening. We've released a range of site improvements designed by our members, to meet the needs of our members.

So what *did* you ask for?

## New Membership History Function

MyRFS users can now see their complete service history with the NSW RFS, as recorded in FireZone.

This function was suggested by secretaries as a way to help brigades in preparing applications for awards and life membership. It allows members to see if there is any information missing from their service history.

Your membership history can be accessed from the My Profile page, by selecting the membership history tab.

If there is either incorrect information, or information missing from your member history, your local district office will be able to help correct this. The following documents will help speed up this process:

- your brown book
- training certificates dated from the time period
- meeting minutes that verify the correct details
- a letter from a member who was in the brigade at the time confirming your details.

## Brigade roles

Members with a role recorded against them in FireZone will now have this role displayed within the brigade contact book which can be accessed via the My Brigade tab.

There are a number of generic roles available within FireZone including:

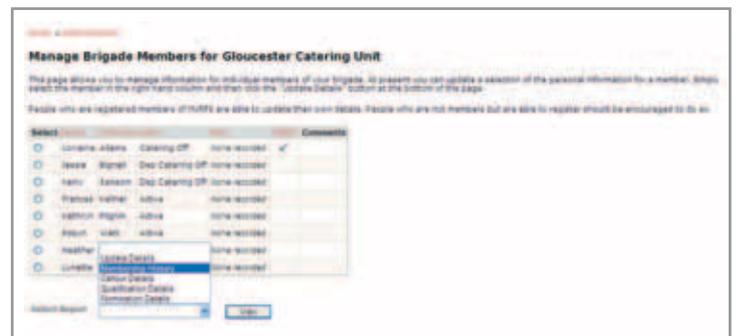
- Training Officer
- Callout Officer
- Equipment Officer
- Fundraiser
- First Aid Officer
- Permit Officer
- Public Relations Officer
- Safety Officer
- Community Safety Officer
- Maintenance Officer
- Executive Member

If you currently hold one of these roles and it is not recorded within MyRFS your district office will be able to assist you in correcting this.

## Captain and Secretaries reports

MyRFS have developed a range of new reports for captains and secretaries, to help them with their administrative duties.

These reports are available through the Manage Brigade



Members link on the Administration page.

There are a number of reports available to captains and secretaries, including membership history, callout details, qualification details and nomination details.

## Training Officers Reports

Brigade training officers can now view qualification and course nomination reports for members of their brigade.

These reports are accessed on the administration page, however the 'Manage Brigade Members' link will only appear if a member is recorded as a training officer within the FireZone system.

Training Officers can be identified in the role column of the brigade contact book.

If you are not listed as a brigade training officer and should be, contact your district office to have this corrected.

## What next?

The MyRFS team are always looking for ideas for new functionality and improvements. If you have a great idea let us know at [myrfs@rfs.nsw.gov.au](mailto:myrfs@rfs.nsw.gov.au)

**TOP:** The new Membership History Function allows you to see your complete service history

**CENTRE:** Captains, secretaries and training officers now have access to a range of new reports.



# HAY CATEGORY 6 TANKER

By NSW RFS Engineering Services

In the latter half of 2008, Superintendent Neil Headon, the Manager - Mid West Team at the time sponsored the construction of a 'one-off special build' Category 6 tanker for operation by the Hay Rural Fire Brigade. What Hay required was not only a sister for their locally built 10,000 litre bulk water tanker, but a tanker specifically designed for combating grass fires that featured the latest standards in crew comfort and protection.

This Category 6 concept arose from the experience of Hay using their existing bulk water tanker for grass fire suppression in late 2007 where this tanker was successfully used to halt a fast running grassfire north of Hay that was driven by 55kph winds and destroyed 370ha of farmland in just 48 minutes. As Hay had fitted a remote controlled monitor to their bulk water tanker, this enabled this tanker with just a crew of two plus with the aid of a tractor and plough to rapidly put in a wet line break in front of the fast approaching fire front to protect property that was under threat and then used the monitor to knock down the fire.

This experience demonstrated the merits of this concept resulting in the request by the Mid West Team to gain approval to construct a Category 6 tanker. Following some months of approvals, planning and preparation Hay's new Category 6 tanker was constructed in the latter half of 2008 and was delivered in late December of that year. To date a number of other districts have expressed an interest in this type of tanker, the development concept and the potential for use, not only for the Western parts of the State, but also in areas along the Eastern seaboard.

In comparison with the traditional grassland tanker where the firefighting is done by crew working from the refuge bay, this tanker does not have any external area for crew. Instead, this tanker features Cat 1 style grass sprays and a cabin mounted remote control monitor operated by a crew riding in the cabin to perform the same function. This concept is an attempt to engineer out the need for crew to operate externally in some circumstances, to maximise the capacity of firefighters by requiring a smaller crew and reduce crew fatigue.

This, in combination with the tanker being constructed on a short wheel base bogie drive chassis, enables substantially more water to be carried and hence extends the firefighting duration of the tanker.

A combined partnership between the Mid West Team and the NSW RFS Engineering Team has provided the NSW RFS with the opportunity to enhance our fleet capability by further developing a bulk water concept, in place for many years. The end result is a contemporary appliance which incorporates sound engineering principles and addresses end user requirements. Although the original thoughts were around a grassland tanker with a diesel engine powered firefighting pump and remote controlled monitor, for around the same cost the concept evolved into a more multi-role appliance. Engineering Services Project Officer, Peter Church who managed the design process from concept to construction, says this tanker is fitted with a hydraulically driven power take-off pump, enabling the water carrying capacity to be increased to just over 11,000 litres, plus stowage for 200 litres of foam. The tanker still retains the same equipment stowage as a grassland Cat 1 tanker.

"What we need are multi-role vehicles that represent value for money that require minimal crew," Neil Headon said, "With two and half times the amount of water than a Cat 1, it means the tanker can spend more time on the frontline doing firefighting. It's easy to use, the firefighters prefer it, it carries more water yet is about the same size as a Cat 1 and being a 6x4 chassis, it can be driven most places you would take a Cat 1. It simply makes sense not only from a firefighter's perspective but also from an economic view point.

"Although our initial thoughts were around a grassland tanker, what NSW RFS Engineering has designed and constructed for us, for little more than the price a grassland Cat 1, is a fabulous result which is simple to operate which provides a multi-role tanker not only for grass fires, but also a bulk water tanker and one that is capable for use at the village incidents (mainly semi-trailer and B-double fires) that the Hay Brigade are required to frequently respond to.

- Continued on page 30



# HAY CATEGORY



# HAY 6 TANKER



## Hay Category 6 features:

- 6x4 medium wheelbase chassis ('Fire Spec' configuration)
- Low profile 11,000 litre water tank internally baffled with new ball baffling system with 65 mm inlets on each side
- 200 Litre foam tank
- Rear mounted hydraulic PTO pump 2000 lpm @ 1000 kPa that can be primed by flooding with water from the water tank
- Simple to operate manifold of two 65 mm outlets
- Cat 1 style pump control panel with tank gauges and simplified operating instructions
- 30 m hose reel
- Wet hose tray
- Alloy bull bar with LED beacons and eft and right Cat 1 style grass sprays
- Remote controlled monitor mounted on cabin roof
- Cabin protection spray
- Wheel protection sprays
- Two standard tanker lockers (one each side) with fluorescent lighting
- Two pump/generator storage lockers on each side
- Hose and tool stowage side (each side of the water tank)
- Standard twin 20litre fuel container storage locker
- Three 100W twin-beam work lamps



Pull out this section to display in your station or Fire Control Centre



“Being fitted with the same capacity pump as the Category 11 Village Pumpers in combination with the 11,000 litre water tank, a 200 litre foam tank and ample storage for equipment makes the Cat 6 a very versatile unit. The feedback from the Hay Brigade has been very positive and although it has yet to be proven at a major fire, it is a very welcome addition to the Mid West Team. I would like to add that I have nothing but praise for the professional way in which this project has been managed and also I would like to acknowledge the support provided my Regional Manager.”

At a local level, this project has been very much a collaboration with the members of Hay Brigade and the staff at Mid West Team, all of whom have been excellent in their support, and were very open minded in terms of trialling new ideas. Hay Brigade volunteers have, in their own time, proudly displayed this concept tanker at various locations around the State including the recent International Wildfire Conference and the Region North Exercise. Everywhere this tanker has been on display, the reaction has been very positive from both volunteers and staff.

Although this was constructed as a ‘special one-off’ build, this presented the opportunity to create a base template for the ongoing development of any further Category 6 heavy tankers. This design is able to be configured to suit different chassis, equipment stowage and pump configurations. This design even allows for a trailer combination to provide the same water carrying capacity as a semi-trailer yet providing greater flexibility in operation.

Full credit to Neil Headon and the Mid West Team for not only proposing this innovative tanker concept, but also for their sponsorship of it.





**Fire Fighting Pumps**



**Foam Nozzle & Attachments**



**Emergency Resuce Equipment**



**Area and Torch Lighting**

## Emergency products you can rely on

GAAM Emergency Products is a diversified company providing specialised equipment designed to meet the rigorous of emergency services and other industries operating in demanding environments. We offer a wide range of products, including;

- > Fire Fighting Pumps
- > Emergency Rescue Equipment
- > Protective Clothing and Equipment
- > Fire Accessories
- > Area and Torch Lighting
- > Lights and Sirens
- > Forced Entry Tools
- > Nozzles



For more information, contact the NSW Manager Fred Brown on:  
p: 02 4256 5084 | m: 0408 424 994 | [www.gaam.com.au](http://www.gaam.com.au)

# REGION NORTH EXERCISES AT GLEN INNES WENT OFF LIKE CLOCKWORK



The town of Glen Innes opened its doors, showgrounds, tourist spots, parks and public places to the NSW RFS in May 2009 for the Region North Exercises.

The motel carparks around town were filled with NSW RFS vehicles, parklands around the showgrounds were filled with tents and the showground proper was packed with NSW RFS tankers. The two days of exercises were held at the Showgrounds and at venues around Glenn Innes and its surrounds.

Region North Operations Manager and member of the organising committee, Bryan Daly said it went off smoothly.

"You can see that it is a success this year as it has been in the past," he said, "Everyone here is committed to continual improvement. The marshals want to present the best possible training, the caterers want to

produce quality meals on budget and the comms operators – they aim for the best communication."

It takes about 150 staff and volunteers to host the Region North exercises. An organising committee of seven rounds up volunteers and staff from around the region including 12 marshalls, 25 catering staff, 60 scenario staff and nine members of the Incident Management Team (IMT) who run the event as it is happening.

The aim is for volunteers and staff from across Region North to learn new skills, improve existing skills, and learn how to work as a team in the case of an emergency. Training covers everything from planning to logistics to catering.

"We make the exercises as realistic as possible," Bryan said, "This year we brought the tilt tray and Fire Overrun tanker up from the Canobolas Zone to add realism.

"When the crews pull up they see a fire appliance on fire and firefighters injured, which has an impact on the crews. It will remind them that they are working in a dangerous environment, and that they are vulnerable. They don't forget it."

Although Region North Exercises enjoyed record numbers in 2008, this year overall numbers were down, with about 100 fewer people attending. Bryan Daly surmised there were two reasons for this.

"The Victorian deployment," he said, "Many of our volunteers went to Victoria so they could no longer afford time off work to come to the exercise.

"Additionally, because of the Victorian fires we had to change the date from the usual weekend in March to May and some people were no longer able to attend."

Major sponsors of the Region North Exercise, the RFSA, provided entertainment for the troops throughout the exercises. The highlight was on Saturday night when country music's Darren Coggan rocked up. "The social aspect is almost as important as the training," Bryan said, "it fosters greater contact



and better relationships between brigades and across the region. In an S44 or an out-of-area deployment - they will have an instant connection."

Region North conducted the first ever Regional Exercise in the State and in 2010 it will celebrate its tenth anniversary. Bryan Daly and the organising committee promise all new scenarios and some pleasant surprises.

Photos by Anthony Clark and Jacqueline Murphy



# TEAM WORK | THE PEOPLE BEHIND THE SCENES AT THE REGION NORTH EXERCISES

A committed team of volunteers and staff stand behind the success and ease of the Region North exercises.

Photos by Jacqueline Murphy



**Bryan Daly:** Member of the organising committee: *Everyone here is committed to continual improvement.*



**Steve Tremont:** Volunteer from New England (Armidale), Marshal for Team Challenge Scenario: *In these scenarios I try to provide real learning through real experience. Although the scenarios are not strictly fire-related, the principles learned can be applied to any situation where cohesive teamwork is essential.*



**Jan Barber:** Member of the Catering team: *We've been working together so long we know what each other are thinking!*



**Terry Best:** Catering Manager: *We are all a team. I love it!*

**Alan Burman:** Country Energy, trainer for the Country Energy scenario: *NSW RFS members are at risk around electricity wires. I've been travelling the State for four months visiting NSW RFS brigades and exercises to get the key safety messages across.*



**Angela Daly:** Marshal for the Basic Skills Scenario: *Exercise week is always full-on but I have a great team on Basic Skills, they make my life easy!*



**Neale 'Big Dog' Hayter:** Member of the catering team: *I start up the BBQ at 3am. It's the same each year and the same people.*



**Harry Lebusque:** Marshal for the fire overrun scenario: *Practicing the overrun is the most important five minutes of your life.*

# in focus:volunteers



## Bouquets for Betty

"I was so excited, I still feel nervous," she said. "It's one of the biggest things that has happened to me."

"I was so excited, I still feel nervous," she said. "It's one of the biggest things that has happened to me."

In August this year Betty Heycox was awarded a lifetime membership to the Nelligen Rural Fire Brigade on the Far South Coast. She said receiving the award was one of the most gratifying experiences of her life.

Betty and her husband joined the service when they moved to Nelligen in 1948 because "it was just what people did back then".

"It was that community spirit," she said. "Everybody just clubbed together."

According to Betty, women played an important support role in those days packing sandwiches and other refreshments for the men.

Betty describes the old days before electricity as hard work.

"It's all different now," she said. "I remember a time when there was a well at the bottom of the hill in Reed Street. They had to put the buckets down the well and lift them up to get water to fight the fires. The men would be tired before they had even reached the fire."

Betty has instilled a community spirit within her family. Her sons and daughters are all Rural Fire Service volunteers and she has great hopes for the generations to come.

Courtesy of the Bay Post

## Vale: Barry Cain



### Volos surge in Bega Valley

There has been a surge of new recruits in the Far South Coast zone. A total of 245 new volunteers has signed up in the past six months.

Region South Manager, Superintendent Andrew Stark, says that is four times the number of last year.

"Tragedies like the Victorian fires move people into action," he said, "There has also been a lot of fire activity on the Far South Coast in the past 12 months. People notice just how dry and volatile the landscape looks and they know the best way to be prepared is to join a brigade."

Superintendent Stark said the Far South Coast team has been running a campaign to attract new recruits using Federal government funds. The region won a \$22,000 grant to erect signs that encourage volunteering from the Attorney-General's national Volunteer Recruitment and Training scheme.

Fire Danger Signs have had recruitment messages added to them such as: 'Are you prepared? To learn about fire fighting, join your local brigade.'

"It seems that the signs are working," Superintendent Stark said.

"We have also been concentrating on making sure that brigades are nice places to be when the new recruits arrive.

"We make sure we support the brigades so they get the right level of training and when people come, they are happy to be a part of the brigade.

"We do get a lot of press in our region, which also helps with recruitment."



Group Captain Barry Cain provided invaluable assistance not only to the Gosford District but to the NSW Rural Fire Service as a whole. He unselfishly gave up his time, day in and day out, to contribute to the Service in order to make a difference for our future generations.

Barry joined the Wamberal Rural Fire Brigade in 1975 and until his death in early July this year, Barry served in the NSW RFS on the Central Coast with great passion. Barry attended all major fires on the Central Coast, contributing in one way or another. He led many an out-of-area taskforce (too many to list) but worthy of mention were to Grafton, Wyong, Warragamba and particularly the taskforce that went to Canberra in 2003. It has been acknowledged far and wide that there was no better representative of the Service than Barry, who led his crews with pride, skill and professionalism.

It is without doubt, that Barry's contribution to the Service should be highly commended. He provided invaluable assistance to the District and Service over the years and was an exceptional role model to those around him. He selflessly carried out his duties at all times without fuss or expectations. Barry's unwavering passion for the Service, his commitment, dedication and guidance were remarkable.

#### A NOTE FROM A FRIEND ON BARRY'S PASSING

*"Barry Cain passed away from cancer. He was working with us up until about two weeks before he passed away. He was ill for about eight years but never let onto us that he was suffering. We knew he didn't look well, and coughed like there was no tomorrow. But it wasn't until he received word from his doctor that they couldn't do anything more for him, that he told us just how sick he was.*

*From that day on, which was two weeks before he passed away, he was pretty much bed-ridden. He was escorted outside in a wheelchair with his oxygen. Later he went to hospital with a chest infection.*

*Barry Cain received his Commendation for Service from the Commissioner on Thursday 2 July 2009.*

*He passed on the very next day.*

*He was really a beautiful man, and we miss him so very much each and every day."*

Susan Butler  
Administrative Officer  
Gosford Fire Control Centre

# AUSTRALIAN FIRE SERVICE MEDAL: QUEEN'S BIRTHDAY 2009

By Melissa Krull, NSW RFS Communications Intern

Six members of the NSW RFS were awarded with the highly esteemed Australia Fire Service Medal as part of the Queen's Birthday Honours List.

Members, who receive this award, receive the highest honour available to those of the Service. Recipients were officially awarded the medals by Her Excellency Professor Marie Bashir AC CVO, Governor of NSW on September 16, 2009.

## Superintendent Christopher Barron



Superintendent Christopher Barron joined the Tarago Brigade, north east of Canberra, in 1967. In 1996 he became the Fire Control Officer at Jerilderie. He quickly realised that there were only three or four trucks in the shire and that he had to get a cohesive operation going to increase the number of trucks in the area. Mr Barron, along with a few colleagues, built tankers for the area to the NSW RFS standards during his nine years as Fire Control Officer. He also instigated that the area take 4WD courses as crews were often aiding areas like the Snowy Mountains and Victoria during Section 44 fires.

## Superintendent Brett Bowden



Superintendent Brett Bowden joined the NSW RFS in 1980 in the Port Stephens District. He was a volunteer for the first 15 years and in 1995 was appointed as Fire Control Officer in the Cabonne District. In July 2001 Mr Bowden became Operations Officer for Canobolas Zone when the areas of Cabonne, Orange and Blayney merged together. Coming from a volunteer background, Mr Bowden says that he understands the needs of volunteers and has worked to improve the level of equipment, technology and skill available to them so that they can carry out the work their communities ask of them. Brett Bowden is the second person in his family to receive the medal with his father, Leslie Bowden, receiving the award in 2006.

## Group Captain Keith Butt



Group Captain Keith Butt is an active life long member of the Monteagle Brigade, near Young, having joined the brigade in 1960. He played a part in creating a 'Zone' between Harden, Boorowa, Young and Cootamundra which had been previously thought of as impossible. He became an Instructor in 1996 in which he still assists in regular annual training. During his time he has participated in numerous strike teams and task forces across the State and in Victoria in 2009. Mr Butt is a member of various committees such as the South West Slopes Zone Bush Fire Management Committee and Training Committee in which he believes he plays a communication role between management and volunteers.

*“These members have all demonstrated what the NSW RFS has been built on – hard work, dedication and commitment to the community,” said Commissioner Shane Fitzsimmons.*

### Group Captain Jim Chivas



Group Captain Jim Chivas joined the NSW RFS in 1962 and is a life long member of the Bullaburra Brigade in the Blue Mountains. He has fought all major fires in the Blue Mountains since 1957 as well as various Section 44 fires across the State. Mr Chivas has had an in-depth commitment in the NSW RFS with 26 years as a Group Officer and has played a key role in the development of a number of training programs in teaching trainers, assessors and coordinators.

### Group Captain Alfred Raistrick



Group Captain Alfred Raistrick, is still an active member of the NSW RFS, joined the Cobbitty Rural Fire Brigade in 1952, but transferred to Camden West Brigade in 2007. He has attended many incidents that have occurred in his local area as well as fires in Cootamundra, Blue Mountains, Central Coast, Wollondilly, the Royal National Park and Hawkesbury to name a few. Mr Raistrick has been involved in the development of firefighting resources and training as well as the design and construction of early tankers. Mr Raistrick has played leadership and mentoring roles during his service, supporting and guiding new members.

### Deputy Group Captain James Smith



Deputy Group Captain James Smith is an active member committed to the Middle Dural Brigade joining in 1977. Coming from a building industry background, Smith has aided in the building and consulting of fire stations. He found that through teamwork he could pass on quite a bit of information and believes that the NSW RFS has exemplary skills in this area. Known for his leadership, strategic and tactical skills, Mr Smith is dedicated to volunteers, especially the younger members.

Image courtesy of the Hornsby Advocate, photographer Peter Kelly.

# BRIGADE IN PROFILE

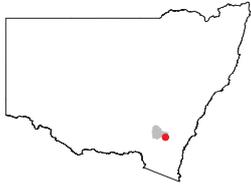
**Name of Brigade:** Sutton Rural Fire Brigade

**Year brigade formed:** 1949

**Current Captain:** John Cooper

**Current President:** Bill Stoll

**D/T/Z:** Yass Valley, Region South



## Can you give us a brief history of the brigade?

The brigade was formed in 1949, having been part of the Gundaroo Brigade since 1932. The area comprised mainly sheep and cattle grazing country until the 1970s when properties started to subdivide into rural/residential blocks to support Canberra's growth. Our neighbouring Wamboin Brigade was formed from Sutton in 1984.

In 1979 high tension power lines at Hall were the cause of a large fire which burned through the village.

In 1985 a deliberately lit fire at Mt Majura in the ACT caused havoc.

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

There are some interesting stories in Margaret Ferrett's 1999 history of the first 50 years of the Sutton Brigade. The brigade has benefitted from the experience of many long serving members. For example, Sutton Brigade has had only eight captains in 60 years with three of those coming from one family - including our current Group Captain, Ron Hardy. Ron has been Group Captain for 34 years.

Sutton Brigade has grown and shrunk as our boundaries have changed. For many years Sutton Brigade operated across two local government areas based in Queanbeyan and Yass.

We have the largest station in the shire with four vehicles stored on site, a training and meeting room, kitchen and showers.

## What are some recent milestones the brigade has achieved?

The Sutton Volunteer Bush Fire Brigade celebrated its 60th birthday this year - 12 February, 2009.



Sutton Fire Station. Constructed in three stages: the original shed on the left (now briefing room), the three-truck shed and connecting section to house the PC

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

The brigade area is a mix of farming, village (Sutton itself has around 50 houses, a shop and primary school), rural residential, retained bush as well as the Federal Highway (which forms our eastern boundary) and local roads. We have a number of historic buildings, including the hall, school and church, in the village and a fireworks factory at our western boundary.

## What types of incidents does your brigade attend?

In recent years the brigade has responded to motor vehicle accidents, grass, bush and structural fires. We have assisted other brigades and, like many others, sent firefighters to Canberra in 2003 and Victoria in February this year.

## What vehicles do you have?

Sutton Brigade has a Cat 1 tanker, Cat 2, Cat 7, Cat 17 Captain's vehicle, a PC (Mitsubishi dual cab ute) and a

Volvo town pumper on loan from the ACT for structural and MVA response. We also have a trailer mounted fast fill pump that was most recently used to support hazard reduction activities west of the Lake George escarpment. Our 1970s ex-urban pumper has caught the eye of a number of fire truck enthusiasts.

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

Our training officer, Eddy Tillotson, keeps the training interesting, topical and focussed on meeting the demands of the members. Training is held on the second Sunday of the month and focuses on the range of skills necessary for basic, advanced and specialist operations such as equipment familiarisation, firefighting, hydraulics, navigation and communications. Our crash test dummy adds a high degree of realism to MVA scenarios. Brigade members going through NSW RFS courses such as BF, AF etc. are also given plenty of opportunities at training sessions to practice and revise the skills and complete the post-

course work for their respective courses. Training sessions also enable the more experienced members of the brigade to mentor the newer brigade members.

## What are some unique skills and features of your brigade?

Our brigade has a very experienced MVA crew as well as members who have significant grassfire experience. We think that having a brigade Community Education Officer among our volunteers is either unique or rare.

## What are some unique features of your community?

While we think of ourselves as a fairly typical small rural community we are unique in our proximity to the ACT. As most members work in Canberra, daytime callouts tend to go to the precious few left in the village during the week. The proximity to Canberra has also resulted in a rapidly changing demographic from traditional farming area to rural/residential. We are not unique in having to



deal with the turnover of the population, particularly younger members.

**What community events does your brigade participate in?**

Sutton Brigade has forged strong links with many groups in the community, including the Sutton Primary School, Sutton and District Community Association and Sutton LandCare. We regularly attend and support events of these and other community groups (such as the local church that celebrated its first 100 years this year). The brigade conducts annual programs for children and staff at the school as well as running Community Education events for residents.

Assisting at the Murrumbateman Field Days is our major fund raising event. For the last two years the brigade, in conjunction with the community association, has prepared and run the community bonfire using timber removed to form the village SFAZ.



Brigade members Michael Gardiner and Gary Pearce with Sutton 1 in 2009. Captain John Cooper is in Sutton 17



Brigade's Community Education Officer, Graham Scofield, with local students. This room was the original fire-shed that housed two trucks

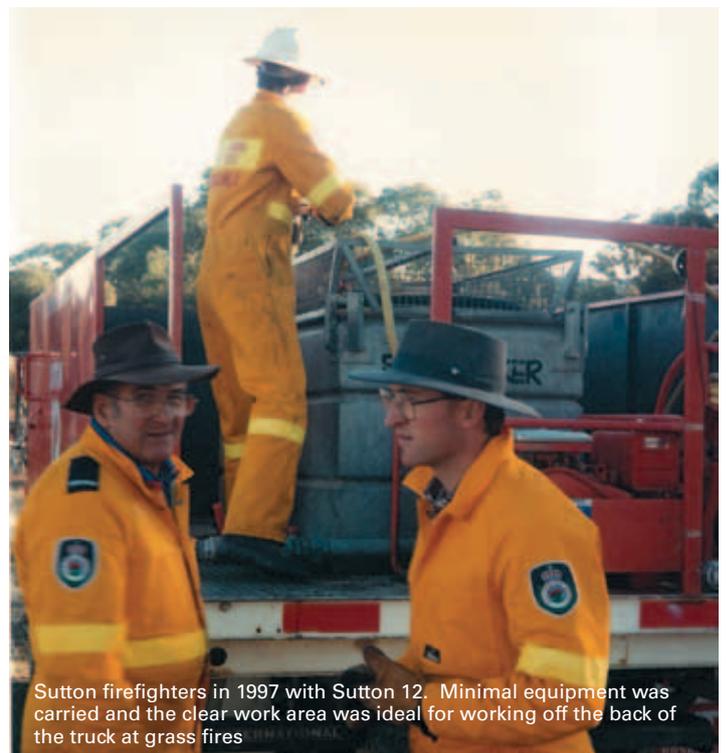
Our thanks go to our Community Safety Officer, Graham Scofield, who is always looking for fresh ideas to take to the community.

**Any final thoughts or comments you would like to add?**

We are an active brigade with a mix of members from those who are new to the area through to experienced firefighters with family links to the founding officers. We all get on well together and get on with the job. Let's hope the fire season stays benign and we do not have too many jobs to get on with.

**Written by Michael Gardiner, Vice-President Sutton Brigade**

**Photos are by Eddy Tillotson**



Sutton firefighters in 1997 with Sutton 12. Minimal equipment was carried and the clear work area was ideal for working off the back of the truck at grass fires

# master COM

WIRELESS COMMUNICATION SOLUTIONS

*"Celebrating 40 Years in Business"*



## GEN III TRANSPORTABLE REPEATER

The GEN III Transportable Repeater is the latest unit designed by Mastercom to provide extended radio communications for Emergency Services.

## New - Tait "Waterproof" PMR Radio



**Tough, reliable and waterproof**  
Durability is assured through Tait's approach to design, testing and manufacture.

**Safer and more effective feature set**  
Advanced power management

**Flexible communications**  
The 128 channel TP8115 and 350 channel TP8120

**Light, strong and powerful**  
Two-shot moulded construction delivers added durability and better grip.

**Ideal for system solutions**  
Backed up by Tait's proven customisation.



## ACT Intelligent Battery Charger

- Easy to use
- Fastest possible charge times (15-40 minutes)
- Conditions the battery during "every charge"
- Suits multiple brands of radios
- Rugged construction
- For Ni-Cad, Ni-MH and Li-Ion batteries

*"Supporting the NSW Rural Fire Service for over 20 Years"*

Master Communications & Electronics Pty Ltd  
A.B.N. 87 074 042 229  
Unit 2, 136 Railway Parade (PO Box 303) Granville NSW 2142

Telephone: (02) 9682 5044  
Facsimile: (02) 9682 6763  
www.mastercom.com.au



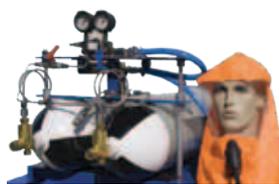
# Dräger

## Technology for Life

Be prepared for the next bush fire season



### BREATHING AIR SOLUTION FOR BUSH FIRE REFUGE ROOMS



Dräger BF ABS 4000

Dräger's vast experience in designing reliable and sought after breathing systems for the Australian mining industry and emergency services has led to the development of a breathing air solution for refuge rooms in bush fire endangered areas. This cost effective system can be customized to accommodate any number of occupants for any length of time.

1800 67 77 87  
www.draeger.com

Dräger. Technology for Life®

# OFFICER IN PROFILE

**Name:** Ron Hardy  
**Rank:** Group Captain (Group 4)  
**D/T/Z:** Yass Valley, Region South  
**Years in service:** 35

## How old were you when you first joined your local brigade and what made you decide to join?

I think I was born into the brigade. My father was the captain from the time I was 10. He was the brigade's first secretary in 1949 and my grandfather was the first brigade president. My great-uncle was the first captain.

## How long have you been a member of the Service and what keeps you as a member?

I have been in the brigade for more than 35 years and, at this stage, I am not sure that I am allowed to retire.

## What do you do when you're not wearing an orange helmet?

Grazier and Brumbies supporter.

## What have you gained personally from your time as a volunteer?

I have gained mateship and friendship through involvement over many years, not just in the brigade but in the district. Blood pressure also seems to come with the territory.

## What are some of the most significant changes that you have witnessed during your time with the Service?

The system has grown from honorary FCOs (Fire Control Officers) to fully equipped and paid Fire Control Centres. There have been significant changes in the level of training and equipment for volunteers. We have moved from volunteer-equipped trucks to NSW RFS-supplied. From a bush fire brigade to a fully fledged fire service providing a broad service that includes MVAs (motor vehicle accidents). The other significant change in our area has been to land use from rural to rural/residential.

## What has been the most frightening moment you have experienced?

I am not sure if the most frightening moments were a half hour at the altar years ago or being in a helicopter over the Lake George fire in 2006.



## What are some of the other big fires and memorable incidents that you have been too?

I missed the 1979 fire because I was down the coast fishing but was involved in the big fires in 1985 and 2003. 1996 at Bulahdelah was interesting. I was a Sector Leader. We drove all night to get there with lights and sirens blaring all the way through Sydney. In 1993 we

drove to Rosehill to pick up our first Cat 1 tanker. This truck was memorable because it ran out of diesel at its first fire.

## What is your most satisfying moment?

Becoming Sutton Captain in 1994.

## What advice can you give to other volunteers?

Think seriously before you commit - because it is addictive and can become a lifelong commitment. Mobile phones and pagers can follow you anywhere.

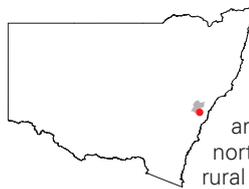
By Michael Gardiner,  
Vice-President, Sutton Brigade

# “THEY ARE A GREAT ASSET TO US”

Story and photos by Jeff Drewitz, Oakville Brigade



**With 24 junior members from 13 high schools, the Oakville Brigade is truly bringing kids together from across the district.**



Located in the Hawkesbury District and covering a large area of Sydney's northwest urban/rural fringe, the brigade, under Captain Peter Speet has been actively recruiting junior members since the 1970s.

Back then, before the formal training programs were put in place, junior members learned on the job so to speak. They picked up their knowledge from older members while attending hazard reduction burns and helping out at other emergencies such as floods. Back then junior members were almost exclusively from families of brigade members.

Since the 1990s with a more formal training routine and

active recruitment of the junior members, membership has grown beyond the immediate local area and juniors now come from throughout the Hawkesbury, Baulkham Hills and Blacktown districts. In an attempt to get them interested, and keep them that way, juniors are started on Bush Firefighter (BF) training as soon as possible. They are actively encouraged to participate in Tuesday evenings' maintenance and training activities, as well as fundraising and Open Days. Another big draw for the juniors is the chance to compete for the brigade at the District, State and National Championships, where they have been very successful over the years.

While many are sons and daughters of older members, others are referred by friends and neighbours or get interested

**LEFT TO RIGHT:** Molly Powe (Bede Polding College), Ben Albers (Toongabbie Christian School), David Taylor (Bede Polding College), Matthew Bellinger (Chisholm Catholic), Paul Fear (Windsor High School), Amber Kennedy (Windsor High School), Adam Hutt (Rouse Hill Anglican College), Andrew Koomen (Cherrybrook Technology High School), Zac Ghys (Bishop Tyrell College), Matthew Carruthers (Oakhill College), Maddie Maslin (Richmond High School), Matteo Pettenon (Oakhill College), Patrick Watts (Arndell Anglican College), Ian McKelvey (Arndell Anglican College), Hannah Powe (Arndell Anglican College), Louise Maguire (Our Lady of Mercy College).

**INSET PHOTO SCHOOL UNIFORMS, LEFT TO RIGHT:** 1. Robyn Moller (Windsor High School) 2. Alistair Mansfield (The King's School) 3. Melanie Cherviakov (Windsor High School)

**NOT IN PHOTO:** Michaela Powe, Bede Polding College Cullum Mansfield, The King's School, Kate Maguire, Our Lady of Mercy College



when speaking to brigade members at Open Days or brigade visits to local schools. Sometimes they even get interested after seeing the brigade in action at an incident.

Our juniors join for a variety of reasons. Louise Maguire, Our Lady of Mercy College, originally joined up to fulfil a requirement for The Duke of Edinburgh's Award. After speaking with a neighbour who was an Oakville member, she and her father joined up two years ago when she was in Year 9. She enjoys the practical aspect to the skills she is learning and values the wider experience that the training is giving her. She recently attended her first fire call, having previously been involved in a few hazard reductions since turning 16. Adam Hutt, from Rouse Hill Anglican, also had a neighbour

who is a member of the Oakville Brigade. After talking about the opportunities there he joined up in 2007 at the age 14. Since then he has, in addition to the training on Sundays and Tuesdays for his BF, attended the Royal Easter Show with the brigade and taken part in some hazard reduction burns.

Matthew Carruthers, from Oakhill College, joined at age 13 while in Year 8. He has an ambition to be a career firefighter and saw membership in the brigade as a way to get a head start. After training for 10 weeks with six other juniors he passed his BF assessment at Ebenezer and has continued training for regional and state competitions.

At the State Championships at Tweed Heads in 2008 the Oakville team came in fourth in the State.

Membership has also given his family a deeper understanding of his intended career. His Mother, Robyn Carruthers, got Matthew started at Oakville after speaking to a brigade member at the local school. She ended up speaking to the District Office, who recommended Oakville as a good start for Matthew as it is the only local brigade that has a cadet program.

So whatever the reason for joining up and wherever they come from, all of our junior members learn new skills, make new friends and enjoy the community service aspect of the brigade. Many of our juniors (40 percent and growing) stay on to become full members and stay for the long term. With so many schools represented there is a real absence of cliques among the juniors at Oakville. They are all just fire men and women in training.

In fact, keeping brigade numbers up and getting new people and new ideas into the brigade are some of the main reasons that Captain Peter Speet promotes the recruitment of juniors actively.

"We have been doing it for a long time," Mr Speet said, "I started off like that. I started at 14 or 15. It used to be that it was all the children of members that came along. Now it has got to the stage that the children bring along their parents!

"They are a great asset to us."

# BENELEC

Professional Wireless Solutions

## BL500 RFS RADIO PACK VHF INCIDENT GROUND



### KEY FEATURES

- Full 5 Watt Output Power
- IP65 - Jets of Water + Dust Proof
- Ultra-Rugged Housing
- **Compact Size:** 114x55x30mm (without antenna)
- **Light Weight:** 300g (with antenna & battery)
- Pre-Configured out of the box for RFS Fire Ground use
- **Economically Priced**
- **3 Year Warranty**



### Pack Includes:

- BL500V (Pre-Programmed to RFS channels)
- Single Bay Rapid Charger
- Heavy Duty Speaker Mike
- AC Power Adaptor
- DC Power Adaptor
- 2X 1800 mAH Battery pack
- Belt Clip & Antenna
- Nylon Case

ORDER#: 96RFS001



ACTUAL SIZE

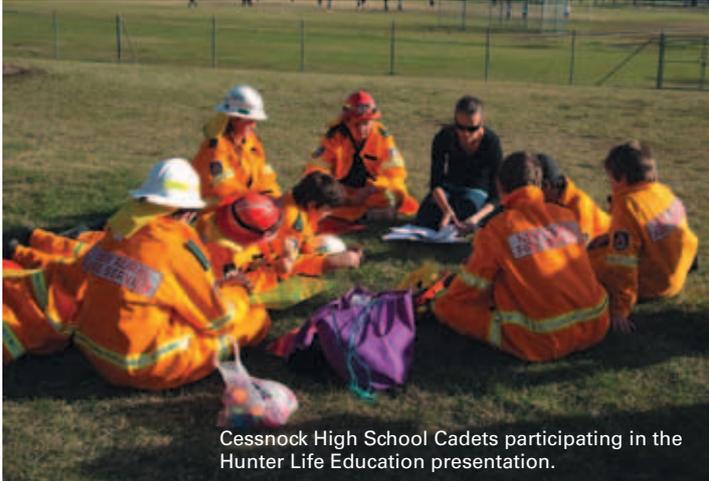


[WWW.BENELEC.COM.AU](http://WWW.BENELEC.COM.AU)

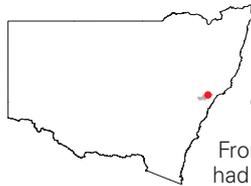
BENELEC. Pty. Ltd. Unit 2/581-587 Gardeners Road Mascot NSW 2020 AUSTRALIA Telephone +61-2-9364-7000 Facsimile +61-2-9364-7099

# ANOTHER SUCCESSFUL CADET PROGRAM COMPLETED IN THE LOWER HUNTER ZONE

By Frank Stewart, Central Brigade, Lower Hunter Zone



Cessnock High School Cadets participating in the Hunter Life Education presentation.



It's only the second year that Central Brigade in the Lower Hunter Zone has run a cadet program, but numbers have already doubled.

From a humble beginning last year when we had two high schools in the zone, we now have a large number of brigades and schools who participate. In 2008 we ran a cadet program at Mount View High School with 15 cadets participating. This year we are running the program at both Mount View High School and Cessnock High School, with 27 students involved. Term Three saw another 24 cadets from the two schools participating.

It is interesting to observe the changes in the cadets from when they first start until graduation. They show a remarkable boost in their confidence, as well as in their ability to work as a team and doing tasks outside their comfort zone.

As part of the cadet program we had Cessnock Liquor Accord, Hunter Life Education, NSW Parks and Wildlife Service and the local Volunteer Rescue Association all giving talks and demonstrations to the cadets.

We have had a number of cadets joining our brigade and they have encouraged or inspired their parents to join the brigade as well. Both the former cadets and the parents have undertaken the Bush Firefighting course and have become valuable members of our brigade.



Cessnock High School Cadets posing in front of our truck prior to their demonstration.



Mount View High School Cadets going through their paces in the five person fog attack.



## FIRE HOSE REELS for over 75 years!

Hannay Reels - Reel Tech are the world leaders in storage & live reel solutions to suit the latest in fire hose technology, along with rescue tools, lighting & communication cable requirements.

- Innovative, OHS compliant rewind & payout systems to ensure safer operating solutions for ALL vehicle applications
- Toughest reels for the roughest operating environments
- Custom reels available from standard parts, in stock
- Local service, stocking & technical support
- Truly safe solutions for both new and retrofit reels
- Nozzles for deluge, vehicle protection systems, monitors & more through sister company, Spray Nozzle Engineering



[sales@reeltech.com.au](mailto:sales@reeltech.com.au) 1800 REELIN  
[www.reeltech.com.au](http://www.reeltech.com.au)

See us again at AFAC 2009!

# ARE CHILDREN THE KEY TO A FIRE SAFE COMMUNITY?

By Briony Towers, Bushfire CRC researcher

## School-based bush fire education is one way of increasing bush fire awareness and preparedness in vulnerable communities.

My PhD research at the University of Tasmania aims to develop a child focussed model of bush fire risk perception that assists fire agencies and educators to be more effective in their education programs.

For the project, 250 children aged between five and 17 were interviewed in same-age focus groups at schools across Victoria and Tasmania. To investigate the influence of the family on children's perceptions and vice versa, approximately 70 parents were interviewed.

While analysis of the interviews is ongoing, several important themes have emerged, each of which have important implications for school-based bush fire education. These themes centre around two major categories:

- the factors children use to assess the risk for their home before a bush fire occurs, and;
- children's ideas about emergency response, in particular, the decision to stay or go.

### Factors used to assess risk

Children focus on a variety of factors to assess the level of bush fire risk for their home. The types of risk factors they identify can be divided into two main categories. The first category encompasses

factors that are perceived to intensify a property's physical exposure to bush fires. These factors include combustible materials and objects around the house such as leaves, long dry grass, woodpiles and wooden furniture. Children as young as five identify these things as hazards that would increase the likelihood of the fire spreading to the house and exposing it to heat and flames:

**L:** *The grass. It can catch on fire easily... And the flowers, they could catch on fire easily.*

**M:** *And they're near the house and they burn on the house.*

**L:** *And the big log. It's made out of wood and it could go across the grass to the house.*

Six years, Warrandyte

Children living in wooden houses think the only way to prepare is to knock the house down and rebuild it in brick:

**D:** *You could turn your house, instead of it being wood you can change it to be brick so that the fire can't get in... Because it can't burn through brick.*

Eight years, Warrandyte

The perception that wooden houses are not defensible is contrary to expert opinion and is problematic because it may thwart the consideration and adoption of simple and achievable measures that can be undertaken to reduce bush fire losses.

The second major category of factors can be described as features that protect a house or property from exposure to the fire front. For example roads, brick walls, rivers and swimming pools are all perceived as providing protection because they would prevent a fire from reaching the house:

**M:** *Well near my house like about not that far away there's sort of a small river going past and it would probably stop there if it came from that way.*

11 years, Warrandyte

The idea that a fire will stop on the other side of a river or brick wall reflects a belief that fire only travels along the ground and, once again, a naivete about the role of ember attack in the spread of fire and the ignition of homes.

A major protective factor identified by children is a brick house. Whereas wooden houses are perceived as being most susceptible to ignition and destruction, brick houses are perceived as providing the most protection and being the most resistant to flames and heat. On this topic children's views are clear - wooden houses burn, brick houses don't:

**B:** *And what would happen if a bush fire came near this house?*



**D:** *It would burn down*

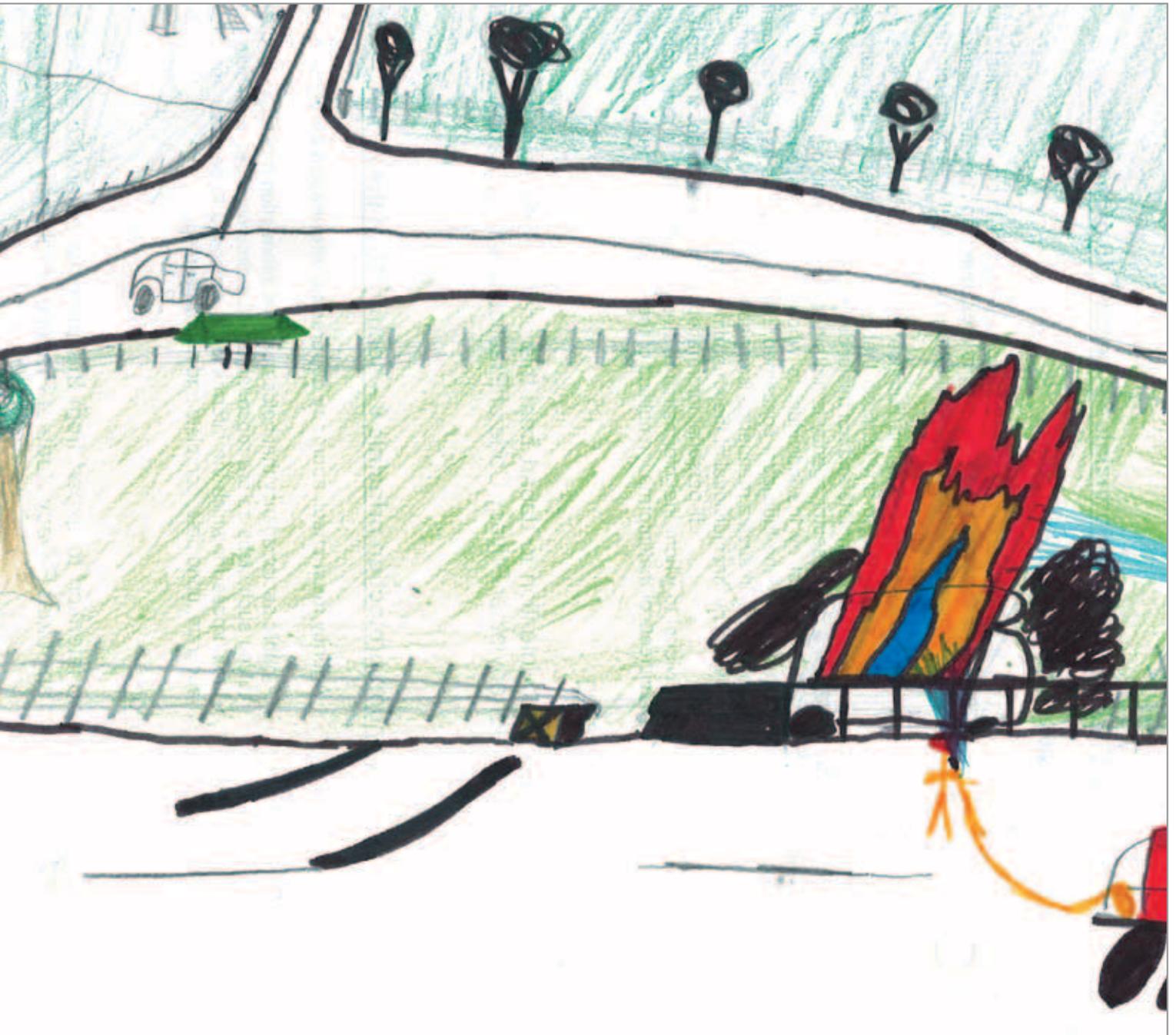
**S:** *Yeah everything around there would burn*

**J:** *But except the house because the house is made of bricks*

Nine years, Warrandyte

Children's singular focus on building materials when predicting the consequences for a house, again, reflects a naivete about how houses actually burn down in bush fires and the factors that contribute to this. They perceive bricks as providing a physical barrier that the fire will not be able to penetrate.

This is a drawing of a truck fire on the Federal Highway near Collector by Steven Shaw.



**“Given the level of trust children have in firefighters as sources of reliable information... an increase in the level bush fire education in primary schools would be a worthwhile investment...”**

What is clear from this examination of children’s perceptions of risk factors is that they focus on significant,

tangible and concrete processes such as burning trees falling on houses, fires stopping at rivers and flames burning through wooden houses. This reflects a lower level of causal thinking about bush fire consequences and serves to illustrate that education programs cannot assume that children think about bush fire risk in the same way as adults.

#### **Emergency response**

In responding to a bush fire emergency, children see themselves as having two main options. The first and most popular option is to get out of the

house as quickly as possible and meet the family at the letterbox or the ‘meeting place’. To ensure this wasn’t a problem of semantics and that they were hearing the word ‘bush fire’, children were asked to verify whether this course of action was appropriate for a bush fire or a house fire:

- K:** *When we see a fire we all run out to the letterbox*
- L:** *Mine’s the same that you have to go out to the letterbox*
- B:** *So are those plans for a bush fire or a house fire?*
- L:** *Both*
- K:** *I would say both.*

10 years, Warrandyte

This lack of differentiation between emergency response for bush fire and house fire is pervasive among primary school children and might be attributed to the emphasis placed on house fire in the school-based education programs currently delivered by Victorian and Tasmanian fire services.

Children’s application of what they have learned about house fire safety to a bush fire scenario is a good example of how, in the absence of other information, children will make use of the information they already have to solve a problem.



The other course of action identified by children is to stay and fight the fire:

**Te:** I'd stay because we believe that we can save the house.

**T:** Yeah, I wouldn't run away. I wouldn't run away

Nine years, Warrandyte

These children, in discussing their approach to protecting the house reveal some valuable insights into how children perceive bush fire risk. In children's dialogue, there is an emphasis on stopping the fire from actually reaching the house. Building brick barricades, keeping the yard wet and throwing water at the fire are all strategies aimed at putting the fire out or stopping it before it reaches the house. They are not preparing the house to withstand the heat and flames of the fire front as it passes over, as is the expert approach to stay and defend, rather their goal is to stop the fire from going past the house:

**K:** Um, well I've got a lot of dirt around my house so I can throw lots of dirt on the fire to make it stop and it will.

Seven years, Warrandyte

If they can't put the fire out before it reaches the house, then they will leave:

**I:** We would stay home...and my dad's going to have a fire extinguisher and try and put out the fire and we would have buckets all around the house

and if it got really bad we'd go to our cousin's house.

**B:** What would really bad look like?

**I:** That far away from our house [30cm]

Eight years, Warrandyte

Fleeing the fire at the last minute makes sense when we consider the children's understanding of what happens as the fire moves past the house. For nearly all children, it is inevitable that the house will be destroyed. When discussing the consequences for a house as a fire passes over, all of their previously stated ideas about brick houses with no trees being safe become redundant. For them, there is nothing that can be done to protect a house in the path of a bush fire:

**B:** How would your [brick] house burn down?

**R:** Well the fire is powerful enough to absorb through the walls...and the fires gonna be more powerfuller and burn the house down

Seven years, Warrandyte

To stay in the house as the fire passes over would mean getting trapped and killed. Children would prefer to jump in the pool or the water tank, get on the roof or try to run than seek shelter in the house:

**B:** Now the fire is at the back fence.

**H:** Well obviously I evacuate to

my neighbours pool.

**J:** But what would you do in the pool?

**G:** You'd hide.

10 years, Warrandyte

### The role of social context in the development of bush fire risk perception

Among the children interviewed, those with the most sophisticated risk perceptions are those from families who take bush fire risk seriously, plan accordingly and include the children in the planning process. Thus, for children at the primary school level the family appears to be the dominant influence.

However, most children select firefighters as the most credible and reliable sources of information because they have hands-on experience and specialised training. Given the level of trust children have in firefighters as sources of reliable information, and given the integral role trust plays in effective risk communication, an increase in the level of bush fire education in primary schools would be a worthwhile investment of agency resources. There is also evidence from this study that school-based bush fire education would have benefits beyond the children themselves.

**"Children exert a powerful influence in their homes and are capable of persuading their parents to consider and adopt (bush fire) preparedness measures."**

Among parents interviewed, a large majority talked about their children coming home from school after house fire education and initiating the formulation of house fire escape plans. Parents noted that due to their

responsibilities as parents, they were unable to ignore or dismiss risk messages that came from their own children. Using children to disseminate messages about bush fire risk to their families may be an effective way to get parents to think more seriously about bush fire risk and the importance of preparing.

### Conclusion

Educating children is a seemingly viable approach to increasing levels of bush fire awareness and preparedness. However, children do not necessarily approach the bush fire education experience with the same set of perceptions or thinking styles as adults. It seems that teaching children about fire behaviour - how fires travel and spread or how houses burn down - would help children to better understand the mechanisms underlying the consequences of preparation. This would provide a more robust foundation upon which to build their understanding of prevention, creating more opportunities for the promotion of preparedness and emergency planning in bush fire prone communities.

**Thanks to David Bruce at the Bushfire CRC and Fire Australia.**

*Bushfire CRC is a national research centre in the Cooperative Research Centre (CRC) program, formed in partnership with fire and land management agencies in 2003 to undertake end-user focused research. The NSW RFS is one of the founding fire agencies in the Bushfire CRC.*

**TOP RIGHT:** One night on the way home, Tia Williams asked her Dad, the Regional Hazard Reduction Coordinator for Region South, how fires burn. After listening to her Dad, Tia produced this drawing at school the next day. She is at Berry Public School in Year 2.

# BOOKS

## BLACK SATURDAY

Stories of love, loss and courage from the Victorian bush fires

Edited by John McGourty | HarperCollinsPublishers

Reviewed by Russell Taylor

**John McGourty has edited together stories and experiences from those who suffered the devastation and loss of the ferocious Victorian Fires of February 2009.**

Reading this book is a deeply emotional experience and I am yet to find a firefighter who was even remotely affected by the fires, who can read more than one or two of these personal accounts without having to put it down and seek some distraction. I think this is because of the nearness of events and its ability to touch firefighters at the very heart of what we try to do in and for our communities.

**“Overall the reader is struck by the enormity of the fires that must have appeared as chaos at best and Armageddon at worst...”**

But in saying that I would not want to discourage anyone from reading this fine compilation of events and their aftermath. It is rare that we get to hear from the people who are most affected and in my view, we ought to take advantage of resources like this to try to understand what the public thinks before, during and after such terrible fires.

It's important for us to understand what messages the public receive and how they perceive our advice in order to better appreciate what they hear, accept and act upon.

Contributions range from the lofty to the most humble and everyone in between. There is

also a contribution from one of our own - Group Officer Peter Evans from Sutherland Rural Fire District.

One passage, among many I could have used, illustrates the point. *“Something else becomes clear, too. Luck is not only handy. Today, in Marysville, it is everything. Untended houses still stand, defended houses burn down. And conventional advices, such as staying inside the house and filling baths with water, is shown to sometimes offer the thinnest veneer of protection. Time. There isn't enough of it before the fire hits Maryville.”* (Patrick Carlyon, Herald Sun, p 195)

Possibly nothing could prepare communities for the ferociousness of the Victorian fires. Overall the reader is struck by the enormity of the fires that must have appeared as chaos at best and Armageddon at worst, to the residents of the affected towns.

The current Royal Commission may shed some light on this. Until then, this compilation of views, stories and the consequences of such a tragedy is a valuable contribution to the debate on community preparedness and emergency services' response.

All proceeds from the sale of the book go to the Salvation Army Victorian Bush Fire Appeal. Just another good reason to pick up a copy.



# WORLD

# FIRE BOTSWANA: new to fire management

By Melissa Krull, NSW RFS Communications Intern



**ABOVE:** His Excellency, the High Commissioner of the Republic of Botswana, Molosiwa Selepeng visited the NSW RFS Headquarters and met with the NSW RFS Commissioner Shane Fitzsimmons.

**TOP AND CENTRE:** As part of the developing relationship between the two countries, Head of the Department of Forest and Range Resources in Botswana, Jeremiah Ramontsho, was invited to speak at the recent International Wildfire Management Conference hosted by the NSW RFS in Sydney.

**BELOW:** The NSW RFS team in Botswana in June 2009

**CENTRE RIGHT:** Lions pouncing on their freshly caught prey. One of the NSW RFS team snapped this while driving to a training session.

**In September 2008 a series of large fires burnt out 11 million hectares of land in the country of Botswana in southern Africa. Fortunately no lives were lost however there was significant environmental damage with an estimated 17 percent of Botswana's wildlife destroyed.**

Following the devastating fires, the Government of Botswana approached Australia to help them gain a better understanding of bush fire management and improve their firefighting skills.

After completing a Scoping Mission, Rural Fire Service (NSW RFS) officers made a number of recommendations which led to the formal signing of a Memorandum of Understanding (MOU) between the Service and the Republic of Botswana. This MOU will allow Botswana to develop their firefighting and fire protection skills with the support from the NSW RFS over the next five years.

His Excellency, the High Commissioner of the Republic of Botswana, Molosiwa Selepeng visited the NSW RFS Headquarters to meet with the NSW RFS Commissioner Shane Fitzsimmons. He said the MOU is very important to the Botswana people.

"It is a matter of life and death, as we don't have any real capacity to put out fires," he said, "When fire comes, everything goes to smoke – literally!"

His Excellency said that at the moment people tend to panic at the sight of a bush fire. He believes that many people in Botswana would benefit from learning new skills in order to fight fires more effectively.

Botswana is a relatively large country and has some of the best protection in southern Africa for its wildlife and the environment. Elephants, giraffe, many types of deer (including impala) and big cats are abundant in the central and northern parts of the country and government legislation ensures that the wildlife remains diverse, well-nourished and protected from poachers.

The Republic gained its independence from colonial Britain in 1966. Since then it





reserves and is well placed to develop its fire and emergency management capabilities.

As part of the developing relationship between the two countries, Jeremiah Ramontsho, from the Botswana Department of Forest and Range Resources, was invited to speak at the recent International Wildfire Management Conference hosted by the NSW RFS in Sydney.

At the conference in June 2009, Mr Ramontsho said that there were less than 200 firefighters who had received the basic fire training course in Botswana.

With so few members of the community trained to fight bush fires, fires can easily get out of control. The Botswana Government is looking toward the NSW RFS as a model for developing their own volunteer fire service.

"We do want more trained firefighters," Mr Ramontsho

## The commitment from the NSW RFS

Between July and February 2010, 14 NSW RFS staff and volunteers will be travelling to Botswana to provide basic firefighter training.

NSW RFS personnel, (mostly volunteer members) will train 90 people in basic firefighting in each deployment, perform assessments and look for potential trainers and crew leaders. They will also get some time to visit game reserves and undertake other cultural activities.

Personal and professional development of our people is at the forefront of our work internationally, Group Manager Executive Support, Russell Taylor said.

"While the Service is sharing expertise and experience with our neighbours and assisting countries such as Botswana to up skill their people and better protect themselves from fire and other emergencies, we never lose sight of the opportunity to provide professional development for our volunteers."

The Botswana program ranges over five years and it is hoped that many more Service personnel will be able to share their skills, knowledge and experience with firefighters from Botswana either over there or here in NSW.

"We were overwhelmed by the response to an EOI seeking Service members who were willing to participate in overseas projects," Mr Taylor said.

"Through the program with Botswana, and other programs in the pipeline, we hope that many more Service members, particularly volunteers, will have the opportunity to work and gain useful insights into the fire issues of other countries."

In the coming five years and supported by NSW RFS training and guidance, the Botswana Government hope to become a centre of excellence in Sub-Saharan fire management. They see themselves as providing bush firefighter training for the entire southern African region and enabling countries to work together to manage fires.



said, "As you can see the country is big and most of the population is in the rural areas.

"At the moment when there is a fire outbreak, communities expect to be paid if they were to go to a fire or they expect the Government to be on the forefront in terms of mobilising resources and going to put out the fire," he said.

"We would like to see the community owning the problem. It is their resources, their land and it is their livelihood that is being impacted by these fires," he said.

"If people can be trained and given resources, I believe they can efficiently manage the fires themselves."

has been peaceful and well-governed and has developed remarkably. Mining, especially diamond mining, has meant the government has significant cash



# CAPTURING THE NSW RFS VALUES IN ACTION

In 2008 the NSW RFS announced seven new organisational values. They are:

1. One Team, Many Players, One Purpose
2. Integrity and Trust
3. Support, Friendship, Camaraderie
4. Community and Environment
5. Knowledge and Learning
6. Adaptability and Resourcefulness and
7. Mutual Respect

## Our values in action

Each value has a certain behaviour that can be seen "in action". Most people know when they're on the receiving end of support and friendship. We also know what being in a team looks like. And we can identify that people respect each other by how they relate to each other.

But what does Integrity look like? And what does Knowledge and Learning or Adaptability and Resourcefulness look like? And how do you find a photo that sums up Community and Environment?

These questions faced the project team who were tasked with branding and marketing these seven values.

## A photo competition

As one of their strategies - the team launched a photo competition in March 2009.

Around 200 separate photos were submitted up to the closing date of 31 July 2009. The project team and three guest judges (a volunteer, a senior staff member and a professional photographer) chose three winners to take home vouchers for photographic equipment.

Each photo was assessed for composition, resolution, clear focus, mood and inspiration - and, of course, on whether it showcased one of the seven values. The winners and other short-listed images will be used in this publication and in the 2008-09 NSW RFS Annual Report.

## A picture worth a thousand words

The voting was done on 65 of the 200 entries. The entries selected for judging were filtered initially against criteria including - correct PPE, correct safety procedures, appropriate service activity and appropriate digital formatting.

The criteria used for judging the effectiveness of the photographs were: the impact, the emotional quality, the clear point of interest, the creativity, the technical competence, the story telling quality, technical mastery and finally the composition.

The prize winning photos were then assessed on how well they represented the seven organisational values. The winner was determined on the number of values inherent in that single photo.

These photos and several others make up the NSW RFS Values posters downloadable on MyRFS.

## We are pleased to announce the winners:

### 1st prize The Gumble Gum Tree Meeting

**Steve Smith  
Gumble Hall,  
North of Manildra,  
Cabonne District,  
Canobolas Zone  
October 2006**

The composition and story in this photo articulates a number of the seven values - particularly Community and Environment, Learning and Development and Adaptability and Resourcefulness.

At the time the photo was taken, the NSW RFS was conducting brigade consultation about risk management in particular on the Goobang project. Being resourceful, the team also used the day to issue PPE to farmers and answer questions in regard to fleet and equipment. Being adaptable, Steve, the photographer, Operations Officer for the zone, also acted as chef on the BBQ for the day.





### 2nd prize – Teamwork

**Matt Reeves**  
**Region East Championships,**  
**Cataract Scout Camp, Wollondilly**  
**September 2008**

This photo captures the focus and dedication essential in two of our seven NSW RFS values, namely; One Team, Many Players, One Purpose and Learning and Development. The photographer is a Learning and Development Officer, who was working on the day and was struck by the crew from Cumberland, who were competing in the championship task of building a fire trail.

“They were working so well together, with everyone doing their part to achieve a greater goal!”, Matt said. He photographed them with the idea of using the image in the training programs he runs. Matt is also a member of the Ingleside Brigade, Warringah Pittwater.



### 3rd prize – Hayley

**Steve Brown**  
**Basic Training Course,**  
**Bulga**  
**November 2008.**

The photo - with a disarming star, Hayley - epitomises the satisfaction and joy that comes from a job well done.

Steve, the photographer who is the Operations Officer, Hunter Valley Team was running a basic training course for the Hunter Valley Team. Darlington Brigade was on the course and Steve was struck by this young member's candour and enjoyment of the task.

Within shot we see Hayley's team behind her, ready to support, offer friendship and share the camaraderie that comes with being in a close knit team at the end of a good day's job. The photo also represents the value of Knowledge and Learning.

## Choosing the winners

There were so many great photographs received – it is very difficult to choose one great image over another. But that was the job these judges had.

Because there can only be three winners, the judges highly commended photographs by David Mayer, Cain Maitland, Grant Roberson and Barry Smith as well.

Thanks to all who contributed to this competition – we hope you continue to photograph the NSW RFS Values in action and send them and the story behind them through to the Bush Fire Bulletin or MyRFS so that we can share the image with others.

# CAPTURING THE NSW RFS IN ACTION

## HIGHLY COMMENDED:



**David Mayer**  
Rubicon Forest, Victoria, February 2009

An NSW RFS member and DSE tree felling specialist in the Rubicon Forest in Victoria. Both were part of a crew conducting property protection and containment lines around several historic sites in the area. The photo was taken eight days after Black Saturday.



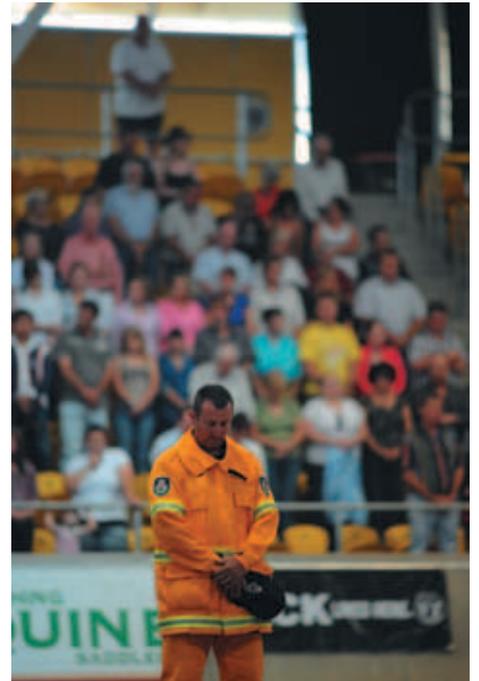
**Cain Maitland**  
Londonderry, in Sydney's north-west, NSW, January 2009

Mopping up in Londonderry the day after fires threatened 15 homes and destroyed sheds, cars and machinery.



**Grant Roberson Pulletop Rural Fire Brigade - Riverina Zone**  
Moreton National Park, January 2009

Raft crews take a breather during mopping up operations in the Moreton National Park, at the Wingecarribee Section 44.



**Barry Smith,**  
Northern Daily Leader,  
Tamworth, April 2009

An NSW RFS member, Gowrie RFB Captain Steve Walters, observes a minute of silence for the victims of the Victorian bush fires prior to the commencement of the Rodeo Fundraiser in Tamworth. The event raised just under \$51,000 for the Victorian Bush Fire Appeal.



**Dean Symons, Royal National Park at Maianbar, NSW, 2007.**

# BUSH FIRE BULLETIN READER SURVEY

Overall, how appealing did you find this edition?

- Very appealing
- Fairly appealing
- Neutral
- Fairly unappealing
- Very unappealing

Comments: .....

.....

.....

.....

.....

.....

For each of the following, please indicate or comment on the features you were interested in reading in this issue (tick column applicable)

	Yes, I was interested	interested	I will use this section
<b>Incidents</b>	<input type="checkbox"/> .....	<input type="checkbox"/> .....	<input type="checkbox"/> .....
<b>General News</b>	<input type="checkbox"/> .....	<input type="checkbox"/> .....	<input type="checkbox"/> .....
<b>Features</b>	<input type="checkbox"/> .....	<input type="checkbox"/> .....	<input type="checkbox"/> .....
<b>Operations Liftout</b>	<input type="checkbox"/> .....	<input type="checkbox"/> .....	<input type="checkbox"/> .....
<b>Spotlight on Volunteers</b>	<input type="checkbox"/> .....	<input type="checkbox"/> .....	<input type="checkbox"/> .....

Please list the types of stories, or specific story ideas, you are interested in reading in the Bush Fire Bulletin

.....

.....

.....

## SIGN UP TO RECEIVE 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:**  
 Bushfire.Bulletin@rfs.nsw.gov.au

**Name:** .....

(Please include any post-nominals)

**Address:** .....

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

**Email address:** .....

- Update       New Subscription



## ANNUAL PUBLISHING AUTUMN / WINTER / SPRING / SUMMER

## PRODUCTION & ADVERTISING CARILLON GRAPHIC COMMUNICATIONS

Advertising, Design & Artwork: Steve Byers: 02 9906 2444 // [steve@carillongraphics.com.au](mailto:steve@carillongraphics.com.au)

## BUSH FIRE BULLETIN ADVERTISING RATES & SPECIFICATIONS

NOTE: ALL RATES ARE BASED ON PER ISSUE. Popular sizes shown here only.

To view or download the **FULL RATE CARD** go to: [http://www.rfs.nsw.gov.au/dsp\\_content.cfm?CAT\\_ID=510](http://www.rfs.nsw.gov.au/dsp_content.cfm?CAT_ID=510)



	Measurements (Width x Height)	Casual Rate Per Issue	RHP First 12 pages	12 Month Contract rate	12 Month Contract RHP First 12 Pages
Spread	<input type="checkbox"/> 420 x 297mm	<input type="checkbox"/> \$2810	<input type="checkbox"/> \$3232	<input type="checkbox"/> \$2670	<input type="checkbox"/> \$3070
Full Page	<input type="checkbox"/> 210 x 297mm	<input type="checkbox"/> \$1405	<input type="checkbox"/> \$1616	<input type="checkbox"/> \$1335	<input type="checkbox"/> \$1535
1/2 Page	<input type="checkbox"/> 132 x 186mm	<input type="checkbox"/> \$984	<input type="checkbox"/> \$1132	<input type="checkbox"/> \$935	<input type="checkbox"/> \$1075
Inside Front Cover	<input type="checkbox"/> 210 x 297mm	<input type="checkbox"/> \$2038	NA	<input type="checkbox"/> \$1936	NA
Inside Back Cover	<input type="checkbox"/> 210 x 297mm	<input type="checkbox"/> \$1967	NA	<input type="checkbox"/> \$1869	NA
Outside Back Cover	<input type="checkbox"/> 210 x 297mm	<input type="checkbox"/> \$2178	NA	<input type="checkbox"/> \$2069	NA



[www.rfs.nsw.gov.au](http://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 9737 0171

Email: [Bushfire.Bulletin@rfs.nsw.gov.au](mailto:Bushfire.Bulletin@rfs.nsw.gov.au)

Web: [www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au)

ISSN: 1033-7598

Publisher NSW RURAL FIRE SERVICE Editor Jacqueline Murphy

Production/Advertising Coordinator Steve Byers Graphic Design/Art Production Steve Byers - Carillon Graphics

Cover Photo NSW RFS Commissioner Shane Fitzsimmons addresses the International Wildfire Management Conference, 19 June 2009. Photo by Adam Hollingworth.