

Fire & Rescue

Winter 2017

News

FAREWELL & WELCOME

A new Commissioner for FRNSW

CAPABILITY ROADMAPS

deliver clear direction

FIRE OPERATIONS JOURNAL

The facts about
hydroponic grow houses



The Minister WRITES



In the Cabinet reshuffle that followed Ms Gladys Berejiklian succeeding Mike Baird as the Premier of NSW, I took on the vital portfolios of both Police and Emergency Services.

Serving as a Minister is an enormous privilege and I will continue to work tirelessly in my portfolios as well as in my role as Member for Dubbo.

As a former Police Officer with 22 years frontline service, I am very aware of the close working relationship between Police and emergency services, and the critical role they both play in serving and protecting the community.

I note that this is a time of significant change for Fire & Rescue NSW. Last December in the NSW Parliament, we paid tribute to the achievements of Greg Mullins who recently retired after 13 outstanding years as Commissioner. At the same time, Paul Baxter from the New Zealand Fire Service was recently selected via an international executive search to succeed Mr Mullins as the next FRNSW Commissioner.

I look forward to working with Mr Baxter and other emergency service representatives to ensure that our State continues to be well prepared to deal with any emergency or natural disaster. I am also dedicated to supporting our State's emergency services staff and volunteers to ensure they have the resources they need to get on with their jobs of looking after the community.

Troy Grant

Minister for Police and Emergency Services

The Commissioner WRITES



As I begin work as FRNSW Commissioner, I must reflect on the extraordinary contribution made by my predecessor, Commissioner Greg Mullins, to make this one of the world's best and most respected firefighting organisations.

It certainly gives me the firmest foundation upon which to begin my work. Together with the leadership team, I have begun the process of determining how we will go about setting the future direction for FRNSW.

It will be a thorough and thoughtful process with input and involvement with as many people as possible. What is clear already is that there are many challenges for us such as the expected growth in the State, limited budgets and complex emergency management environment, but there are also many opportunities as well. We need to choose our direction wisely.

Over the coming months I will be asking various groups representing all FRNSW's layers, departments and workgroups to feed into the development of the plan. Most importantly, our communities, external partners and stakeholders will also be consulted to ensure we keep an external focus, after all, that is what we exist for, to serve the community.

Your participation is invaluable and I will communicate our progress openly and regularly.

Meanwhile a lot of work is being done to ensure our operations are continuing to endure and improve for both current and emerging issues and challenges. In recent months we have finalised roadmaps for firefighting, hazmat and incident management to guide the ongoing development of these capabilities. We also have a new headquarters at our Greenacre site and work is continuing on the new State Training Academy at Erskine Park.

I thank the Executive team for the support they have offered me, and all staff for their welcome. I especially thank Deputy Commissioner Jim Hamilton for the high level of professionalism he has shown leading FRNSW in the period following the retirement of Commissioner Mullins.

Paul Baxter
Commissioner

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Fire & Rescue NSW @FRNSW · 4 Nov 2016
REVESBY | UPDATE: #FRM photo of car wrecking yard in



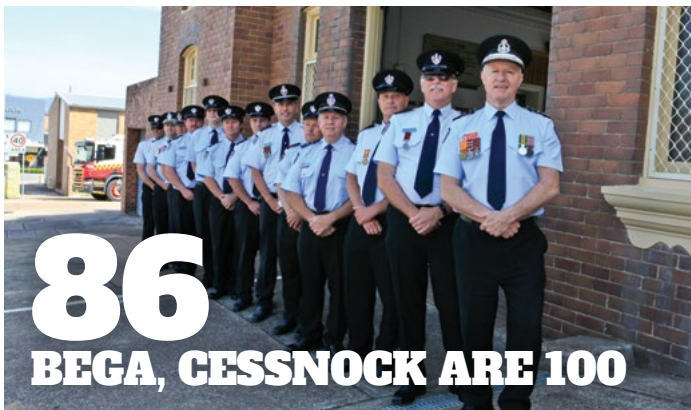
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CHANGE OF COMMISSIONER FOR FRNSW

COMMISSIONER GREG MULLINS RETIRES LEAVING HUGE LEGACY

He was the principal architect of the NSW “two fire services policy”.

Commissioner Greg Mullins was appointed as the 21st Chief Officer on 4 July 2003. He is the second longest serving Chief, only surpassed by Supt Alfred Webb who served from 1898 to 1913, and the first person to come from the ranks to fulfil the roles of both Chief Fire Officer and Chief Executive Officer.

Commissioner Mullins had a solid firefighting and rescue background, having served as a volunteer firefighter with the then Bushfire Service from 1972 to 1982, and as a career firefighter with the NSW Fire Brigades from 31 March 1978. He rose quickly through the ranks, serving at busy fire stations and the Bushfire Section. As a Station Officer and District Officer he relieved in many specialist positions, in Sydney, Newcastle, Wollongong and the country.



Fondly farewelled after more than 13 years of exceptional service


VIEW VIDEO AT
fire.nsw.gov.au/frnews

OR


SCAN CODE TO WATCH NOW




Commissioner Greg Mullins

In 1995 he was appointed Superintendent / Manager of the Operations Research Unit, and was awarded a Churchill Fellowship allowing him to travel to England, France, Spain, Canada and the USA for three months. He was appointed as a member of a Ministerial Task Force to consider experiences during the 1994 bushfires, and how the two fire services could work more closely together. He was the principal architect of the NSW “two fire services policy”.

He was appointed as a Regional Commander (Assistant Commissioner) in 1996, and in 1997 was seconded to a major private sector company as a Project Director. In 2000 he was appointed Director State Operations. He has completed the Oxford Strategic Leadership Program, the Executive Fire Officer Program at the US Fire Academy, has a Masters Degree in Management, is a Fellow of the Institution of Fire Engineers and the Australian Institute of Management, and is a Graduate of the Institute of Company Directors.

While the operational capabilities, corporate governance and business performance of FRNSW have been transformed and modernised during Commissioner Mullins’ term, perhaps his greatest legacy will be in the “people side” and organisational culture. A passionate advocate of workplace fairness and dignity, he leveraged a difficult period involving revelations of historical workplace bullying and harassment to rally the government, employees and unions to support values-based leadership, workforce engagement, and a modernisation of workplace practices. He also championed workplace diversity, implementing an Indigenous employment program and a 50/50 male/female recruitment policy.

A passionate advocate of workplace fairness and dignity, he leveraged a difficult period involving revelations of historical workplace bullying and harassment to rally the government, employees and unions to support values-based leadership, workforce engagement, and a modernisation of workplace practices.

Commissioner Mullins, who served as President of AFAC, received many awards during his career including the Australian Fire Service Medal, the National Medal and two Clasps, the Commissioner’s Commendation for Courageous Action, the NSW Police Commissioner’s Commendation for Service, the NSW Fire Brigades Long Service and Good Conduct Medal and two Clasps, the Chief Officer’s Commendation, and the St John Ambulance Emergency Services Award.

FRNSW wishes him and his family all the best in a well-deserved retirement.

END

Parliamentary tribute by former Premier Mike Baird, 8 November 2016

On behalf of everyone in New South Wales I say a simple thank you to the Commissioner—to Greg. My thanks go well beyond gratitude for his incredible decades of service. His service typifies the service of all fireies, who are prepared to put their lives on the line for all of us. Words are not enough to describe that. The Commissioner’s service has been incredible. This is about more than his roles and responsibilities; it extends to who he is and the way he has carried out his role. His grace and humility have been an inspiration and an encouragement to every single one of us. He has fulfilled his leadership role in a way that all of us look up to. So on behalf of the people of New South Wales I thank him.

APPOINTMENT OF NEW COMMISSIONER PAUL BAXTER

Paul Baxter was appointed the new Commissioner of FRNSW and the 22nd chief officer of FRNSW/NSWFB following an international executive search and merit-based selection process.

Mr Baxter was the National Commander and Chief Executive of the New Zealand Fire Service (NZFS), overseeing both it and the National Rural Fire Authority. Together they have 10,000 volunteers and 2,200 career staff serving at 650 fire stations nationally. The NZFS is recognised worldwide as a capable, innovative organisation largely due to Mr Baxter’s leadership and focus on workforce engagement and innovation.

Mr Baxter has more than 30 years of fire service experience, originally serving as a volunteer firefighter, then as a firefighter with the New Zealand Air Force. He became a full-time firefighter with the New Zealand Fire Service and worked through the ranks until being appointed as National Commander a year after the devastating 2012 Christchurch earthquake.

In addition to his firefighting credentials, which included being on an incident management team during the 2001 Christmas bushfires in NSW, Mr Baxter was a volunteer ambulance officer for many years. Recently, in partnership with St John Ambulance, he implemented a co-responder program between the fire service and ambulance service in New Zealand which is credited with saving many lives.

Mr Baxter describes himself as “an experienced emergency services executive with a broad and deep understanding of the sector including urban and rural fire management, fire engineering, risk reduction, response, rescue, hazardous materials and emergency medical services”. His practical experience is backed by formal education in business and emergency management disciplines and he is experienced in developing organisational capability to respond to disasters and crises.

Mr Baxter holds a degree in business, is a certified company director with the New Zealand Institute of Directors, has studied advanced management at the Melbourne School of Business, is a Fellow of the Institution of Fire Engineers, a Member of the New Zealand Institute of Management, and has completed the Executive Fire Officer Program at the United States Fire Academy.

When Commissioner Mullins stepped down recently as President and Board Chair of the Australasian Fire & Emergency Service Authorities’ Council (AFAC), Mr Baxter was elected to succeed him – the first New Zealander to hold this prestigious role. Until recently Mr Baxter was also Chair of the Asia-Pacific Region of the UN’s International Search & Rescue Advisory Group (INSARAG), and oversaw New Zealand’s achievement of UN accreditation as a heavy urban search and rescue task force. **END**



Commissioner Paul Baxter

 **VIEW VIDEO AT**
fire.nsw.gov.au/frnews

OR

 **SCAN CODE TO WATCH NOW**



Torning's Trumpet



Handover of the Commissioner's black helmet

HANDOVER MARKS START OF NEW CHAPTER FOR FRNSW

Monday 16 January 2017 was a momentous day with a large crowd of dignitaries, staff and other emergency service representatives attending to witness the historic handover to FRNSW's new Commissioner.

At the ceremony, the much-loved serving Commissioner Greg Mullins AFSM was fondly farewelled and tributes paid to his extraordinary achievements during his 13 years at the helm. At the same time, FRNSW warmly welcomed its new Commissioner, Mr Paul Baxter, who took up his new role at FRNSW on 24 April. Deputy Commissioner Jim Hamilton AFSM served as Interim Commissioner during the transition period.

Attendees at the handover ceremony included the NSW Governor David Hurley, Minister for Emergency Services David Elliott, and the heads of all the other NSW emergency services. This strongly reflected the high regard in which FRNSW is held, and also the close cooperation between agencies in the emergency services sector.

Highlight of the ceremony was the formal handing over of the FRNSW banner to Mr Baxter, symbolising the transfer of command. In addition, Mr Baxter was presented with the Commissioner's black helmet, a familiar sight at major incidents, and Torning's trumpet, which was used in the fire service's early days to shout orders on the fireground.

Firefighters from 01 City of Sydney, 22 Leichhardt, 23 Gladesville, 28 Marrickville and 39 Randwick provided a parade and three Maori elders performed a traditional ceremony to mark the occasion.

At the ceremony's conclusion, Commissioner Mullins and his wife Erris were driven away in the historic 1929 Ahrens Fox fire appliance provided by the Museum of Fire. **END**



Commissioner and Mrs Erris Mullins

The much-loved serving Commissioner Greg Mullins AFSM was fondly farewelled and tributes paid to his extraordinary achievements during his 13 years at the helm. At the same time, FRNSW warmly welcomed its new Commissioner, Mr Paul Baxter, who took up his new role at FRNSW on 24 April 2017.



CAPABILITY ROADMAPS LAUNCHED TO PROVIDE STRATEGIC DIRECTION

Capability roadmaps provide strategic direction and support FRNSW operations in a changing environment. They are developed through consultation across all areas of the organisation.

The Rescue Roadmap was launched in 2015 and has already delivered on some of the projects outlined in the 2015/16 period. The Incident Management, Hazmat and Firefighting roadmaps were recently released and outline objectives to 2021. **END**

REALISTIC AND ACHIEVABLE INCIDENT MANAGEMENT GOALS

Managing emergency incidents professionally and effectively is a core FRNSW capability.



The term ‘incident management’ describes the processes, decisions and actions taken to resolve an emergency incident effectively, efficiently and safely.

Incidents have always been managed by some type of formal or informal command structure. In 1909, when the NSW Fire Brigades was established, the senior ranking officer present took command of the brigade. Fast forward to the 1980s and the development of the Australasian Inter-Service Incident Management System changed the face of incident management and revolutionised its training and assessment.

By 2013, its importance was reflected in the creation of the Capability Manager Incident Manager position. In 2015, a new Incident Management System (including Standard Operational Guidelines, policy and training) was released.

Capability Manager Incident Management, Superintendent Greg Rankin, said the roadmap builds on the launch of the new Incident Management System in 2015.

“It’s easy to just think: ‘Are the fires going out? Are the hazardous materials being rendered safe? Are rescues being performed? Yes, of course’. But as a leading organisation, we should never be complacent.

“The roadmap brings together a comprehensive review of our current capability and the drivers for changes we’ll encounter over the coming five years. Things like climate change, social media, technology for firefighters and mobile apps will continue to have a major influence.

“With all this in mind, the roadmap sets out a series of realistic and achievable goals against six strategic objectives to both maintain and improve our ability to manage incidents.”

For more information, see the toolkit (Toolkits → Operational → Incident Management → Incident Management Capability). **END**

The Incident Management Roadmap 2017–21 shows how FRNSW plans to:

- Embed the incident management system as the accepted practice for managing all incidents attended by FRNSW
- Ensure all FRNSW incident commanders are recognised as professional practitioners of incident and emergency management
- Enhance the use of technology for efficient and effective incident management success
- Ensure FRNSW incident management is interoperable and aligns with national emergency management arrangements
- Take a leadership approach within AFAC incident management streams, shaping incident management throughout Australasia
- Continually improve incident management within FRNSW through innovation and operational improvement.



A HOLISTIC APPROACH TO FIREFIGHTING

FRNSW fights all types of fires, including structure fires, bush and grass fires, transport fires, and flammable liquid fires.

With permanent and retained firefighters at 338 fire stations, FRNSW has the resources to protect 90% of the NSW population from fire.

During major bushfires resources are moved where required to support the Rural Fire Service or to a major fire interstate if requested.

FRNSW's firefighting knowledge is also used to educate the community on fire safety and prevention to incidents.

Capability Manager Firefighting, Superintendent Jeremy Fewtrell, said the Firefighting Roadmap lays out intentions for the next five years, and what is important.

"It is more holistic in approach: before it was possible to become too focused a small aspect. Now we will work more strategically across a broader view," he said.

"Firefighters may not have always been aware of the work that has gone on in the background to enable the organisation to do the work that it does. With the Roadmap, for the firefighter, it is up front, out in the open and it demystifies things.

If a firefighter has a certain passion for a particular area, he or she can see through the Roadmap how they can potentially participate in it either directly or indirectly."

Supt Fewtrell said that from an organisational point of view, the roadmaps will allow better linkages with other sections to deliver a more cohesive product.

The Firefighting Roadmap breaks the core functions of firefighting into six separate but intertwined areas, beginning with structure fires and increasing in complexity. **END**

The Firefighting Roadmap identifies six strategic objectives and identifies projects to address the changing environment to 2021. To achieve its vision, the strategic objectives are:

- Ensure all firefighters have the knowledge, skills and capability to provide safe, effective, and rapid response to structure fires and emergencies.
- Enhance firefighting capabilities to ensure adaptable operators at complex structure fires.
- Partner with the transport industry and policy makers to lead community focused outcomes at transport fires and other emergencies involving transport infrastructure.
- Ensure all firefighters have the pre-requisite skills and knowledge of hazards faced at flammable liquid and other special fires.
- Provide a safe, effective and rapid response to urban interface fires.
- Ensure fire safety within the built environment and prevention strategies are fully integrated and embedded into firefighting capability.

GROWING HAZMAT CAPABILITY FOR ALL FIREFIGHTERS

The Hazmat Roadmap aims to increase FRNSW's hazmat capability, with an emphasis on training, developing partnerships with industry and other agencies, and keeping pace with emerging hazmat technology trends worldwide.

As the combat agency for all hazardous materials incidents on land and inland waterways within NSW, FRNSW is responsible for protecting and saving life and property, confining or ending such incidents, and rendering the site safe.

FRNSW deals with hazmat incidents ranging from small and contained, to large and complex, using a standard methodology in which all firefighters are trained. It is also responsible for dealing with chemical, biological, radiation or nuclear (CBRN) incidents.

FRNSW has agreements to assist numerous government agencies and its hazmat capabilities can be deployed anywhere within NSW, nationally or internationally.

Capability Manager Hazmat, Superintendent Paul Johnstone, said it is important for FRNSW that it not only maintains its hazmat capability, but continues to grow it.

"The hazmat field is one that requires continuous improvement, whether we are dealing with accidental release of chemicals within industry, transport accidents, or deliberate acts of vandalism/terrorism," he said.

"The hazmat roadmap will assist all firefighters. The hazmat capability is not just limited to firefighters attached to hazmat stations. All firefighters within FRNSW have a hazmat capability. An example is the roll out of the Altair multi-head gas detectors to every station in NSW.

It is important that all FRNSW firefighters remain competent, confident, and professional in dealing with all manner of hazmat incidents to which they are likely to respond." ■■■■END



The Hazmat 2021 vision is for FRNSW to be recognised as a leading provider of hazmat/CBRN capabilities. To achieve this, Hazmat 2021 sets out these strategic objectives:

- Ensure FRNSW's hazmat/chemical, biological, radiation or nuclear (CBRN) capability meets its legislative requirements and the expectations and needs of the community.
- Ensure all firefighters are recognised as professional hazmat practitioners.
- Effectively use current and emerging hazmat technologies.
- Partner with industry and other agencies to enhance hazmat services.
- Take leadership within AFAC hazmat, to assist other agencies in shaping hazmat capabilities throughout Australasia.
- Continually improve hazmat capability within FRNSW through analysis, innovation and constant learning.

OPERATIONAL EXCELLENCE FRAMEWORK

A new Operational Excellence Framework was published in January 2017 to detail how FRNSW establishes, maintains, continuously improves and adjusts its services to the community. Operational excellence is built on a philosophy of leadership, teamwork and problem solving resulting in continuous improvement.

In establishing the framework, Manager Operational Improvement Superintendent Mick Morris said thinking about and engaging in continuous improvement, and seeking to always achieve operational excellence, is something that everyone in FRNSW is involved in.

The Operational Excellence Framework is a methodology that explicitly links FRNSW's purpose and mission with the organisational elements that are required for operation excellence.

"The Operational Excellence Framework is a methodology that explicitly links FRNSW's purpose and mission with the organisational elements that are required for operation excellence, including our ability to establish routines and practices that help us put the right capability in the right place at the right time," he said.

The framework includes the 'Plan, Do, Check, Act' cycle. This is consistent with internationally recognised continuous improvement frameworks such as ISO9001 quality assurance systems.

For more information about the framework, contact Supt Mick Morris.

■■■■END

5
MINUTES
WITH...

OUR NEW SENIOR EXECUTIVE TEAM



Back, from left: Executive Director People and Culture, Assistant Commissioner Mal Connellan; Executive Director Logistics Support, Emmanuel Varipatis; Deputy Commissioner Field Operations, Jim Hamilton; Executive Director Information Technology, Rob Hilditch; Deputy Commissioner Strategic Capability, Graeme Finney. Front: Executive Director Finance, Adam Summons; Commissioner Paul Baxter; Director Governance and Legal Office, Catherine O'Mallon

Under the *Government Sector Employment Act*, all NSW Government agencies have been required to implement new senior executive arrangements. As a result, a new senior executive team was appointed at FRNSW, reporting directly to the Commissioner.

In the last issue of Fire & Rescue News, now retired Commissioner Mullins and Deputy Commissioners Hamilton and Finney shared their vision for the coming year. In this issue we hear from the other members of the Executive Leadership Team – Adam Summons, Emmanuel Varipartis, Robert Hilditch, Assistant Commissioner Mal Connellan and Catherine O'Mallon.

5
MINUTES
WITH...

**EXECUTIVE DIRECTOR
PEOPLE AND CULTURE
MAL CONNELLAN AFSM**

Assistant Commissioner Mal Connellan joined the NSW Fire Brigades in 1983. He has served in a variety of operational and specialised positions, including Professional Standards and Conduct Officer, Assistant Director Recruitment and Staffing, Acting Director Human Resources and the Commissioner's Chief of Staff. In July 2016 he was appointed Executive Director People and Culture and was appointed to the rank of Assistant Commissioner.

What do you hope to achieve in the next 12 months?

I'd like to change the focus of the Directorate from internal, where people come to us for assistance, to one where we go out to business units and partner with them. We need to provide value in their day-to-day workforce planning, injury management, transfers, recruitment and people management.

While acting in the role of Director HR, I tried to focus on turning it to an outward-looking Directorate. I worked on building relationships within the Directorate and developing the skills that already exist, while supporting people to do their jobs. We have smart, intelligent people so it's about recognising their work and knocking down the silos. I think we can build on the existing staff, because there are some really good people doing really good things.

I'm looking forward to getting back into it. It's a really exciting time, not only for the Directorate but also for the whole organisation. We've gone through a strong period of rebuilding governance and structures, and now we can use all those skills and knowledge and platforms to really take FRNSW where we want it to go.

The timing's great, the move to Greenacre will bring everyone together. Before we were scattered across floors and in corners. The move will bring the administrative arm – that back room of the organisation – together. That's where I think we'll get some good synergies and be able to do really good work as the environment we are constructing will support better collaboration.

What don't people know about you?

I grew up in the Sutherland Shire but I managed to extricate myself from there to the South Coast which I really enjoy. But the rest of my family now lives in the outback in a place called Ceduna. It's on the edge of the Nullarbor. It's a fun place to go to – for about 10 days! They've been there about 20 years; and then my parents went and settled there too. I've got no plans to retire there. My plans have been set for me. I'll probably spend the summers on the South Coast of NSW and the winters in Queensland. However my daughter has a French boyfriend so I'd be happy to spend summers or winters over there! But retirement's a long way off; there are many things I want to achieve before then. **END**



5
MINUTES
WITH...

**EXECUTIVE
DIRECTOR FINANCE
ADAM SUMMONS**

Adam Summons joined FRNSW in January 2011 as the Chief Financial Officer (CFO). He has 25 years' experience in Australia, Europe and the Asia-Pacific region working in both the public and private sectors. Prior to joining FRNSW, he served as Director Financial and Performance Management at Housing NSW during a significant reform program. In 2013 he was made a Fellow of the Institute of Chartered Accountants in Australia and New Zealand for services to the accounting profession.



In the 2014/15 financial year he was named CFO of the Year at the Thomson Reuters Tax and Accounting Excellence Awards – Australia and New Zealand. In July 2016, he was appointed Executive Director Finance.

What do you hope to achieve in the next 12 months?

The most critical part will be to work closely with the newly appointed executive team to obtain the best outcomes for the organisation within our financial parameters. This will involve focusing on our resource allocation – both in terms of recurrent and capital investment – and in maximising our revenue opportunities.

Finance Directorate will continue to look at enhancing our financial services to the field.

While we've focused a lot on people, process and systems development over the last five years, we're always looking at ways of improving the service we provide to our customers. A lot of that is achieved by listening to what the business needs and adapting to it where we can.

Over the past five years we've moved from a traditional, transactional activity based group to a more contemporary strategic finance team with a strong customer and outcome focus. We are perceived as cutting edge in terms of finance function within government.

This is why our finance function was awarded 2014/15 Finance Team of the Year in the Thomson Reuters Tax and Accounting Excellence Awards for Australia and New Zealand. That was fantastic recognition for our corporate and field finance staff, especially as we were competing against the private sector.

What don't people know about you?

I was Patrol Captain for 10 years at Ocean Beach Surf Life Saving Club on the Central Coast. Most fortnights during summer I was leading five or six volunteer lifesavers over a 12-hour patrol. You've got responsibility for protecting lives – and that could be anything from 10 people on the beach to 3000 – the safety component is critical.

I did my Bronze Medallion at 16, after which you have to requalify for every year. Within a few months I was Patrol Captain with a high level of responsibility at a young age.

Reflecting now, it was a great building block for my career because you learn a lot in terms of management and leadership skills such as teamwork, building trust, decision making, communication, delegation, resilience and motivating a team. **END**

5
MINUTES
WITH...

**EXECUTIVE DIRECTOR
LOGISTICS SUPPORT
EMMANUEL VARIPATIS**



Emmanuel Varipatis joined FRNSW in October 2010. He has worked in both the private and public sectors in various senior roles. Prior to joining FRNSW, he was General Manager Property Services with the NSW Police Force. Other positions he has held include National Installation Manager for Optus; National General Manager, Association of Consulting Engineers; Chief Executive Officer RedR Australia; and other key construction roles throughout Australia, Indonesia and the United States. In July 2016 he was appointed Executive Director Logistics Support.

The key role is to ensure the vehicles, equipment and property required by frontline firefighters to carry out their duties are reliable, functional and available in the best possible way.

What do you hope to achieve in the next 12 months?

The key role of Logistics Support is to ensure that the vehicles, equipment and property required by frontline firefighters to carry out their duties are reliable, functional and available in the best possible way.

It is important for our Directorate to provide strategic planning, management, procurement and maintenance of fleet, property and specialist firefighting equipment efficiently and effectively within budget and timeframe, to sustain emergency operations.

Over the next 12 months I look forward to delivering the new Headquarters building and the new FRNSW Training Academy strategy while continuing to build working relationships with all levels of operations. In doing so, we need to ensure that systems and processes are in place to continue to provide an efficient and streamlined service. This includes the rollout of the new self-contained breathing apparatus contract as well as the new rescue equipment program.

I also am looking forward to working with Command over the next 12 months to develop the strategy for our future fleet and property needs.

What don't people know about you?

On a personal level I enjoy "fixing things" around the house, working on my cars and keeping a high polish on my classic Harley Davidson motor bike. I especially enjoy working on and renovating classic cars having recently rebuilt a 1960 Vauxhall Cresta and a Torana SLR 5000 which I enjoy driving whenever I can.

END

5
MINUTES
WITH...

**EXECUTIVE
DIRECTOR GOVERNANCE
& LEGAL OFFICE
CATHERINE O'MALLON**

Catherine O'Mallon joined FRNSW in August 2013, and, after a brief stint at Transport for NSW, returned in March 2016. Her background includes corporate and government roles and she is well experienced in governance and assurance, government relations, organisational ethics and corruption prevention. Catherine backs over 20 years' experience with strong academic achievements in public policy and strategic management including a Master of Public Policy from Sydney University and an Honours Degree in Public Administration.



What do you hope to achieve in the next 12 months?

There are often improvements that can be made to any process, system or activity: it's just a case of taking an objective look and being honest about what you find. I'm passionate about helping FRNSW continue to take that long, hard look at itself and improve on what it finds.

With this in mind I'll be working hard with the Governance & Legal (GLO) team to partner and work with business units to improve the way risk is managed, and to implement the business improvements recommended by FRNSW's auditors in a practical and useful way. We can benefit the business by using the views of others, often external to our world, in a strategic way to make long term differences to the way we operate. An audit shouldn't be something to fear; look on it as an opportunity!

Over the next year, the GLO team will be developing strategies and implementing frameworks to manage information, our relationship with government and external bodies such as the Information & Privacy Commission and the NSW Ombudsman, and again, to work with the business to demystify governance.

What don't people know about you?

I'm a qualified tailor and ran my own business in the UK making formal and wedding wear. I carried it on for a while after I moved to Australia but changed from making clothes to making costumes for the Global Television Studios in Melbourne.

The costumes I made gradually became more and more creative, I moved from making normal street clothes for shows like Neighbours to making novelty costumes and props for comedy shows like Full Frontal. Some examples? How about adult sized vegetable costumes, a walking tomato, carrot, chilli etc. and a full set of adult sized Teletubbies...

■■■■ END

We can benefit the business by using the views of others, often external to our world, in a strategic way to make long term differences to the way we operate.

5
MINUTES
WITH...

EXECUTIVE DIRECTOR INFORMATION TECHNOLOGY **ROB HILDITCH**

Rob Hilditch joined FRNSW in December 2015. He has more than 25 years experience managing and delivering information, communications and technology solutions to large businesses. Prior appointments include Interim Director, IT Services Uniting Care NSW ACT, Chief Information Officer (CIO) Goodman Fielder, CIO Wesfarmers Industrial & Safety, Head of Information Technology AWB Ltd and CIO Wesfarmers Landmark. In July 2016 he was appointed Executive Director Information Technology.

What do you hope to achieve in the next 12 months?

We're moving into a period of stabilisation. There has been a lot of investment in IT over the past five or six years and it's really about taking some of the applications we've developed and making sure they're robust and reliable. We need to make sure the back office is stable but really we need to start focusing on the front office operational capability. The continuation of the mobile data terminal rollout is going to be very important. We'll also be looking at what additional functionality we can put into the ADASHI mobile data terminals. Another thing is new phablets, which are effectively big smartphones. We're working with the Commands to roll out more of them into appliances and maximise their value.

Another big thing for me is to revise and create a new IT strategy for the next three to five years. The current one runs to 2016 so the next three or four months will be spent working across the organisation – upwards, downwards and sideways – to build a new strategy so we can understand what we have to be focussed on, in order to meet FRNSW needs.

As we move into this stabilisation period, we are looking at how we resource IT to keep the systems running, develop new capabilities and continue to support FRNSW from a technology point of view. A structural realignment of IT has been approved and work has commenced, with the aim of having all the key functional positions in place by September.



What don't people know about you?

I'm very passionate about football (the round ball game, I'm not a massive fan of using the word soccer). I still play, my two daughters have played regularly, I've coached their teams throughout the years and I watch a lot of it both locally and following Rangers. My wife Laura says everything is about football with you, especially in the winter when the playing season's on. I play for Lindfield in the North Shore League. I usually play striker. I'm OK at it. In the last five or so years I've been top scorer – I don't think that is going to be the case this season though. ■■■■ END

We need to make sure the back office is stable but really we need to start focusing on the front office operational capability.

FRNSW FACILITATES USAR WORKSHOP IN HONG KONG

Last November FRNSW facilitated an Urban Search and Rescue (USAR) skills workshop for 12 members of the Hong Kong Fire Services Department at their Fire and Ambulance Services Academy.



SO Bruce Cameron and SF Peter Watson with Hong Kong workshop members

This workshop focused specifically on Category 2 Rescue Technician skills as well as instructor delivery techniques and course design. Station Officer Bruce Cameron and Senior Firefighter Peter Watson from the USAR training team facilitated the 10-day workshop.

The skills development and familiarisation included INSARAG guidelines and methodology, USAR first responder, USAR operations and equipment, technical search, rope and trench rescues, heavy lifting operations, shoring, concrete cutting and breaching, USAR exercise planning and development, base of operations and logistics.

The Hong Kong Fire and Ambulance Services Academy is a world class training facility purpose built to accommodate all facets of fire and rescue as well as medical and paramedic first response.

USAR Instructor SF Watson said this engagement strengthened professional relationships between the two services. "It provided unique opportunities for officers from both services to share their experiences in disaster response rescue operations which will further develop USAR best practice in both the Hong Kong Fire Services Department and FRNSW." **END**

FORESTVILLE FIREFIGHTERS NOW HAZMAT ACCREDITED

With hazardous materials incidents on the increase, last October the Minister for Emergency Services David Elliott and Commissioner Greg Mullins visited 51 Forestville to announce that it had officially become an accredited hazmat station.



The move makes Forestville the fourth fire station in the Sydney area to be hazmat accredited and the seventh in the metropolitan area.

The four platoons at the station successfully completed 12 weeks of intensive training and their truck was repurposed to carry special equipment for hazmat incidents.

Commissioner Mullins said the change would provide quicker response times to the northern suburbs of Sydney for hazmat incidents, where previously appliances had to respond from Alexandria and Chester Hill, which could take up to 90 minutes in peak traffic.

"Firefighters attend more than 15,000 hazmat incidents across NSW each year," he said. "Across northern Sydney, there were more than 1,600 incidents in the past financial year alone and this resourcing boost will increase our response coverage for these types of incidents.

"Forestville firefighters will now respond across the northern suburbs of Sydney to support colleagues from other fire stations that only have a basic hazmat capability." **END**

ROAD CRASH RESCUE – PREPARED FOR ANYTHING



503 Wollongong's skill and commitment to road crash rescue techniques has seen the team clock up thousands of kilometres competing in rescue challenges from the Top End to South America.

In just their second year at the Australasian Rescue Challenge, Wollongong claimed an epic overall win in the Northern Territory in July 2015. The challenge saw 17 teams from Australia, New Zealand and Hong Kong competing across time critical, controlled, entrapped and trauma scenarios. A second FRNSW team – 295 Forster – achieved third place in the entrapped scenario in their first attempt at the challenge event.

Speaking after the victory, Wollongong Leading Station Officer Andrew Barber said it was a great learning experience for participating stations.

"We received some coaching from the guys at Burwood and Hurstville who had previously competed. We put the work in and went well. Forster also did really well for their first year," said LSO Barber.

"In the Best Medical Team event, Wollongong was placed first and Forster second. It's an excellent result made even more significant given that many of the other teams included paramedics, unlike the FRNSW teams."

As Australasian Rescue Challenge winners, Wollongong secured a place at the 2016 World Rescue Challenge (WRC) in Brazil in October 2016. The WRC is the largest simulated rescue competition, attracting the best rescue teams from around the globe.

Over four days of competition, 30 teams from 17 countries went up against each other in rapid, complex and standard extrications, as well as trauma challenges.

Wollongong achieved an equal 2nd place in the rapid event alongside Portugal's Lisboa (last year's world champions) with Wales' Bridgend crew taking first place. Wollongong's two medics, SF Dave Elliot and SF Andrew Clark, were rated as the best medics in this event.

The team, which also included SF Stuart Willick, QF Justin Taylor and QF John Robinson, finished in ninth place overall out of 30 teams, with Bridgend crowned world champions.

LSO Barber said the training required to compete at this level is extremely beneficial for FRNSW crews. "It prepares any crew for any road crash incident they are likely to encounter. It gives crews the confidence to deal with these incidents."

END

WYONG STATE FIREFIGHTER CHAMPIONSHIP 'ONE OF THE BEST EVER'

Norah Head Showground was the focus of much firefighter activity for three days from 27 – 29 October last year when 505 Wyong hosted the biennial NSW State Firefighter Championship.



Commissioner Greg Mullins said the championship provided firefighters with the opportunity to work together under pressure and develop their operational skills.

“Retained firefighters are trained and equipped to deal with the same emergencies as full-time firefighters and are dedicated and passionate about what they do – and you can witness that skill and commitment firsthand at the firefighter championship.”

29 teams from across NSW, together with several NSWRFs teams and a visiting New Zealand Team, participated over the three-day competition in 15 events that simulated real world firefighting. The Women and Firefighting Association (WAFa) also entered two teams and competed in all events.

2017 Championship calendar

- Uralla Regional Championship, 4–5 March 2017
- Bega Regional Championship, 6–7 May 2017
- Port Macquarie Regional Championship, 12–13 August 2017
- Carterton, New Zealand Australasian Championship, 26–29 October 2017

Assistant Commissioner Rob McNeil, the Championship Director, actively led from the front by helping to make up the numbers for teams from Merrylands, WAFa and The Entrance and competed in a number of events. He was keen to praise the importance of such events.

“It was especially good to see the team from 485 Wangi Wangi win the Safety Award. This award is the most treasured award of the Championship as it exemplifies our most important guiding principle in everything we do.”

Overall champions were the team from 219 Bega who took out the coveted Alfred Webb Cup, and also became the first team with a female firefighter to do so in the State Championship thanks to RetF Cassandra Dickson. They were followed by the RFS team from Kootingal with Kelso coming in a close third.

Throughout the three days, the Health and Safety Section played a crucial role in running early morning warm-up sessions for all teams and stretching sessions for competitors during each day. They also provided firefighters with free pedometers, and hundreds of firefighters participated in cholesterol, blood pressure and blood sugar on-the-spot testing together with functional movement screening.

Throughout the Championship, all teams were also provided with firsthand training in the use of the new computerised system to manage availability and retained time sheets (SMART) which is accessed through ESS and now available to all retained crews across the State.

On the Friday night, retained and local permanent crews combined to deliver community education activities at the Entrance Memorial Park. Hundreds of families visited and were thrilled with kitchen fat fire simulator displays, Bernie Cinders, aerial water demonstrations, and rescue and hazmat displays, all culminating at sunset with a brilliant torchlight procession of firefighters around the shoreline and into the showground arena. The community was then treated to a spectacular 12-minute fireworks display from the centre of the river.

The fireworks, together with many of the competition events and prizes over the three days, were all made possible through the generous donations and support from sponsors such as Chubb, MSA, FRNSW, the FBEU, Firefighters Mutual Bank and the Relief and Welfare Fund. **END**



This painting, recently recreated from a photo taken at the 2015 Gunnedah Championships of Goonellabah RetF Steven Fawcett (left) and Jeremy Penfold, is the epitome of the determination shown by those who compete.



RETAINED FIREFIGHTERS BECOME PERMANENT

On 25 November 2016, 11 former Retained Firefighters graduated to become Permanent Firefighters at the FRNSW State Training College at Alexandria.

Among the graduates were a maths teacher, baker, graphic designer, paramedic and a number of mine workers. One of the graduates had been a retained firefighter for 21 years and a Brigade Captain for seven, while another had been a retained firefighter for 18 years.

Having already worked as firefighters in their local communities, these new recruits are using their previous experience as well as the advanced training they have received in firefighting, road accident rescue, working safely at heights, community risk management, fire science and hazardous materials response to help keep their communities safe.

FRNSW Commissioner Greg Mullins said the graduating class would uphold the high standards of integrity, courage and professionalism expected of a FRNSW firefighter. "It is a pleasure to welcome these already seasoned firefighters to the full-time ranks," he said. **END**

CFU LAUNCHES eLEARNING PROGRAM FOR FRNSW STAFF

The Community Fire Unit (CFU) team has released the newly developed eLearning Program to all FRNSW staff.

The CFU eLearning package brings CFU volunteer induction training into the 21st century, moving away from a regimented 8-hour program into a flexible course designed to improve learning and allow volunteers to engage and do extra research into fire behaviour.

The eLearning package offers an improved process for new CFU members who can now complete four theoretical modules via an online interactive presentation. The eLearning modules allow candidates to move through the program at their own pace, and at a time and place of their choosing. This resource is not just available to new members but also to all current CFU members and all FRNSW staff, allowing them to refresh and reinforce their knowledge in the areas of property preparation, bushfire behaviour and the functioning of the CFU program.

The four theoretical modules need to be completed within a 6-month period. CFU applicants must then attend a short practical training session to become operational CFU members.

There are more than 6000 CFU volunteers throughout the State. During a major bushfire, it is likely CFU volunteers will be assisting fire crews to protect properties. It is therefore important that firefighters understand what CFU members have learnt and their limitations. The CFU eLearning modules can be accessed by all FRNSW staff in the Learning Hub, under CFU Resources. Contact cfu@fire.nsw.gov.au for any queries. **END**



Mutual assistance

5 MINUTES WITH AC JANET RUECROFT

Assistant Commissioner Janet Ruecroft joined Fire & Rescue NSW in October 2016 after serving for 26 years with the Department of Corrective Services. In September 2005, Janet was appointed General Manager Corrections and served as the Governor of Maximum Security institutions including Goulburn and Cessnock. Prior to her promotion to Chief Superintendent, Janet served as Superintendent of State Operations and as the Commissioner's Ministerial Liaison Officer in Parliament. She has most recently served as the Director of the Correctional Reforms Branch. She was responsible for implementing RTO arrangements within Corrective Services and facilitated the introduction of traineeships for inmates.

What was it about Fire & Rescue that attracted you to make the change?

I wasn't actually looking to leave Correctional Services. I was very focused on staff engagement as I really believe it's key across the public sector, but there's always room for improvement. Corrective Services was moving towards benchmarking and introducing partnership agreements so I really wanted to engage with staff from grass roots through to senior management. I typed in 'training and education' as that was one of the things I thought would help tap into that engagement and this job popped up at me. As I read through the role requirements it was like it had been written for me. I felt that Fire & Rescue was offering an opportunity to undertake so many things that are important to me.

Which of your previous roles will you draw on most at FRNSW?

All of them. I think it all becomes a growth of your knowledge and experience and your corporate wisdom, which is transferable if you've been in leadership for some time. Managing staff and delivering educational programs to inmates in correctional centres gave me knowledge and skills around management and meeting the client groups' needs.

Then as a General Manager, I looked after a cluster of geographically spread correctional centres so I had to learn how to manage at a distance. Working in the Minister's office gave me an appreciation of the political and government drivers for organisations, and working as the Superintendent of Operations taught me very quickly about managing state wide operations and 24-hour service delivery needs. I then moved into the Director's role in the reform branch and was looking at what was being done well, what needed to change and what that change should look like.

I don't know this business, but you do. Even if I was here for 10 years, my experience will be quite different to yours.

What do you hope to achieve over the next 12 months?

I'm really interested in going through the training needs analysis that was started under Deputy Commissioner Graeme Finney. We're undertaking a gap analysis to see where we're at and where we need to be to meet operational needs. Clearly that's what Education & Training must do. If we're not meeting operational needs, then we're not doing what we're paid to do. It's a matter of looking at that background work and organising into the future to make sure, as FRNSW changes, our service delivery meets needs.

We're looking at the learning and professional development part of the organisation and I'm really excited to be at the forefront of that project. It will target the professional development and leadership needs of our managers to ensure we can support with training FRNSW's succession plans.



Assistant Commissioner Janet Ruecroft

Transportable qualifications are also really important for both Permanent and Retained Firefighters. Like the rest of NSW, we have an ageing population and we need to explore avenues both internally and externally to ensure our staff have meaningful opportunities.

I enrolled to do the Retained Firefighter training program in February and then will go out and do some ride-along with crews as it's important for this role to be strategic and operational. You need to understand both. I am very proud to wear the uniform, and of course have been a uniformed officer for over 11 years, both at Superintendent and Chief Superintendent ranks. Being uniformed means I can help and support operational staff within communications or liaison roles. There are six Assistant Commissioners and it's important they are all able to help and support senior managers and operational firefighters to do their job in times of crisis. Do I think I have something to offer in terms of 'critical incident management'? Absolutely. I've been managing critical incidents for 26 years. My sole goal is to learn as much about the business as quickly as I can to help and support FRNSW in whatever capacity I can.

I've started visiting stations – I hope eventually to get to all of them. The whole purpose is saying to firefighters: "I don't know this business, but you do. Even if I was here for 10 years, my experience will be quite different to yours". It's always been my experience that if you sit down and have a cup of tea with people, not only do they know the problem but they often know the solution. I'm here to listen to find out what I can do to make training better to meet your needs.

I've been amazed at the welcome and the strong family spirit that's so alive here. The conversation invariably starts with what Training & Education used to provide and doesn't now. But after we talk about budgetary constraints and the fact I'm not going to get 100 extra positions, or an extra million dollars, and we get around the sense of loss at the more collegiate experience, I find people have good ideas about what is real and possible. Visiting stations is one of those deliberate time carve outs that is so important. Clearly, I need to do it because I need to understand the frontline needs. But as time goes on I have to make sure I remain current by carving out that time. **END**

DEVELOPMENT OF eLEARNING MODULES FOR AGED CARE EVACUATION

Developing an eLearning package for all firefighters can be difficult at any time, but to produce one to meet the specific requirements of the Coronal Inquiry into the Quakers Hill Nursing Home fire proved particularly challenging.



"Patient" and firefighters at the exercise



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The nursing home fire in 2011, which was deliberately lit, resulted in the deaths of 11 residents.

The accounts from the firefighters who responded to this incident highlighted the vital importance of emergency services personnel having a comprehensive knowledge of aged care evacuation, so that hopefully no further lives will be lost.

Following an initial brief from the former Director Operational Capability Mark Brown, a project team was established in March 2015. This comprised eLearning expert Rhonda Paterson from the Program Development and Design Unit, teamed with LSO Steve Perkins who was the subject matter expert and who liaised with the crews.

Steve and Rhonda met many times over the following months to work on the topics to cover in the modules. From that they developed the storyboard, which laid out the proposed layout and content to be used in the modules. Documenting this helped to identify the areas where more information was required. Finalising the content also clarified what images were needed, so Steve went to his local aged care homes and took the required photos.

During this time, Supt Warwick Isemonger from the Building Compliance Unit suggested videoing evacuation techniques at Royal Prince Alfred Hospital's new fire simulation unit. This also had to be scripted and storyboarded. Finally the storyboard was distributed to the project team for review and sign-off in February 2016. "I didn't realise so much work had to be done before we could start developing the modules," said Steve.

FRNSW employed a contractor, Sarah Marwick, to design the eLearning modules. She added her creative flair to the content to make it come alive and organised the video shoot at Royal Prince Alfred Hospital. Steve organised fire crews from 18 Glebe and 05 Newtown to attend the video shoot dressed in full PPC to evacuate a patient. "While I got a little bruised from the ropes and sheets, it was worth it because of the importance of showing the techniques available," said Rhonda.

While I got a little bruised from the ropes and sheets, it was worth it because of the importance of showing the techniques available.

I didn't realise so much work had to be done before we could start developing the modules.

One technique demonstrated was SO Brett Johnson's Wrap and Roll, a technique he developed following his experience at the Quakers Hill fire.

The two modules and a supporting video filmed by Broadcast Producer Bronwyn Hilton were finally launched in September 2016. The modules are available to all staff through the Learning Hub and have received positive comments from those who have completed it. "Thank you everyone who made this possible," said Rhonda. **END**





Commissioner Mullins presents his award to SO Johnson



Colonel Craig Lauder

AWARD WINNER SAYS SAFETY SHOULD BE EVERY FIREFIGHTER'S FIRST PRIORITY

For Castle Hill Station Officer Brett Johnson, workplace safety is the very foundation of what he does for a living. It's a philosophy which saw SO Johnson named the overall winner of the 2016 Commissioner's Safety Awards at Liverpool Fire Station last October.

The Commissioner's Perpetual Award recognises his commitment to setting a positive example, providing mentorship and proactively spreading the safety message within the organisation and in the community.

For SO Johnson, receiving the award from Commissioner Mullins was a "very humbling and proud moment" in his career.

"Safety is very important, so to be recognised is a privilege – and to be nominated by my peers is equally important. Emergency services workers' first priority should be themselves and their co-workers. Anyone who doesn't think so is increasing the load on others and inadvertently making the job unsafe for others.

"Safety is about adapting to environments that are ever-changing and listening to the people around you who may have great ideas. But it's not always a conscious thing – you have to train yourself to automatically apply it. Without safety, our industry can be catastrophic, so this must be a core value."

At the award ceremony, Commissioner Mullins reflected on the three years that the awards have been in place and the people who contribute to improving or promoting safety in the workplace, but also those who recognise and nominate individuals.

Guest speaker Colonel Craig Lauder from the Australian Army spoke on the significant roles leadership, accountability and responsibility play in underpinning safety.

"Safety is a core function of command, but is also an individual responsibility," Colonel Lauder said. "Strong leadership is required to foster this culture, but ultimately, every man and woman on the ground has a role to play."

In addition to SO Johnson, four category winners were recognised for their contributions. **END**



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Category winners

Category 1: Best solution to an identified workplace health and safety issue

Winner: Station Officer Neil Lawler developed documented processes to manage a biological hazard from a flying fox colony.

Category 2: Best individual contribution to workplace health and safety

Winner: Station Officer Jason Wood identified the increased risks posed by car stackers and developed an intranet toolkit.

Category 3: Best group contribution to workplace health and safety

Winner: Station Officer Rodney Staggs, and Qualified Firefighters Gavin Smith, Tol Broinowski and Daniel Towner were involved in the FRNSW Structure Collapse Risk Awareness video.

Category 4: Best management of a workplace injury

Winner: Superintendent Andrew Dadley and Senior Firefighter David Jordan were involved in developing suitable targeted duties for injured firefighters.

See the Commissioner's Safety Award toolkit (Toolkits → Organisation Wide → Health & Safety → Safety Legislation and Guidance → Commissioner's Safety Awards) for more information on the winners and finalists.

PROACTIVE APPROACH TO PTSD AWARDED FOR INNOVATION

FRNSW is the first emergency service agency in Australia to successfully implement recommendations made regarding the diagnosis and treatment of post-traumatic stress disorder (PTSD).

This commitment to driving an improved approach to PTSD was recognised for innovation in the 2016 TMF Awards for Excellence. FRNSW's proactive and early intervention approach to PTSD – in conjunction with Employers Mutual Ltd and the Black Dog Institute – was selected as the winner in the 'Innovation in Design' category at the awards in Sydney last November.

The awards showcase achievements in risk management in both the public and private sectors. FRNSW was also a finalist in the 'Innovation in Process' category for initiatives implemented to raise firefighter awareness of the risk of structure collapse.

Former Wellbeing Coordinator LF Mark Dobson said the award is the result of much hard work and dedication by Health and Safety staff, managers and those suffering from PTSD who have been willing to speak out.

"FRNSW is the first organisation in the world to research the impact of manager training on return to work outcomes through the RESPECT project. Additionally, we are the first fire agency to participate in an online mindfulness resilience program specifically aimed at protecting and improving the mental health of emergency workers."

Commissioner Greg Mullins said that removing the stigma that some people still perceive around mental illness remains an ongoing journey.

"It is vital that we keep talking and listening to each other. However, I am very proud of how far we have come and of the tangible, practical solutions we have pioneered. My sincere congratulations to everyone involved in building, driving and implementing the proactive and early intervention approach to PTSD."

END



Former Wellbeing Coordinator LF Mark Dobson, former Deputy Commissioner Jim Smith and Manager Health Promotion Brendan Mott



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'LET'S TALK' – ARE YOU HAVING THE MOST IMPORTANT CONVERSATIONS?

A new strategy, a 'lived experience' video and 'Let's Talk' kits are helping drive wellbeing conversations, support and recovery.



The audience for the launch of the strategy

In NSW, the mental health of frontline staff has never been higher on the agenda thanks to the launch of the Mental Health and Wellbeing Strategy for First Responders in NSW at Parliament House in October 2016.

Drawing on the expertise of the NSW Mental Health Commission, the Black Dog Institute and NSW emergency services organisations, the strategy combines promotion, prevention, and support from recruitment to retirement and beyond.

The strategy launch also included the premiere of a 'lived experience' video featuring first responders and FRNSW firefighters, including an honest, hard-hitting and inspirational account from SF Peter Kirwan.

Former Wellbeing Coordinator Mark Dobson said the film shows first responders they are not alone and help is available, while assuring people that accessing services is normal.

"Most importantly it aims to kick-start conversations and reduce stigma around seeking help. Although dealing with mental health is multi-faceted, these two areas are fundamental. We have to be able to talk and we have to get over any embarrassment. There is no shame in looking after your mind in exactly the same way you look after your physical health."

Messages in the film were backed up at grass roots level by the distribution of 'Let's Talk' kits to all fire stations and zone offices, and a Mental Health Month breakfast at City of Sydney Fire Station in October.

At the breakfast, Commissioner Mullins said all FRNSW staff have a responsibility to look after each other, particularly as firefighters work closely with the same team for long periods.

'Let's Talk' kits

Station and Zone Offices received information packs at the end of 2016 to provide Station, Duty and Zone Commanders with tools to help start and continue important wellbeing conversations with firefighters.

The kits contained the following items:

- Letter from Commissioner Greg Mullins
- Conversation flash cards
- QR codes for useful resources
- Generalised anxiety factsheet
- Mindfulness factsheet
- Symptoms of depression factsheet
- Talking about mental health for managers factsheet
- Threat of self-harm factsheet
- Implementing RESPECT factsheet
- FRNSW Peer Team contacts.

Additional support and an electronic copy of the kit can also be accessed through the Health & Safety Branch or by visiting the mental health toolkit (Toolkits → Organisation Wide → Health, Fitness & Wellbeing → Mental Health).

"These long-term relationships should provide us with a level of trust and knowledge to notice if our peers are not travelling well," said Commissioner Mullins. "We need to exercise courage and start a conversation, engage in a supportive way and encourage our mates to seek help."

NSW Commissioner of Mental Health, John Feneley, congratulated FRNSW on leading the way with long-established wellbeing programs and the development of an extensive peer network to support firefighters. He explained his vision for the strategy as a "burning platform" to light the way towards a wider strategy for the whole of government and indeed community mental health. **END**



NSW Mental Health Commissioner John Feneley

TO ENSURE OUR MESSAGE COMPETES, NOTHING BEATS TWEETS!

Wondering why FRNSW bothers tweeting? And what does it achieve? In fact, Twitter is an incredibly important community and media engagement tool. In a fast-paced and increasingly connected community, Twitter is a forum heavily used by a wide range of individuals and organisations to find out what's going on right now. Media especially want information instantaneously and so when it comes to incidents, Twitter is the FRNSW Media Team's primary notification tool.

Still wondering why we bother? Well, FRNSW is a NSW Government agency with a responsibility to be open and transparent about what it does. If we're not constantly talking about the great work that firefighters are doing, then it becomes much harder to justify the hundreds of millions of dollars that FRNSW receives in taxpayer funding each year. And if we don't talk about what we're doing, and why we're doing it, then other emergency services may talk up their own activities in order to fill the void. So the onus is on FRNSW to 'sell' itself and its achievements. And that's where Twitter comes in. It's a quick and easy forum to use, not only to communicate what our firefighters are doing, but also to counter any misinformation.

More than 45,000 people and organisations currently follow the @FRNSW Twitter page and many of those, especially media organisations, share our tweets regularly, thereby cascading important operational and safety information to hundreds of thousands of people.

What really increases the popularity of a tweet is a picture or two. As the saying goes, a picture tells a thousand words. A series of three tweets on the Revesby car wrecking yard fire on 5 November included both photos and RPAS footage of the massive fire. The three tweets received 57 retweets (shares) and 55 likes. That was a huge spike and increased the penetration of not only information about the incident but also about the work of FRNSW firefighters on the ground. And again back in August, @FRNSW received similar social media attention when a petrol tanker overturned on Wentworth Avenue at Mascot. A series of pictures and a video of the truck being righted were not only retweeted 37 times and liked 95 times but were also reproduced on news websites and television broadcasts across the State. Many of those retweets were by organisations such as NSW Police and media outlets with hundreds of thousands of followers which helps @FRNSW to reach a huge audience.

Pictures don't have to be brilliant, but having a steady hand and capturing firefighters at working at incidents are vital. Photos of appliances and flames are good, but to really tell the story of what firefighters are doing at an incident, we need pictures that show this. So if you're at an incident and have a few seconds to photograph your colleagues in action without in any way compromising operations, then please do so and email it to media@fire.nsw.gov.au. **END**



More than 45,000 people and organisations currently follow the @FRNSW Twitter page and many of those, especially media organisations, share our tweets regularly

ISSUE 6

FIRE & RESCUE OPERATIONS JOURNAL

Editor's note

Farewell, Sir!

At the time this edition of Fire & Rescue Operations Journal goes to print, the career of one of the greatest firefighters and leaders this organisation has ever seen, has ended. Commissioner Greg Mullins AFSM has departed from our ranks. As editor of the journal, I would be greatly remiss if I did not congratulate and pay tribute to the one person who has had the greatest influence in taking the operational capability of this organisation forward into the 21st century. Under the leadership of Commissioner Mullins, we have seen a revolution in just about every aspect of operations, always with the safety of firefighters and the highest levels of service delivery to the community of NSW as the foremost priorities.

This edition of Fire & Rescue Operations Journal is dedicated to the great work of Commissioner Greg Mullins AFSM, who has left a lasting legacy to the members of Fire & Rescue NSW and the community of NSW. Every aspect of operations has improved in a revolution of innovation and technology. FRNSW now stands at the forefront as global leaders of fire and emergency response. We do this thanks to the vision, decisiveness and leadership of Commissioner Mullins, who has an understanding of fire and emergency operations that is second to none. None could be better qualified than Commissioner Mullins to have a greater understanding of the sharp end of FRNSW operations. On many a long, cold, wet and wintry night or an endless blisteringly hot summer day, Commissioner Mullins stood shoulder to shoulder with the men and women who have battled some of NSW's biggest fires and emergencies. Not only are firefighters more capable to protect the community of NSW than ever before, we do so confidently with the highest levels of safety.

In other news, this edition contains two special reports; one on a new and emerging threat, hydroponic grow house fires and the importance of being able to identify the warning signs. The second concerns vacant building fires and the importance of being aware of the threat they pose and the need to always remain vigilant when responding to a vacant building fire; in North America the firefighter fatality rate is five times higher at vacant buildings than it is at occupied structures.

As we close off, it is only appropriate as editor of Fire & Rescue Operations Journal, that on behalf of all of our readers, I say farewell, thank you and have a great retirement Mr Mullins. You will be missed and the tremendous and lasting legacy you have given us will always be remembered fondly within this great organisation. **Farewell, Sir!**

Inspector Kernin Lambert
Editor, Fire & Rescue
Operations Journal





The view from Alpha Sector: heavy fire involves the roof and upper level; operations are now defensive on the northern side of the building

Pumper 73 Firefighters Shane Stephens and [unclear] of a third level unit, one of several ladder routes was blocked and fire involvement of the

7TH ALARM VILLAWOOD RESIDENTIAL UNIT BLOCK FIRE

Incident summary: Fire involving foam lounges broke out in an internal stairwell within a residential unit block. The intensity of this fire blocked the escape path of all occupants located in units attached to this stairwell. Fire entered the roof space and began rapidly travelling above upper level units, presenting significant danger of fire drop down into the occupied units below. Numerous occupants on all levels were now trapped. From the moment FRNSW arrived on scene, firefighters were engaged in numerous rescues, using a combination of external ladders and internal search and rescue operations. At the same time, firefighters advanced internal hoselines to the location of the fire, in an attempt to conduct fire control within the heavily involved roof space. Heavy fuel loads within the roof space resulted in rapid fire spread and intense fire activity. Structural composition of the roof greatly hindered the efforts of firefighters to gain access to the roof fire to conduct extinguishment. At the same time, firefighters attempted to employ a cut-off strategy to stop fire spread through the common roof (and stop fire destroying the entire top floor).

Signs of advanced fire activity within the roof resulted in a partial withdrawal of firefighters from the fire building and the employment of a defensive strategy. The establishment of a robust fireground command structure ensured that the many tasks required to be carried out were conducted in a coordinated manner, and all incident objectives were safely achieved. Despite the advanced fire conditions when firefighters arrived on scene, twelve trapped people were rescued by firefighters and no lives were lost. A further 17 persons were safely removed from the building. An effective containment strategy confined the fire to one side of the building, despite the presence of a common roof over the building.

Incident type: Residential apartment building fire.

Time, date and place of call: 0157 hours on Wednesday 10 August 2016, 247-249 Woodville Road, Villawood.

FRNSW response: Hazmat Pumpers 85 (Chester Hill) and 77 (St Marys), Pumpers 55 (Guildford), 73 (Fairfield), 72 (Merrylands), 27 (Parramatta), 41 (Smithfield), 49 (Cabramatta), 30 (Lidcombe), 19 (Silverwater), 65 (Rydalmere), 64 (Lakemba),

16 (Drummoyne), 12 (Balmain) and 61 (Lane Cove), CAFS Pumper 31 (Busby), Rescue Pumpers 57 (Wentworthville) and 62 (Bankstown), Aerial Pumper 47 (Revesby), Ladder Platforms 27 (Parramatta) and 21 (Kogarah), Heavy Hazmat 85, Logistics Support Vehicles 97 (Huntingwood), 21 (Kogarah) and 1 (City of Sydney), Mobile Command Centre Alpha and Rehabilitation Pod 1.

Duty Commanders MW2 (Parramatta), MW1 (Huntingwood) and ME3 (Ashfield), Staff Officer Chief Superintendent Philip Lindsay, Operational Media Coordinator Superintendent Ian Krimmer, Manager FIRU Superintendent Jeremy Fewtrell, Operational Safety Coordinator SO James Davies and Manager Equipment Research and Design SO Cheryl Steer.

In addition to the above, a further eight FRNSW appliances and numerous other senior officers and specialist support staff responded to the incident over the following 12 hours for relief and fire duty purposes.

Additional agencies/services in attendance: NSW Police, Ambulance Service of NSW, gas authority, electricity authority, Department of Housing, Regional Emergency Management Officer (REMO) and Roads and Maritime Services.



...d Peter Cooke rescue the occupant
...scues made. The internal escape
...the occupant's unit was minutes away



Once the attack switched to a defensive strategy Ladder Platform 27 and Ladder Platform 21 attack the fire with aerial streams

Fireground description: The fire occupancy was a residential apartment building containing 24 residential units. The building was 60m x 25m, three levels, constructed of brick and timber frame, of irregular 'H' shape. A hip and valley common roof, 1.2m high and formed of timber frame and metal sheet cladding, was fitted to the building. About six months prior to the fire, the roof had been changed from tile to iron sheet. As a result of these modifications, the previous timber battens remained in place. The roof contained a significant quantity of material including a thick layer of fibreglass insulation (about 10kg/m³), left-over building materials from the roof installation including plastic polypropylene bags and excess timbers. The roof space also contained large quantities of void space dust. A fire wall was located midway along the roof, dividing the roof into north and south halves. The fire wall did not completely seal to the roof and a large number of gaps/openings were located between the top of the fire wall and the bottom of the roof sheeting. Non-fire isolated internal stairwells were located at the northern and southern ends of the building. At the time of the fire, there were approximately 30 persons residing in the building.

Unusual construction features:

Firefighters encountered the following construction features that caused difficulties during operations.

1. The ceiling consisted of two layers of 13mm plasterboard, with galvanised steel mesh located between the plasterboard sheets; extreme difficulty was encountered breaching the ceiling with ceiling hooks to gain access to the roof fire.
2. Windows on the top level of the building were formed of strengthened fixed laminated glass panes; difficulty was encountered breaching the glass to allow hose stream access to the fire.
3. The external eave lining was a lightweight composite metal product consisting of a 3mm thick layer of hard foam product between 2 thin layers of aluminium panelling; the foam product facilitated fire travel, however the panelling resisted efforts to allow access to the fire.
4. Strengthened steel door surrounds resisted and delayed (although did not stop) efforts by forcible entry crews.

Situation prior to FRNSW arriving on scene:

Two polyurethane foam lounges were located on level three within the public hallway, against a glass floor-to-ceiling window on the western side of the northern stairwell.

FRNSW Fire Investigation and Research Unit investigator SO Wayne Schweickle determined these lounges were ignited by unknown person(s) and rapidly became heavily involved in fire, producing intense flames, severe heat and large volumes of thick black smoke. Smoke alarms located in the public hallway operated, alerting some occupants to the fire.

Occupants on all levels attempted to escape, however upon opening their unit doors, were met with conditions of high heat and thick smoke on levels one and two (due to the "stack" effect resulting in smoke and hot gases being pushed down to the ground within the internal stairwell) and conditions of intense fire, heat and smoke on level three. Occupants were unable to escape and retreated into their units and attempted to escape via balconies and windows. A short time later, the floor-to-ceiling window on level three failed and fire began venting externally. Intense venting fire impacted the roof eave lining, breaching the eaves a short time later and entering the roof space. Fire began to spread through the roof space above units on level three, rapidly taking hold due to the large amount of materials within the roof space.

Initial call and response: At 0157 hours on Wednesday 10 August 2016, FRNSW Fire Communications received the first of numerous 000 calls reporting a fire at 247-249 Woodville Road, Villawood.

Callers were also reporting numerous people were trapped. FireCom assigned a 2nd Alarm response to the incident, consisting of Pumpers 73, 55, 72 and 27, Hazmat Pumper 85, Ladder Platform 27 and Duty Commander Parramatta.

First appliances arrive on scene:

As first arriving Pumpers 55, 73 and Hazmat Pumper 85 approached the scene, firefighters observed large volumes of black smoke and an orange glow visible. Upon arrival, intense flames were issuing from the third level stairwell window and venting directly into the roof space via the breached roof eaves. Pumper 55 Firefighters observed a male occupant of third level Unit 93 located in a precarious position after climbing onto the window ledge. This person was calling out and in distress, with large volumes of smoke pouring out through the window behind him. Officer-in-Charge Pumper 55 SO Mark McKinnon established Command and sent a RED message at 0206 hours confirming the response of the 2nd Alarm and advised that people were trapped and firefighters were commencing a ladder rescue.

Ladder rescues made: Firefighters positioned an extension ladder to the third level. Firefighter Scott Lahiff footed the ladder while Firefighter Luke Jackson ascended the ladder and assisted the occupant of Unit 93 from the window onto the ladder. The occupant was in a state of high panic and slipped as he was being transferred onto the ladder. Firefighter Jackson was able to hold the occupant until he was secure on the ladder. Firefighter Jackson then assisted the occupant to the ground and safety. Upon reaching the ground, firefighters asked the rescued person if there was anyone else in the unit and he reported an elderly lady was still trapped. Hazmat Pumper 85 under the command of SO Chris Mcauliffe and Pumper 73 under the command of SO Geoff Wood arrived on scene almost immediately after Pumper 55. Firefighters observed two occupants of Unit 96 located on a third level balcony with smoke pouring out behind them, trapped and calling out for help. Pumper 73 Firefighters Shane Stephens and Peter Cooke positioned an extension leader adjacent to the balcony and Firefighter Cooke climbed the ladder to secure it to the balcony and assisted the occupants (a man in his early 20s and a woman approximately 50 years of age) one at a time onto the ladder and to the ground and safety. Firefighter Cooke located a woman trapped within Unit 85 on level one. This person was not in



Sector Charlie. Following a change in wind direction, flames blow out of the eastern windows on level three. Internally, crews were just managing to hold the fire at a cut-off point within the roof

immediate danger and remained in place until later being removed by search and rescue crews from Pumper 55.

While the ladder rescues were in progress, firefighters on the ground were directing a high pressure reel stream into the involved roof space via the breached roof eaves, attempting to control the fire.

SCBA crews consisting of Hazmat Pumper 85 Firefighters David Weekes and Cameron Simpson and Pumper 55 Firefighters Scott Lahiff and Luke Jackson began to advance two 38mm attack lines from Pumper 55 to the fire floor on level three, via the northern stairwell to commence fire attack and conduct search and rescue operations for people reported trapped. Upon reaching the fire floor, firefighters found a heavy smoke condition present. The fire involving the lounges in the level three hallway had significantly diminished and was close to being self-extinguished. Firefighters conducted a search of the level three hallway, which was found to be clear. Due to information provided by the rescued occupant that an elderly lady remained trapped in Unit 93, firefighters entered Unit 93, extinguished a small area of fire within the unit and conducted a rapid primary search, although no-one was found. Firefighters then forced entry to Unit 96, where a primary search was conducted and found to be clear.

Firefighters Lahiff and Jackson were able to observe heavy fire activity within the roof space through an open manhole on level three. Firefighters began directing a 38mm attack stream through the manhole

opening onto the fire, however this was having no effect due to the intensity of the fire. The fire was burning fiercely within the roof space.

Pumper 27, under the command of SO Matt Ruse, arrived on scene. After conferring with the IC, SO Ruse went to the Charlie side of the building to conduct a 360 size-up and make investigations. SO Ruse went to the Charlie side and found large volumes of smoke coming from the building and banking down to ground level, covering the ground for a distance of at least 20m past the building (NB: although the view from the front of the building was almost clear, the view from the rear of the building was the complete opposite, the Charlie side being covered completely in smoke). SO Ruse was appointed Charlie Sector Commander and Pumper 27 was redeployed to Charlie Sector to assist fire attack from the eastern side of the building.

At this time, Duty Commander Parramatta arrived on scene and command was transferred to this Inspector. A Command Point was established known as "Villawood Command". Observing ladder rescues in progress, the IC increased the response to a 3rd Alarm, sending the following RED message at 0213 hours:

"FIRE COMS DUTY COMMANDER PARRAMATTA RED! RED! RED! FIRE INVOLVING THE UPPER LEVEL OF A RESIDENTIAL UNIT BLOCK. CURRENTLY HAVE LADDER RESCUES IN PROGRESS, INCREASE RESPONSE TO A STRUCTURE FIRE 3RD ALARM. STAGING AREA TO BE LOCATED ON WOODVILLE ROAD, 100 METRES TO THE NORTH OF THE FIRE BUILDING."

Hazmat Pumper 85 SO McAuliffe was located on the Charlie side of the building and found an elderly woman in a highly distressed state, located within the smoke and completely disorientated. SO McAuliffe led the woman to the clean air on the Alpha and transferred her to waiting Police officers, who escorted her to the Ambulance treatment and triage area. SO McAuliffe then switched off power to the southern side of the building at the electricity distribution board located in the southern stairwell. Pumper 27 SO Ruse wearing SCBA went into the ground level lobby at the base of the northern stairwell to switch off electricity to the northern side of the building at the electricity distribution board. After entering the lobby, SO Ruse found two adult females, who had become lost and disorientated in the heavily smoke-filled lobby and unable to reach the exit. SO Ruse led both occupants to the building exterior and safety, where they were transferred to waiting Police officers who escorted them to the Ambulance treatment and triage area. Ladder Platform 27 arrived on the Alpha side of the building and set up, preparing to go into operation. The large amount of tall trees at the front of the building limited the scope of the aerial appliance operations.

The IC appointed search commanders for each level attached to the northern stairwell, to supervise search operations and to ensure searches were conducted in a thorough, deliberate and systematic manner. Due to the situation that the fire was spreading and not yet under control, search commanders were given directions to force entry to all units and ensure all units were searched.

From the fire floor, SCBA crews continued to conduct search and rescue operations, under the command of SO Woods. Firefighters Weekes and Simpson gained entry to Unit 94, where they found a man approximately 65 years of age. This person advised firefighters there was no-one else in this unit. Firefighters conducted a primary search of the heavily smoke-logged unit and located a second man, also about 65 years of age within the unit. Firefighters then removed both men to the building exterior, via the internal stairwell, to Police officers who escorted the occupants to the Ambulance treatment and triage area. SCBA crews completed search and rescue of all units located on level three attached to the northern stairwell. Search operations were conducted on level two under the supervision of SO McAuliffe and on level one under the command of SO McKinnon. Pumper 72 firefighters entered heavily smoke-filled Unit 87 on level one, where they located an elderly woman, who was removed to clean air and given to Police officers, who escorted her to the Ambulance treatment and triage area. Pumper 55 firefighters located an adult in level one Unit 88, who they removed to clean air and safety. Entry was gained by firefighters to all units on all levels attached to the northern stairwell and primary searches were conducted and completed.

Following further size-up, the IC increased the response to a 4th Alarm at 0218 hours and special called an additional Ladder Platform to assist roof access. The following **RED** message was sent at 0218 hours:

“FIRE COMS VILLAWOOD COMMAND, DUTY COMMANDER PARRAMATTA RED! HAVE A RESIDENTIAL APARTMENT BUILDING, 60 METRES BY 30 METRES, THREE LEVELS, BRICK CONSTRUCTION AND IRON SHEET ROOF. FIRE IS ON THE THIRD LEVEL. THERE ARE NUMEROUS PERSONS REPORTED TRAPPED. MULTIPLE RESCUES HAVE BEEN CARRIED OUT AND ARE IN PROGRESS. PRIMARY SEARCH AND RESCUE OF THE ENTIRE BUILDING IS UNDERWAY. INCREASE THE RESPONSE TO A STRUCTURE FIRE FOURTH ALARM AND SPECIAL CALL ONE ADDITIONAL LADDER PLATFORM.”

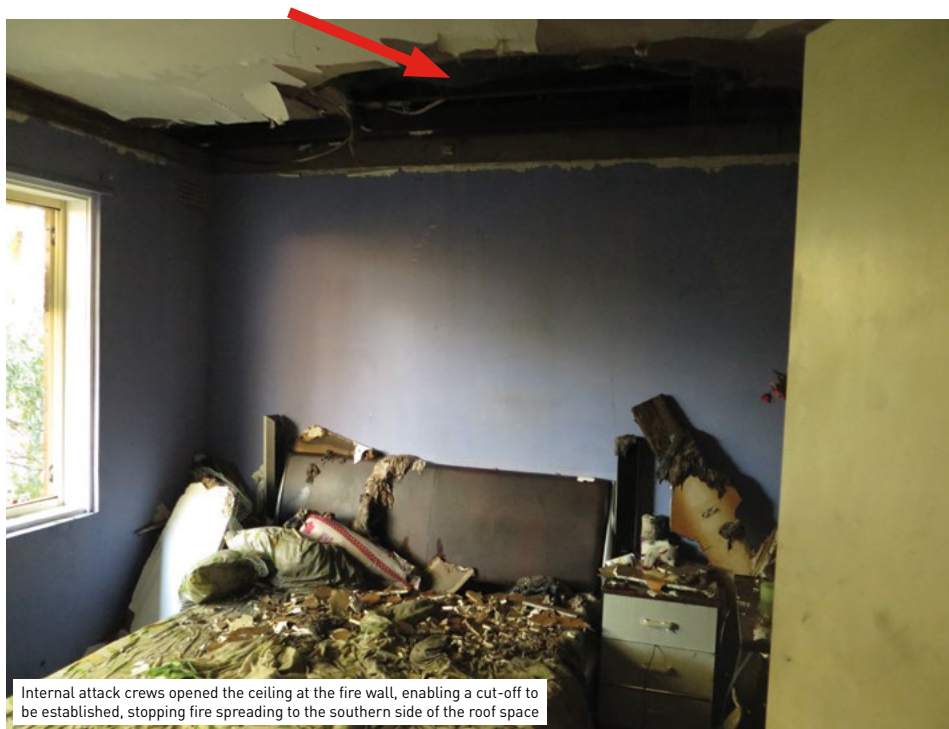
The IC appointed SO Wood the Sector Commander of the fire floor (level three, northern stairwell) and directed SO Wood go to the fire floor to directly supervise firefighting operations. Ladder Platform 27 was in operation (as an observation tower only), with platform cage operator Firefighter Trent Goddard providing critical aerial reports to the IC of the fire progression through the roof and signs of roof structure instability.

Heavy Hazmat 85 arrived on scene and was tasked with establishing main breathing apparatus control at the front of the building, due to the significant SCBA operations underway. Pumper 65, under the command of SO Frank Van Treeck, was tasked with establishing a full Rapid Intervention Team, located near main breathing apparatus control, due to the large number of firefighters operating within a building where the fire was not yet being controlled. NB: staging the RIT at the main SCBA Control provided the advantages of knowing the location of all firefighters within the building in the event an emergency was declared (due to entries recorded on the Stage II SCBA Control Board). Similarly, the RIT would become immediately aware of any crews overdue to exit the building, on account of being staged next to the SCBA Control Board. A large number of internal SCBA crews were conducting aggressive search and rescue and fire attack operations within a structure where the fire was not yet under control and a RIT was a vital component of the safety strategy.

On the northern side of the building, firefighters used ceiling hooks to open sections of ceiling above Unit 93 (where the main body of fire appeared to be burning). Firefighters observed the ceiling above the hallway on the third level was beginning to sag. Crews experienced difficulty opening the roof, due to galvanised steel mesh located within the ceiling between gyprock sheets, which resisted the efforts of ceiling hooks to breach the ceiling. Efforts to open the ceiling were also hampered by heavy fibreglass roof insulation batts and large quantities of timber within the roof. Firefighters reported attempts to gain access into the roof space were slow and extremely difficult. Firefighters were directing attack streams into the heavily involved roof fire and observed the fire was burning fiercely and was very well advanced.



Internal collapse of roof materials onto the stairwell blocked access to level three



Internal attack crews opened the ceiling at the fire wall, enabling a cut-off to be established, stopping fire spreading to the southern side of the roof space



Internal attack crews opened the ceiling at the fire wall, enabling a cut-off to be established, stopping fire spreading to the southern side of the roof space

Pumper 30 and Rescue Pumper 62 firefighters under the command of SOs Gary Pridin and Craig Vincent went to level three, to relieve internal attack crews at that location who were starting to run low on air supplies. SO Vincent advised firefighters were attacking the heavily involved roof space fire with two 38mm attack streams through openings that had been made in the ceiling, however were making very little progress due to the advanced state of the fire. Firefighters observed the fire was beginning to spread through the roof, crossing the hallway in a southerly direction.

Crews gained entry to Unit 96 and began to open the roof in an attempt to cut off the fire spread. Again, significant difficulty was encountered by firefighters attempting to gain access to the roof space. Firefighters were attacking the fire burning in the roof with two 38mm attack lines, however the fire continued to increase in intensity.

Attempts to establish roof cut-off:

At the same time firefighters were attempting to control the fire in the roof space above the northern half of the building, attempts were made to contain the fire and stop it from spreading to the southern side of the building. Realising the fire was burning laterally through a common roof, with the potential to spread along the entire length of the roof from end to end and begin dropping down onto all top floor units below, the IC employed a cut-off strategy, directing the next wave of

incoming appliances to make access to the roof via the southern stairwell and establish a cut-off line.

Rescue Pumper 57 SO Wayne Keevers was appointed the Sector Commander for all operations conducted from the southern stairwell. SO Keevers directed that attack and lay bags be used to conduct a reverse hose lay and deploy attack lines from the southern stairwell. A 70mm attack line was laid from Pumper 49 to the entry door at the base of the southern stairwell with a one into two breaching and 38mm reducer fitted.

Using the reverse lay technique, two 38mm attack lines were deployed to the northern end of third level Unit 81 where the cut-off line was to be established. Rescue Pumper 57, Pumper 49 and Aerial Pumper 47 firefighters wearing SCBA were removing sections of ceiling with ceiling hooks to gain access to the roof space, under the protection of charged attack lines. Firefighters experienced difficulty opening the roof due to the galvanised steel mesh located between the gyprock layers, necessitating use of the battery-powered reciprocating saw to cut through the mesh. Firefighters were able to make sufficient openings to enable the whole of the firewall to be exposed. Once firefighters had opened the ceiling, they found heavy volumes of smoke and flames in the roof space. Jet-like flames were coming across the top of the fire wall where it did not seal completely to the roof and through openings in the fire wall where roof timbers had burnt through, allowing fire to cross into the

roof space on the southern side of the building. Firefighters observed the roof space on the northern side of the fire wall to be totally involved in fire. Firefighters used thermal imaging cameras to locate flames through the heavily smoke-filled roof space, which they controlled with 38mm attack streams. Fire conditions continuously intensified then diminished, as wind blew into the breached roof. Firefighters operated in conditions of very low visibility and high heat over a period of several hours, conducting protection operations at the fire wall.

Duty Commander ME3 Inspector Gary Meagher arrived on scene and was appointed Alpha Sector Commander (operations were most active and the greatest risk to firefighters existed within Alpha Sector). As firefighters protecting the fire wall ran low on air, they were replaced by relief crews, consisting of firefighters from 62, 31, 73, 72 and 55 Stations. NB: effectively a Third Alarm was deployed for operations within the southern stairwell, enabling two stations to fight the fire, two stations to recycle and two stations to position as on deck crews.

In addition to flames breaching the fire wall, a further threat of fire spread existed from venting flames travelling externally along the side of the building and auto-exposing into windows on the southern side of the building. Fire was also spreading through roof eaves, which firefighters attempted to open to undertake extinguishment. Crews experienced significant difficulty attempting to open the eaves, due to metal cladding on the eaves.



SCBA crews prepare to deploy via the southern stairwell

The roof eave material contained a plastic foam material which produced intense fire activity when the aluminium cladding failed, requiring firefighters to protect the southern roof space from ignition. As sections of roof eave became involved in fire, molten aluminium began to drop, necessitating establishment of an exclusion zone near the base of the building. Foam insulation within the roof eaves obstructed operation of thermal imaging cameras from identifying fire travel through the roof eaves.

While operations to stop the fire spreading to the southern side of the building were underway, forcible entry and search and rescue operations were conducted within all units on all levels attached to the southern stairwell, by firefighters from Pumpers 55, 72, 73 and 85. During these search operations, firefighters located and safely removed from the building a man approximately 40 years of age in level three Unit 82, a woman approximately 50 years of age in level one Unit 75 and a woman about 70 years of age in level three Unit 84. Forcible entry using hydraulic rapid intervention kit tools was difficult and time-consuming due to fortified steel frames and jambs on unit doors.

Operations switched to defensive strategy:

From the northern side of the building, firefighters continued to attack the fire. A third SCBA fire attack crew consisting of Pumper 27 firefighters led by SO Ruse were making their way up the southern stairwell with a third fire attack line from Charlie Sector. Fire Floor

Sector Commander SO Wood observed the ceiling above the hallway and stairwell had sagged approximately 20cm.

Fire conditions were now beginning to escalate significantly; the roof space was now totally involved in fire and flames were venting externally at least 15 metres above the roof line. SO Wood was able to observe the roof rafters were now alight through breaches in the internal ceiling. Ladder Platform 27 cage operator Firefighter Trent Goddard reported heavy fire activity was now venting through iron roof sheets. From the ground, the IC observed key elements of the timber roof frame alight within the roof space, including the rafters and struts.

In conjunction with information from Fire Floor Sector Commander and the aerial report, the IC formed the opinion the roof was now unstable and in danger of collapsing onto the area where firefighters were working. The decision was made to withdraw all internal crews working from the northern stairwell located on level three from the building. Shortly after the decision was made to withdraw firefighters from the northern side of the building, several internal collapses occurred; the most significant of these was a major collapse of an area of ceiling and roof timbers (trusses, battens and joists) located directly over the northern stairwell, resulting in access onto the third level being completely blocked. As well as gyprock and timber, the collapse debris included a large quantity of galvanised steel mesh.

NB: Although the roof sheet irons remained in place (albeit unsupported), a substantial quantity of roofing material was now alight, had collapsed or was in danger of further collapse.

At this time, the fire in the roof had been burning for at least 30 minutes, fire intensity was significant, the extent of fire spread was great and fire was burning through key elements of the roof structure (ie trusses and joists). Total collapse of the roof was a significant possibility.

The decision to withdraw crews from the southern side of the building was based on the likelihood of continued collapses occurring and the dangers this would present to firefighter safety.

Duty Commander MW1 Inspector Mark McGuire arrived at the fireground and was appointed Charlie Sector Commander. Following withdrawal of all firefighters from positions attached to the northern stairwell, the strategy switched to a defensive attack on the northern side of the building. Firefighters operating on the southern side of the building remained in place, due to protection provided by the fire wall. Ladder Platform 27 commenced an aerial attack, attempting to direct an aerial stream into the heavily involved roof space fire. Prior to commencing the aerial attack, the aerial operator was provided precise directions concerning internal operations on the southern side of the building and ensured that the aerial stream did not impact this area of operations.

From Alpha Sector, firefighters operating from ground level directed one high pressure hose reel, two 38mm and two 70mm streams into the heavily involved roof space, through openings formed in the roof eaves.

From Charlie Sector, firefighters operating from ground level directed two 38mm streams into the burning roof space. Once operations switched to defensive strategy on the northern side of the building, the response was increased to a 5th Alarm, in recognition that operations would be of an extended nature, as effective firefighting streams were still not reaching the fire. At 0254 hours, the IC sent the following **RED** message:

“FIRE COMS, VILLAWOOD COMMAND, DUTY COMMANDER PARRAMATTA RED! AT LEAST 10 PERSONS HAVE BEEN RESCUED FROM THE BUILDING SO FAR. PRIMARY SEARCHES TO ALL UNITS HAVE BEEN COMPLETED AND ARE NEGATIVE. THE FIRE HAS ENTERED THE ROOF SPACE AND IS SPREADING THROUGH THE ROOF. FIRE CONDITIONS ARE ESCALATING. FIRE IS BEGINNING TO BREACH THROUGH THE ROOF. FIREFIGHTERS ARE BEING WITHDRAWN FROM THE NORTHERN SIDE OF THE BUILDING AND WE ARE ABOUT TO PLACE LADDER PLATFORM 27 IN OPERATION. FIREFIGHTERS REMAIN IN THE SOUTHERN SIDE OF THE BUILDING AND ARE HOLDING THE FIRE AT A FIRE WALL WITHIN THE ROOF. INCREASE THE RESPONSE TO A FIFTH ALARM.”

Fire intensity within the roof space caused the roof structure to begin to collapse, dropping burning roof timbers and materials into the units below, igniting the units. Firefighters experienced difficulty directing defensive fire attack streams into the burning units, due to the strengthened laminated window glass, which would not fail due to fire heat and would not break when impacted by firefighting streams.

At 0348 hours, the response was increased to a 7th Alarm to ensure adequate SCBA crews would be in place to facilitate three-deep deployment. Mobile Command Centre (MCC) Bravo arrived on scene and command was switched to the MCC. The Incident Management Team arrived at the fireground and command was transferred to Superintendent Jeremy Fewtrell. Chief Superintendent Philip Lindsay was appointed Operations Officer.



View of the collapse onto the northern stairwell, preventing internal access to level three

Fire intensity within the roof space caused the roof structure to begin to collapse, dropping burning roof timbers and materials into the units below, igniting the units.

Pumper 41 was deployed to the Bravo side of the building and SO Robert Burgess appointed Bravo Sector Commander. Ladder Platform 21 positioned on Bravo Sector and was placed in operation as a water tower. Ladder Platform 21 operator Firefighter Dave Phillips experienced similar problems as those encountered by Ladder Platform 27, unable to access fire burning within the roof space due to the iron sheet roof. Firefighter Phillips attempted to breach the level three windows with forcible entry tools including a sledge axe, however the glass was extremely strong, highly resistant to breaking and would not shatter or crack. Eventually, openings of limited size only, could be made in the windows, to allow the aerial streams to reach the fire. Firefighters encountered safety locks on windows that would not allow windows to open more than 12cm, again limiting the ability of attack streams to reach the fire. The aerial stream was directed into involved units on level three and assisted in controlling the fire.

Operations switched to offensive strategy: Once roof fire conditions began to diminish, after advice from the Operations Officer, the IC requested that operations be switched to an offensive strategy on the northern side of the building. All aerial appliances and external defensive streams were shut down. Internal attack crews, consisting of SCBA crews from 12, 61, 19 and 41 Station advanced to the fire floor via the northern stairwell and conducted fire attack of the involved units on level three with 38mm attack lines, bringing the fire under control within the four level three units. Ladder Platforms 21 and 27 remained in position above the fire building, surveying the roof for signs of structural instability and providing continuous aerial reports to the IC.

Fire brought under control: Following entry of internal attack crews to level three of the northern side of the building, the fire was rapidly brought under control by 0630 hours and firefighters moved to salvage and overhaul mode. Although four units on level three at the northern end of the building were destroyed by fire, all other units were saved.

Notes:

1. Fire initiated within an internal stairwell. Critically, the heavy involvement of fire within the stairwell prevented occupants escaping from the building by cutting off their main egress path.
2. The fire initially involved two lounges formed of polyurethane foam material. Under fire conditions, a fierce and intense fire rapidly developed, producing high heat release rates, significant flames and large volumes of thick black smoke. As stated above, these conditions prevented occupants escaping via the internal stairwell.
3. A heavy smoke condition and superheated fire gases ascended to internal ceiling on level three then banked down to floor level within the internal stairwell (a classic example of the "stack" effect), preventing occupant egress on all levels.
4. The fire rapidly progressed into the roof space above third level residential units, prior to firefighters arriving on scene. Due to the almost certain likelihood of fire drop-down into units beneath the roof, the "protect in place" strategy was not an option for firefighters. 4,5,6,9,12
5. Firefighters rescued a total of 12 occupants from the building, consisting of five adult males and seven adult females. This was a great effort.
6. Although numerous people were trapped when firefighters arrived on scene, gaining fire control was an early priority of firefighters. Two fire attack lines were advanced to the location of the fire at the earliest opportunity to commence fire attack. Although rescue is important, if the fire is not controlled the situation will greatly deteriorate, significantly endangering more lives (rescuers and trapped occupants alike). 2,4,9,18
7. The fire scene was complex, requiring multiple tasks to be carried out simultaneously across a large fireground; this was most effectively achieved with the establishment of sectors and implementation of Sector Commanders. The fireground was divided into operations conducted from north and south stairwells and Sector Commanders appointed accordingly. Similarly, Sector Commanders were appointed for each level. Sectoring and appointment of sector commanders ensured all operations were conducted in a systematic, coordinated and deliberate manner and ensured all incident objectives were achieved. 5,6,7,9,14
8. From the outset, firefighters were confronted with numerous competing urgent priorities and limited resources. Rapid initial size-up enabled critical factors to be identified and incident objectives determined. Size-up was continuous throughout the incident and the incident action plan modified accordingly. Size-up only stopped after the last FRNSW appliance left the scene. 1,2,4,6,8,9,14,17
9. In a building with a large common roof, once fire enters the roof space it is highly likely fire will spread laterally through the entire roof (literally from end to end). As the roof begins to fail and collapse (due to the roof frame materials becoming involved in fire), fire will "drop down" into occupancies immediately under the roof. A sound strategy for common roof fires is to identify a cut-off point as early as possible and deploy resources to a non-involved part of the building to stop fire spread. 2,5,6,14
10. Although the common roof above the fire building was fitted with a fire wall, numerous openings in the fire wall allowed fire to spread past the fire wall. The determined efforts of firefighters working under difficult and oppressive conditions effectively cut fire spread off through the common roof, saving half the occupancies on the third level. It is important to never assume a "fire wall" within a roof will stop fire spread without intervention. 4,5,9,14
11. The construction of the ceiling above the third level of the building greatly resisted efforts of firefighters, who attempted to create openings to enable access to the fire. This delay enabled the fire to increase in size, to a point where hose streams were not being effective when access was finally gained. The decision to withdraw crews from the area immediately beneath the burning roof was made with consideration to the size/extent of fire within the roof, time the fire had been burning for, fire intensity and what was actually burning/being impacted by fire (critical elements of structure, i.e. timber roof trusses and joists). All of these factors indicated collapse of the roof was likely and firefighter safety could be severely compromised. Firefighters quite naturally wanted every opportunity to try to extinguish the roof fire and were frustrated at being withdrawn; however the decision to withdraw crews was not one taken lightly and was only made after full consideration of the above factors had been made, with firefighter safety being the highest priority. 4,5,6,8,9,14
12. Firefighters were confronted with numerous persons trapped on every level of the building and an aggressive and rapidly expanding fire. Through determination, courage and the highest levels of professionalism, numerous rescues were made, all lives were saved and the fire was controlled. Congratulations to all FRNSW crews who responded to this very difficult fire.



Pumper 49 supplied attack lines to the southern stairwell enabling the fire to be cut off

The determined efforts of firefighters working under difficult and oppressive conditions effectively cut fire spread off through the common roof, saving half the occupancies on the third level

1. AVILLO, Anthony, Fireground Strategies, second edition, Penwell, 2012.

2. BARVELS, Michael, Captain Ladder 115 FDNY 2014, "Complex Operations at Low Rise Fireproof Multiple Dwellings", WNYF 3/2014.

3. DEVITA, Anthony W. Assistant Chief, Staten Island Borough Commander, DUNN, Vincent, Deputy Chief, Division 3, FDNY, 1988, "Fatal Fire on east 50th", WNYF 1/1988

4. DOWNEY, Joseph R, Battalion Chief, FDNY Special Operations Command, presentation FDNY Training Academy, March 2014.

5. DUNN V [2000]. Command and Control of Fires and Emergencies. Saddle Brook NJ: Fire Engineering Book and Videos.

6. FDNY FIREFIGHTING PROCEDURES VOLUME 1, BOOK 1, January 23, 2012, MULTIPLE DWELLING FIRES

7. GUNNING, Michael, Deputy Chief, Division 7, FDNY 2014, "Sectors Play key Role at Bronx Five -Alarm Fire", WNYF, 2/2014.

8. KILDUFF, Edward S., Chief of Department, presentation FDNY Training Academy, March 2014.

KOUBA, Robert J., Deputy Chief, Division 11, FDNY 1998, "Manhattan Fifth Alarm", WNYF, 4/98.

9. LAPOLLA, Thomas, Deputy Chief, FDNY, Battalion Chiefs Command Course.

10. MCDONALD, Edward, Battalion Chief FDNY, 2013, "Causal Factors in the 62 Watts Street Fire: Opportunities to Improve Firefighting Knowledge and Tactics.", WNYF, 3/2013.

11. MCKNIGHT, Pat, Deputy Chief, Division 3, FDNY, 1999, "Box 1323", WNYF 2/99."

12. MOONEY, John, Deputy Chief, Chief of Training FDNY, presentation FDNY Training Academy, March 2012.

13. MURTAGH, James J., Deputy Chief, Division 3, FDNY, "Bronx Box 3162...Odour of Smoke", WNYF 4/86.

14. NORMAN, John, Deputy Assistant Chief (retired), FDNY, "Fire Officers Handbook of Tactics", 4th Edition, ISBN 978-1-59370-279-3, Pen Well Corporation 2012.

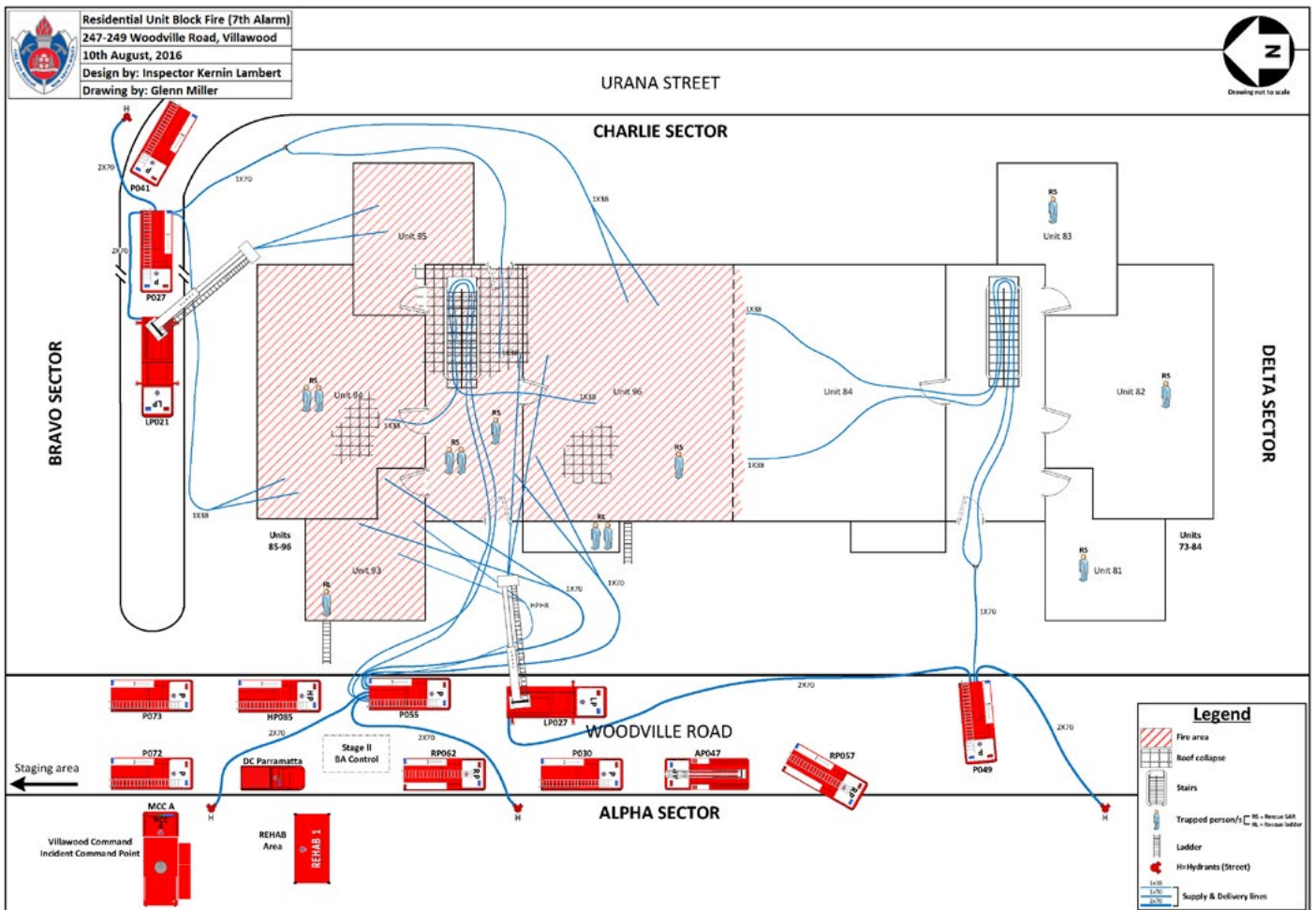
15. NORMAN, John, Deputy Assistant Chief (retired), FDNY, "Tragic High-Rise Fires Spur Dramatic Fire Safety Improvement", WNYF 4/99.

16. PAPA John, Deputy Chief, Division 15 FDNY, "Box 1033, Brooklyn Fourth Alarm: Not Your Ordinary Multiple Dwelling Fire.", WNYF, 1/2013.

17. PFIEFER, Joseph W, Deputy Assistant Chief, FDNY, presentation FDNY Training Academy, March 2012.

18. RAYNIS, Stephen, Chief of Safety, FDNY, presentation FDNY Training Academy, March 2012.

19. Smith, James P., Strategic and Tactical Considerations on the Fireground, 3/e, Brady / Pearson Education, 2012.





Following withdrawal of internal crews, Ladder Platform 21 and Aerial Pumper 47 attack the fire from Alpha Sector

3RD ALARM FIRE IN BUILDING UNDER DEMOLITION AT BELMORE

Incident summary: Firefighters responded to what initially appeared to be a relatively straightforward situation involving a fire within a building under demolition. The fire building contained many hidden hazards typical of buildings that are vacant, abandoned, disused, derelict or subject to demolition, including advanced fire conditions, uncontained fire spread, access difficulties for firefighters and unstable structures. As usual, FRNSW crews performed professionally and overcame the difficulties and hazardous conditions present to safely bring this difficult and dangerous fire under control. This report should be read in conjunction with “*Firefighting Operations at Vacant Building Fires*” contained within this edition of Fire & Rescue Operations Journal.

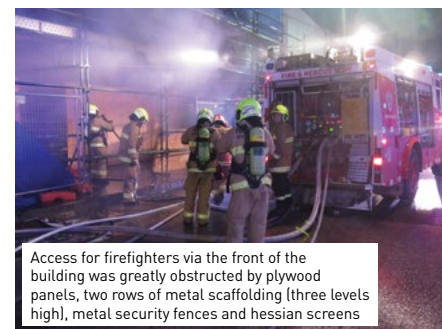
Incident type: Building fire (factory under demolition).

Time, date and place of call: 2244 hours on Sunday 6 March 2016, Canterbury Road, Belmore.

FRNSW response: Pumpers 64 (Lakemba), 52 (Campsie), 14 (Ashfield), 29 (Arncliffe) and 48 (Mortdale), CAFS Pumper 31 (Busby), Rescue Pumper 15 (Burwood), Aerial Pumper 47 (Revesby), Ladder Platform 21 (Kogarah), Hazmat Pumper 13 (Alexandria), Heavy Hazmat 13, Logistics Support Vehicles 1 (City of Sydney) and 21, Duty Commanders ME3 (Ashfield) and MS2 (Kogarah).

In addition to above, a further 14 FRNSW appliances and numerous other senior officers and specialist support staff responded to the incident for relief and fire duty purposes over the following 24 hours.

Additional agencies/services in attendance: NSW Police, Ambulance Service of NSW, gas and electricity authorities and Roads and Maritime Services.



Access for firefighters via the front of the building was greatly obstructed by plywood panels, two rows of metal scaffolding (three levels high), metal security fences and hessian screens



Smoke pours from the heavily involved basement



Fire extended from the basement to level two via numerous internal br

Fireground description: The fire building was a former clothing factory, under demolition at the time of the fire. The building was 42m x 65m, steel joist frame and brick clad. The cement asbestos sheet roof had been removed. A 42m x 25m two level area of offices (levels two and three) was located at the southern end of the building, located above a ground level open space area being used for storage of demolition materials. The first level of the building beneath the offices at the front of the building was formerly used as an underground car park (and was effectively a basement). An area 42m x 45m, located at the northern end of the building, consisted of open space located on a bare concrete slab. A large section of the first level floor located directly above the area of fire was formed of unprotected plate steel. An open block-wall from ground level to 1.0m high, attached to the first level basement was located along the front of the building. Although the openings in this wall provided significant ventilation to the basement, it greatly obstructed fire attack streams.

There were hazardous conditions due to the vacant, abandoned, derelict, disused and demolition status of the buildings. It was in a significant state of demolition and had numerous issues commonly associated with vacant, abandoned, derelict, disused and demolition structures. Some of those identified included the following.

1. The installed automatic sprinkler system and automatic fire alarm had been disconnected and removed. Early notification of fire was not available and the fire was only discovered when it reached an advanced stage. The fire was able rapidly to grow to a size that could not be controlled by initial fire attack.
2. The installed 100mm internal fire main, fire hydrants and installed hose reels had been disconnected and were inoperable. Lengthy hose lays were required by firefighters to reach the location of the fire.
3. Although a number of fire separation walls existed throughout the building, all fire doors had been removed, facilitating uncontained fire spread through the building. Similarly, a number of openings had been made to internal walls and concrete floor slabs, facilitating uncontained horizontal and vertical fire spread through the building.
4. Several fire doors within fire isolated stairwells were jammed in the fully open position by demolition debris and could not be closed. A number of large sections of the fire isolated passageways had been removed. Firefighters could not rely on fire isolated passages for protection and/or refuge during the fire.
5. A large quantity of demolition material was being stored in the ground level open space beneath the offices. These materials included quantities of timber, large quantities of foam rubber slabs, polystyrene and flammable liquids, creating large fire loads that facilitated increased fire activity.
6. The former underground carpark had been converted into a cavernous storage area containing large quantities of combustible materials. This part of the building was not designed for this purpose. Consequently, fire activity was severe, however construction features greatly obstructed the efforts of firefighters to access and attack the fire. The building also contained heavy machinery, forklifts and abandoned vehicles.
7. At some time prior to the fire, the building had been used for habitation purposes. The second and third level offices contained large quantities of abandoned combustible materials (furniture, beds, lounges, mattresses, tables, chairs, cardboard boxes, plastic containers and numerous other items associated with habitation). These materials resulted in increased fire activity.



Access and openings



Fire attack crews forced their way through the concrete blocks with sledge axes, providing access for attack streams to the basement fire

8. Areas of vulnerable structural elements (structural steel) were exposed to fire due to removal of protective cladding by the demolition process. When exposed to heat, these elements of structure were vulnerable to failure and possible collapse.
9. Access for firefighters via the front of the building was greatly obstructed by plywood panels, two rows of metal scaffolding (three levels high), metal security fences and hessian screens. The extension of scaffolding past roof level restricted the operation of defensive streams (in particular aerial streams). The heavy boarding-up of the building greatly restricted the efforts of firefighters to identify the location and extent of fire within the building, significantly obstructing the size-up process.
10. A large quantity of demolition debris and abandoned materials (including torn, twisted and jagged metal sheeting and elements of structure and piles of roof mesh wire) was scattered around the site. This greatly obstructed the progress of SCBA crews and advancement of hose lines through the building interior. These materials increased potential injury to firefighters due to trip and fall hazards. The treads and railings of a number of internal stairwells had been removed making them impassable and creating significant fall risks.

11. During its operation, the building was fitted with extensive metal exhaust ducting extending to all parts of the structure. This ducting had been opened in numerous places due to the demolition process, facilitating the entry and extensive spread of fire to all parts of the building.
12. Due to the advanced state of demolition works, a large quantity of brickwork had been knocked down on level three, increasing the instability of the structure.

Incident operations: Shortly prior to the fire being discovered, neighbours heard an explosion and observed smoke coming from the building, although no fire was visible. Pumpers 64, 52 and 14 and Duty Commander ME3 Inspector Mick Wren were initially responded to the reported fire.

Pumper 64, under the command of SO Martin Quigg, was the first FRNSW appliance to arrive on scene. As firefighters approached the scene, a smoke haze was visible blowing across Canterbury Road in the headlights of approaching motor vehicles. Pumper 64 arrived on scene and SO Quigg observed black smoke billowing out from the gaps between the plywood boards attached to the front of the building. Smoke was issuing along the entire length of the building frontage. Black smoke was beginning to vent out onto the footpath and blow across the road. The combination of scaffolding, plywood panel hoarding, temporary security fences and hessian

screens significantly obstructed the ability of SO Quigg to determine the location and extent of the fire. At 2252 hours, SO Quigg sent a **RED** message describing incident conditions and requesting the response be increased to a 2nd Alarm. SO Quigg became the IC and a Command Point known as “Belmore Command” was established.

As firefighters began to don SCBA and lay hose to commence firefighting, SO Quigg attempted to investigate the size of the building and the extent of the fire from the Bravo side of the building, however access was extremely limited and no valuable intelligence could be gained. SO Quigg returned to the front of the building as Pumper 52 was arriving on scene. Large volumes of smoke continued to vent from behind the plywood boards attached to the front of the building, although firefighters were uncertain as to the exact location of the fire.

Duty Commander Inner West Inspector Mick Wren arrived at the fireground and following a handover briefing, command was transferred to Inspector Wren. SO Quigg was appointed Alpha Sector Commander. Following further size-up, the response was increased to a 3rd Alarm to ensure adequacy of SCBA relief crews. The IC special called CAFS Pumper 31 and a ladder platform aerial appliance.

The Pumper 64 fire attack crew consisting of Firefighters Damien Bower and Sam Rouen gained entry through the front doors of the building located on Canterbury Road, advancing a 38mm attack line. Firefighters observed large volumes of black smoke coming from the basement level of the building, located below street level. An internal stairwell was located within the foyer, inside the front door, which firefighters used to gain access to the level one basement. Upon reaching the basement level, firefighters found no fire present at their location on the eastern side of the building and then returned to level two via the internal stairs. Firefighters then advanced the internal attack line to the western side of the building via the second level. Firefighters reported significant difficulty advancing the fire attack line due to a large number of obstructions caused by abandoned materials and demolition debris scattered throughout the building. Progress was slow, visibility was poor and internal conditions were exhausting. Upon reaching the western wall (Bravo side) they then went along a hallway and down an internal stairwell to level one. Firefighters observed numerous breaches through the building internal walls which were allowing fire to spread and creating multiple ignitions. Firefighters extinguished numerous pockets of fire as they progressed to the location of the main body of fire. Upon reaching the basement, firefighters discovered a large amount of fire burning that was extending to the top of the third level. Most of the basement was heavily involved in fire. Fire was beginning to impact offices on levels two and three. Firefighters directed the attack stream onto fire impacting the levels two and three offices, attempting to stop the fire spreading to the offices. Shortly after Pumper 64 firefighters entered the fire building, Pumper 52 firefighters wearing SCBA under the command of SO Tim Blanch advanced a second 38mm fire attack line into the building through the Alpha side front door to the northern edge of the first level, where they observed a large body of fire burning in the basement level below. Fire attack had no effect on the fire. The fire was producing a large amount of heat that could be felt through the first level concrete slab.



Following withdrawal of internal attack crews, Aerial Pumper 47 attacks the fire from Alpha Sector

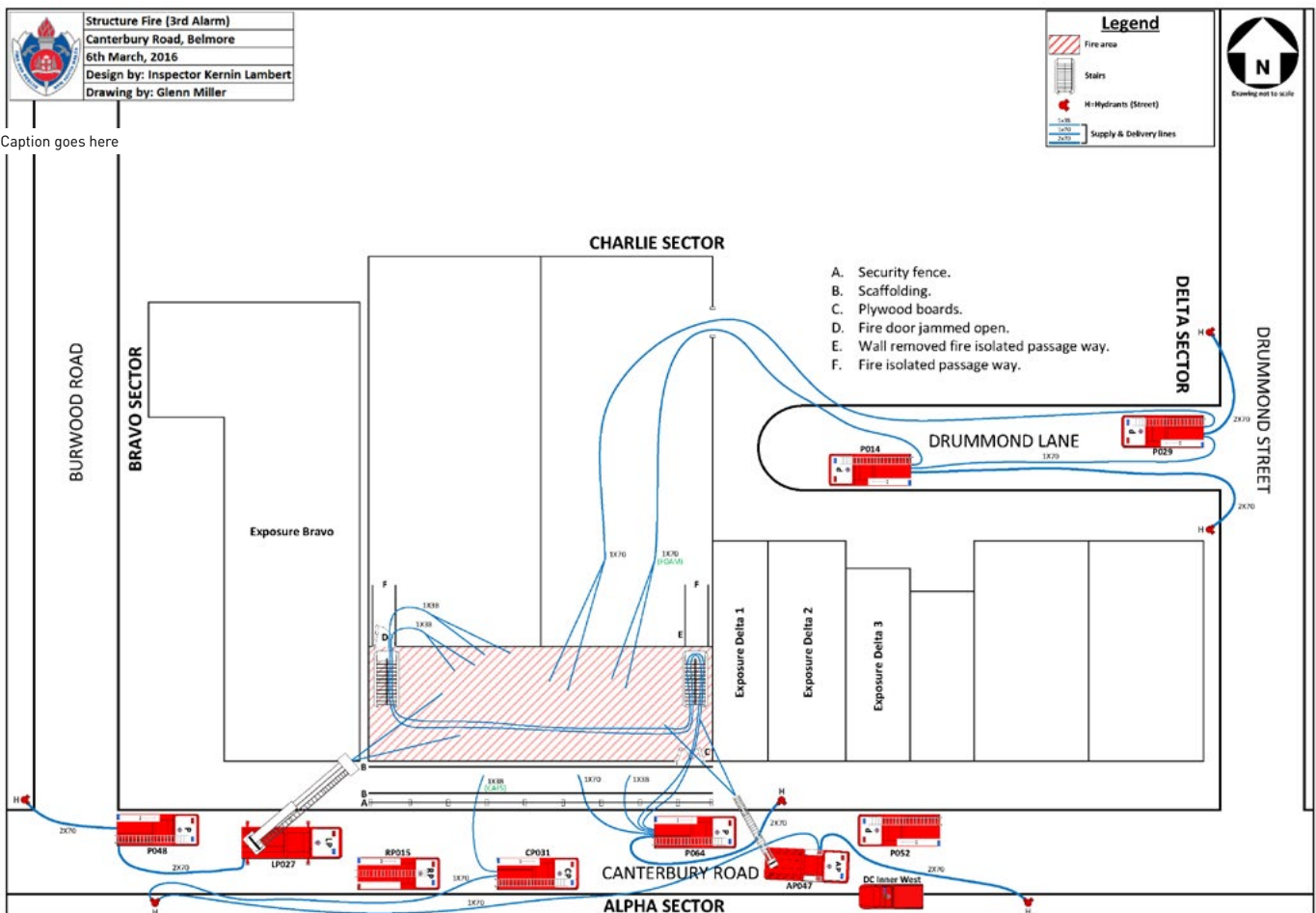
Pumper 14 under the command of SO Tom Leben arrived on scene and was directed by the IC to go to the rear of the building to investigate and commence firefighting operations. SO Leben was appointed Charlie Sector Commander. From Charlie Sector, SO Leben observed the basement level and levels one and two to be heavily involved in fire. Due to the advanced state of the fire, SO Leben decided to conduct an attack on the fire using firefighting foam. Pumper 14 firefighters wearing SCBA began to advance a 70mm foam attack line towards the fire. Firefighters attacked the fire with foam however this had minimal impact on the fire. Pumper 29 firefighters, under the command of SO Janine Bailey and Pumper 48 firefighters (all crews wearing SCBA) under the command of Captain Wayne Challinor advanced a second 70mm attack line from Charlie Sector and commenced to attack the fire, however similarly this attack stream was having minimal effect on the fire. From Alpha Sector, as a precautionary measure the IC directed that Aerial Pumper 47 position and set up as an aerial water tower in the event internal attack crews were unable to control the fire and a defensive attack was required.

As firefighters attacked the fire, conditions continued to worsen. The volume of smoke coming from the basement was increasing. Fire continued to spread and fire intensity continued to grow. Rescue Pumper 15, Pumper 64 and Pumper 52 SCBA crews continued to attack the fire internally, experiencing decreasing visibility and increasing heat. A sudden escalation in fire conditions occurred when fire reached large quantities of stored foam rubber slabs and polystyrene materials within the basement. Large volumes of black smoke were now venting from behind plywood panels located on Alpha Sector, flames were visible extending to the roof and the entire area of the basement was now totally involved in fire. The IC made the decision to withdraw all internal attack crews and conduct a defensive attack, due to escalating fire conditions and the building becoming too unsafe for firefighters to remain inside.

When all crews were withdrawn from the building, the IC gave the order for Aerial Pumper 47 to commence operations as a water tower. The aerial stream was used to conduct direct fire attack on the fire building and to protect Delta Exposure which was coming under threat. Ladder Platform 21 was positioned at the western end of Alpha Sector and placed in operation as a water tower. The two aerial appliances conducted an aerial master stream attack on the fire which extinguished a significant amount of fire on levels two and three, however the fire in the basement (shielded by the concrete slab above it) continued to burn intensely. A number of major internal collapses involving sections of floors occurred, resulting in powerful updrafts of embers being showered into the air above the roof of the fire building, threatening nearby exposures. The aerial crews ensured no fire extension to exposures occurred and all exposures remained fully protected. Firefighters then attempted to access the basement fire externally; SCBA crews began to remove sheets of plywood panels from the front of the building where heavy smoke was pouring out. Upon removing the panels firefighters found heavy concrete blockwork present forming the Alpha side wall above the basement. Fire attack crews wearing SCBA forced their way through the concrete blocks with sledge axes, providing access for attack streams. From the footpath SCBA crews deployed 38mm and 70mm hose streams into the basement in an attempt to control the fire. Minimal impact on fire intensity resulted. A large amount of material had been tightly packed into the basement, shielding burning material from hose streams. At this time, CAFS Pumper 31 was on scene. The IC directed a CAFS attack on the fire. Firefighters began to attack the fire with a 38mm CAFS line at 0.3% and 500kpa, initially set on wet then to medium plus. The CAFS attack resulted in rapid knockdown of most of the visible fire within the basement. Following knockdown of the basement fire, internal attack crews returned to the building interior and completed extinguishment of spot fires. Fire duty crews remained on scene for a further 24 hours extinguishing hot spots and pockets of smouldering fire.

Notes:

1. The building was in a state of advanced demolition. This condition presented numerous hidden hazards to firefighters.
2. Some of the hazardous conditions present due to the state of the building included the disconnection of installed fire systems, large openings within internal walls and floors, removal of fire doors and numerous openings of the extensive internal metal ducting network. These conditions facilitated rapid vertical and lateral fire spread throughout the building and an advanced fire when firefighters arrived on scene. The many openings allowed hidden fire to travel and develop behind firefighters, potentially cutting off escape routes.
3. Further hazardous conditions present included removal of sections of fire isolated passageways, fire doors wedged open, combustible materials within fire isolated passageways, entire stairwells missing treads and exposure of unprotected structural steel due to removal of protective cladding.
4. Due to the demolition works at the site, access to the building was extremely difficult for firefighters. A metal security fence, two rows of steel scaffolding, hessian screening and plywood hoarding secured the front of the building hindering firefighting access.
5. The basement was never intended for use as a storage area of large quantities of combustible materials. The adapted use of this space for storage resulted in heavy fire activity that resisted attempts at extinguishment. A common problem with buildings that are vacant, abandoned, disused, derelict or are undergoing demolition is use of the building for a purpose for which it was never intended; consequently the appropriate BCA measures are seldom in place, resulting in advanced and dangerous fire conditions being present.
6. Once again it was established that the altered state of a building that is vacant, abandoned, derelict, disused or undergoing demolition can result in fire behaviour that is unexpected. What firefighters may encounter at these structures is completely unpredictable.
7. Firefighters conducted a determined attack on the fire. The process of continuous size-up identified many of the hazardous conditions and difficulties present, enabling operations to be modified in accordance with the changing conditions. As a result, firefighters were able to safely bring this stubborn and hazardous fire under control.





Extrication crews cut the steering wheel away

HIGH-SPEED IMPACT INTO POWER POLE AT CANLEY VALE

FRNSW crews responded to a high-speed single-vehicle side impact into an electricity power pole resulting in entrapment of two persons. Firefighters used the cross ramming technique to assist in the release of the driver from compression. Extrication was complicated by vehicle materials which included a carbon composite fibre racing seat.

Incident type: Motor vehicle accident with persons trapped.

Call details: 2319 hours, Sunday 7 August 2016, direct line call from Police RCO, MVA persons trapped, Chancery Street, Canley Vale.

Nature of entrapment/emergency: High speed, single vehicle (light passenger two-door hatchback), side impact (off-side) into a timber power pole, resulting in entrapment by compression of one adult male driver approximately 25 years of age and entrapment by confinement of one adult female passenger approximately 25 years of age.

FRNSW response: Rescue Pumper 62 (Bankstown), Heavy Rescue 8 (Liverpool), Pumper 49 (Cabramatta) and Duty Commander MW2 (Parramatta).

Additional services in attendance: Ambulance Service of NSW, Ambulance Aeromedical Retrieval Unit, electricity authority and NSW Police.

Incident operations: Pumper 49 under the command of SO Carl Franklin was the first FRNSW appliance to arrive on scene. SO Franklin conducted a rapid scene size-up and identified that two persons remained trapped (the driver by compression) within the vehicle that had impacted the pole. SO Franklin also identified an overhead powerline had detached due to impact and had fallen to the ground. SO Franklin sent a detailed informative message describing incident conditions and requesting the urgent attendance of the electricity authority.

This message was critical, resulting in the response being upgraded to include a heavy rescue unit (due to the likely need for additional rescue resources owing to a compression entrapment due to a power pole collision). Pumper 49 firefighters commenced initial vehicle stabilisation, established fire protection, set up an exclusion zone around the fallen powerline and informed all persons at the scene of the electricity hazard. Duty Commander MW2 arrived on scene a short time later and established a FRNSW command point.



Firefighters use hydraulic shears to cut through the A pillar, prior to roof removal

Rescue Pumper 62 under the command of SO Craig Vincent arrived on scene. SO Vincent liaised with SO Franklin and Ambulance paramedics concerning the entrapment and the formulation of an extrication plan. Firefighters determined the woman located in the front passenger seat was trapped by confinement only. The male driver was trapped by compression of both legs within the footwell. Firefighters gained access to the passenger who was able to be removed via rescue board, placed on an ambulance stretcher and conveyed to hospital. Firefighters then commenced extricating the trapped driver, initially performing a roof removal (with hydraulic shears) while Ambulance paramedics stabilised the patient. During the process of the roof removal which involved cutting windscreen glass with a reciprocating saw, firefighters protected the patient from glass particles with a P2 mask, eye protection and the placement of a clear plastic sheet across the windscreen. Following removal of the roof patient access for ambulance paramedics was greatly improved. Similarly firefighters were now able to conduct a more detailed assessment of the nature of the patient's entrapment. The driver indicated to firefighters that he believed his leg may have been impaled.

Heavy Rescue 8 arrived on scene and immediately commenced operation of the command lights greatly improving scene lighting and increasing scene safety. The initial extrication plan involved cross ramming the vehicle to create space around the driver. In addition to hydraulic rams carried aboard Rescue Pumper 62, the mid-sized and large rams were removed from Heavy Rescue 8 to assist cross ramming; a small ram was positioned down low against the sill beneath the near side B pillar and the side intrusion bar on the off-side of the vehicle. The ram was extended, enabling the off-side door to be slightly pushed away from the driver. When the small ram was at full extension, a large ram was then positioned parallel to the small ram and extended, pushing the off-side of the vehicle away from the driver and opening the footwell to release the driver's lower limbs from entrapment. To facilitate spinal management the extrication plan involved removing the driver in the direction he was facing, to ensure the patient's neck and spine remained straight. To best achieve a straight removal firefighters conducted a "third door removal" on the near side of the vehicle using hydraulic shears.

The moulded carbon fibre racing seat the driver was seated in presented an obstruction to spinal management for final release because it could not be lowered or folded back. Firefighters used a combination of hand tools, shears and spreaders to remove the front passenger seat and steering wheel to create space for release. Firefighters used hydraulic shears to cut through the carbon fibre seat sufficiently to facilitate placement of a rescue board. The patient was then carefully removed from the vehicle and placed on an ambulance stretcher before being conveyed to hospital.

Notes:

1. First arriving SO took the time to conduct an initial scene size-up, enabling resources requirements to be identified and ensuring appropriate resources were responded to the scene for an effective extrication to be undertaken. The information contained within the first situation report provided an assessment that indicated response of a heavy rescue unit would be advantageous; attendance of the heavy rescue provided additional equipment and rescue operators to the scene increasing the capability of the rescue crews.
2. Although the obvious priority for the first arriving SO was the entrapment, just as critical was the identification of the fallen powerline. Control measures put in place to manage this hazard enabled all persons at the scene to remain safe.
3. Removing the roof was an important operation, providing paramedics with additional space to perform the medical procedures necessary at this incident. This also assisted the extrication teams to more accurately assess and release the entrapment.
4. An extremely high level of consultation occurred between the Rescue Team Leader and Ambulance Paramedic Commander, ensuring this incident was resolved with the best possible outcome achieved for the patient. This level of consultation ensured the extrication and medical teams were both working in conjunction with each other to achieve common goals.
5. Extrication was conducted in accordance with a systematic and deliberate plan following the process of continuous size-up and review.
6. Congratulations to all FRNSW crews, who performed with high levels of professionalism at this complex scene. Once again this was an excellent example of multi-agency cooperation between the services.



Following roof removal firefighters position rams in preparation for the cross ram operation



Firefighters perform the third door removal



Firefighters remove the passenger seat creating space around the patient's legs



Rescue team leader SO Craig Vincent assesses space created within the foot well around the patient's lower limbs following the cross ram



Firefighters position the large ram following full operation of the smaller ram to continue the cross ram



The injured worker located in the Stokes Litter is placed onto the cage of Ladder Platform 27

FAIRFIELD CONSTRUCTION SITE RESCUE

FRNSW crews responded to a report of a seriously injured worker located on the upper level of a construction site. Upon arrival, firefighters discovered a number of complex issues preventing a straightforward removal of the injured person. A number of techniques using cordage and aerial appliances were applied to enable the safe removal of the injured worker to the ground. Once again this incident demonstrated the complex and unpredictable nature of construction site emergencies.

Incident type: Construction site rescue.

Call details: 1222 hours, Friday 16 September 2016, direct line call from Police RCO, construction site rescue, person injured, The Crescent, Fairfield.

Nature of entrapment/emergency:

A male construction worker approximately 35 years of age, weighing approximately 120 kg, fell about 3.0m from the eighth level to the seventh level, landing on a concrete slab and sustaining a serious head injury and broken wrist. The patient was in a critical condition. Ambulance paramedics required FRNSW to assist in safe removal of the patient to the ground, to enable conveyance to hospital.

FRNSW response: Rescue Pumpers 101 (Bonnyrigg Heights) and 8 (Liverpool), Pumpers 73 (Yennora) and 41 (Smithfield), Heavy Rescue 8, Ladder Platform 27 (Parramatta) and Duty Commander MW2 (Parramatta).

Additional services in attendance:

Ambulance Service of NSW, Ambulance medical retrieval team, Police and SafeWork NSW.

FRNSW operations:

Rescue Pumper 101 was initially assigned to an "Assist Ambulance" incident. At the time of call, information from the caller at the incident scene was vague, not indicating the incident involved a construction site accident, nor the location of the patient. Prior to emergency services arriving on scene, callers to Triple Zero had stated the patient could be easily removed by the internal stairs.

Rescue Pumper 101, under the command of SO Wayne Rush, was the first FRNSW appliance on scene. SO Rush carried out an incident size-up and liaised with Ambulance paramedics on scene, identifying the location and condition of the patient and challenges that a safe removal would present. During continued medical stabilisation by paramedics, Rescue Pumper 101 firefighters performed an assessment of the scene to identify the most effective way of removing the patient.



Firefighters package the patient within the Stokes Litter

building and immediately go into operation to access an open area of scaffolding on level seven. When patient stabilisation was complete the patient was loaded into the Stokes Litter and packaged by firefighters. At about this time the vertical rescue team (Rescue Pumper 8 and Heavy Rescue 8 responded by the Police RCO) arrived on scene and were briefed and informed that they would be required in the event the aerial evacuation was unsuccessful.

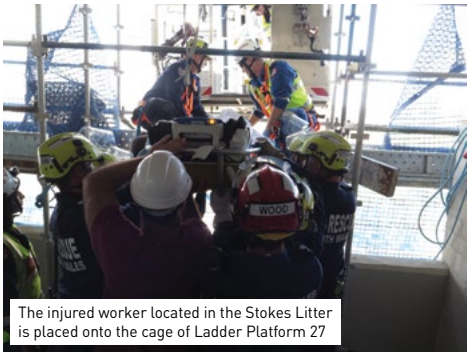
Ladder Platform 27 arrived on scene and positioned at the front of the building. Platform 27 cage operator Senior Firefighter Trent Goddard was in communication via handheld transceivers with the edge controller and received precise instructions concerning positioning of the aerial cage. The medical team SCAT paramedic was provided with a FRNSW aerial harness and was attached to a life rescue line. The patient was transferred by firefighters to the area of open scaffolding in preparation for loading onto the ladder platform cage. SF Goddard positioned the cage of Ladder Platform 27 at the required location adjacent to the level seven scaffolding (this area of scaffolding consisted of a section of elevated platform about 1.5 metres above floor level). Working from life rescue lines paramedics and firefighters loaded and secured the Stokes Litter containing the patient onto the platform cage. The SCAT paramedic entered the platform cage and was secured with aerial safety equipment. When confirmation was received that all was in readiness, Ladder Platform 27 then lowered the patient and SCAT paramedic attendant to the ground. Upon reaching the ground firefighters assisted to unload the Stokes Litter and patient, transferring the patient to an ambulance stretcher.

In consultation with paramedics, the narrowness of the stairs meant these were quickly ruled out as a means of patient removal. The patient's condition required the patient be kept as level as possible, which would not be possible within the stairwell. Further, the tightness of the stairwell made this means of removal unfavourable in the event that a sudden deterioration of the patient's condition occurred and emergency medical procedures were required to be carried out. Construction site staff advised a crane was available to lower the patient, however this was also ruled out, due to a number of uncontrolled risks associated with this means of removal. Duty Commander Parramatta arrived at the incident. An FRNSW Command Point was established known as "Fairfield Command". After further size-up between rescue operators, paramedics and construction site staff, a plan was formed involving using a FRNSW 37-metre ladder platform aerial appliance to bring the patient safely to the ground. As a precautionary backup, it was decided to request the attendance of a vertical rescue unit. The FRNSW Commander requested the attendance of two additional pumpers to assist with handling of equipment due to the size of the rescue scene. As a result, Pumpers 41 and 73, Ladder Platform 27, Heavy Rescue 8 and Rescue Pumper 8 responded to the incident.

Ambulance paramedics and the medical retrieval team (consisting of trauma doctors and SCAT paramedics) conducted patient stabilisation while Rescue Pumper 101 firefighters worked with construction site staff to prepare for extrication from the level seven eastern side of the building via the aerial appliance. The building was surrounded to roof level by metal scaffolding and construction mesh. With the assistance of construction staff, Senior Firefighter Andrew McIntosh removed the exterior mesh from the extrication point. Several steel scaffold bars were also removed under the guidance of construction staff. As a safety precaution, due to the open area of scaffolding, this part of the building was treated as an open edge. A Safety Officer (SO Rush) and an Edge Controller (SF McIntosh) were appointed. All people working near the edge were required to wear safety harnesses attached to life rescue lines, secured to anchors fastened to the building. At the same time Police were clearing the street below of as many vehicles as possible to facilitate positioning of the incoming aerial appliance. As additional pumpers arrived on scene, they were instructed to bring additional equipment to the rescue scene on level seven. FRNSW Commander sent a detailed informative message for the benefit of incoming Ladder Platform 27 advising the situation and the requirement for the aerial to position at the front of the



The rescue leader (SO Wayne Rush), SCAT paramedic, paramedic commander and the rescue crew discuss the evacuation



The injured worker located in the Stokes Litter is placed onto the cage of Ladder Platform 27



Firefighters prepare to lift the Stokes Litter containing the patient onto the cage of Ladder Platform 27



The Stokes Litter containing the patient is lifted onto the elevated section of platform attached to the scaffolding



Final preparations are made prior to Ladder Platform 27 delivering the patient to the ground



The Stokes Litter is secured in place aboard Ladder Platform 27. Note the life rescue lines attached to ambulance paramedic and SFF Andrew McIntosh working on the scaffold



Ladder Platform 27 begins to lower the patient and SCAT paramedic to the ground



The patient has almost reached the ground



Aboard Ladder Platform 27 the SCAT paramedic has good access to the patient and medical equipment

Notes:

1. The initial information provided to first responding emergency crews was inaccurate and misleading (indicating the patient could be easily removed by walking down a flight of stairs). The first arriving SO conducted a size-up in conjunction with ambulance paramedics and quickly identified this means of patient removal as not being practical, requiring the attendance of further specialist resources. This incident indicated the importance of conducting a size-up and not necessarily relying on information provided by the public who are not trained in emergency procedures.
2. Similarly, emergency crews resisted well-meaning offers by construction personnel to use a crane to remove the patient, due to unacceptable safety risks associated with this procedure. Although it is important during the size-up process to take into consideration all options including those provided by construction site staff, safety must be the overriding consideration when forming an extrication plan.
3. A critical part of the size-up process was discussion between the rescue crew, paramedic commander and construction site staff. This ensured incident priorities were identified and the best means of achieving incident objectives were obtained in a safe and coordinated manner.
4. Construction sites contain many hazards and no two sites are alike. This incident was located on an upper level of a building under construction. Parts of the access route were in partial darkness, the ground was uneven, the building was unmarked, numerous trip/fall hazards existed and numerous items of hazardous equipment were located at the rescue scene as well as many other hazards. Firefighters controlled many of the hazardous conditions at this incident by seeking the guidance of construction site management.
5. Rescue incidents on construction sites are usually very labour intensive. This incident was no exception. It is advantageous to call for the response of additional pumpers for manpower due to the many tasks required to be performed at these types of incidents.
6. Congratulations to firefighters and all emergency services present for a very professional operation.

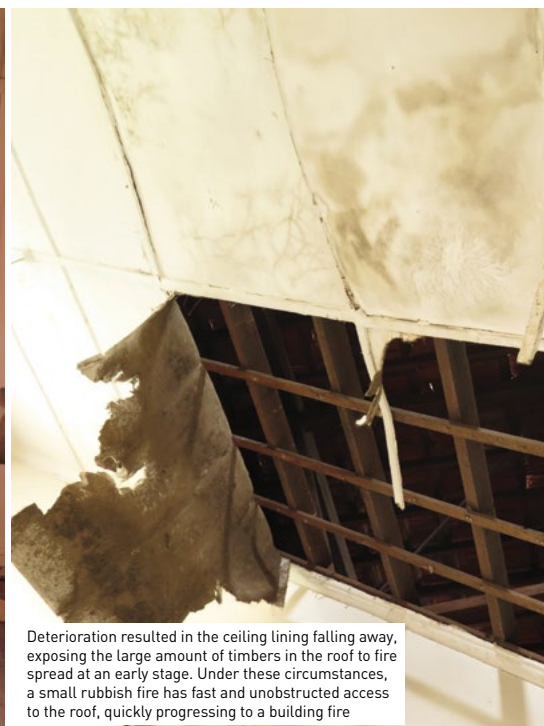
SERIES OF MAJOR FIRES AT LARGE VACANT BUILDING IN GOULBURN



This photograph taken by a passer-by prior to the arrival of FRNSW shows the fire [Fire # 1] which had only just been discovered had already progressed to an advanced stage. Flames were already breaching the roof. Image credit Goulburn Post



Breached walls and removed doors facilitated uncontained fire spread resulting in unusually fast fire travel through the building



Deterioration resulted in the ceiling lining falling away, exposing the large amount of timbers in the roof to fire spread at an early stage. Under these circumstances, a small rubbish fire has fast and unobstructed access to the roof, quickly progressing to a building fire

Recently FRNSW crews responded to a series of major fires within a large vacant, abandoned and derelict 103-year-old building in Goulburn. Typical of many structures that are abandoned, derelict or vacant, this building contained numerous hazardous conditions for firefighters. The building had been subject to significant vandalism over the years, in particular the extensive removal of internal doors, floorboards, ceilings and walls, facilitating uncontained fire spread. The building also contained a very high fire load due to the abandonment of large quantities of combustible materials facilitating increased fire activity. Each fire caused a significant weakening of the structure. Due to ongoing familiarisation visits, firefighters recognised the unique hazards present at this structure, enabling them to form appropriate strategies and conduct operations in a safe and professional manner.

This report should be read in conjunction with "Firefighting Operations at Vacant Buildings Fires" contained within this edition of Fire & Rescue Operations Journal.

Due to ongoing familiarisation visits, firefighters recognised the unique hazards present at this structure

Fire building: A vacant, abandoned and derelict building (previously known as St Johns Orphanage), consisting of "T" shape layout, a north/south wing 80m x 20m, two levels with an east/west attached wing 60m x 20m of two levels. The building was constructed in 1912, formed of timber frame, brick construction, wooden interior, timber floorboards and tile roof. The building was not fitted with any form of installed fire detection or suppression systems. The building had not been occupied since the 1980s and had numerous issues commonly found within vacant, abandoned, derelict and/or demolition structures, discussed below.

Hazardous conditions due to vacant, abandoned and derelict status of building: The building had numerous conditions commonly associated with vacant buildings. Some of those identified included the following.

1. Interior walls, floors and ceilings contained large openings (or large sections had been removed) due to vandalism and theft. Many internal doors had been removed. Fire was able to spread freely through the building vertically and horizontally. Fire spread was extensive and unusually rapid.
2. Numerous sections of protective lining around structural timber frames had been removed by vandals, exposing key elements of timber structure to direct fire impingement, facilitating early structural collapse.

NB: relatively small fires involving rubbish and abandoned materials had a direct travel path to exposed roof timbers.

3. Most of the building's windows had been smashed by vandals, resulting in increased airflow to the fire and subsequent increase in fire intensity and rate of spread.
4. Numerous abandoned combustible materials were located inside the building (some of these materials consisted of bulk goods that had been dumped), increasing the fire load and resulting in more intense fire activity. Within one large room hundreds of dumped cardboard boxes containing thousands of plastic containers were located. Large quantities of unwanted furniture had been dumped inside the building.
5. In an early attempt to secure the building, a number of building exits had been secured with iron bars, padlocks and chains. In the event emergency escape was required by firefighters, egress paths were potentially impassable.
6. Numerous small fires (rubbish fires, mattress fires, internal camp fires etc.) had been lit in the building over the years. Fire impact to elements of structure had caused a weakening of the building facilitating early and rapid collapse.



Taken by a passer-by, fire [Fire # 3] that was initially observed as a small rubbish fire, quickly spread to levels one and two and the roof within minutes. Image credit Darryl Fernance Goulburn Post



Firefighters safely operate longer reaching 70mm streams well out of collapse zones

7. The building had fallen into disrepair, allowing rainwater to penetrate the roof space and cause deterioration, failure and collapse of the interior plasterboard ceiling exposing roof timbers. This facilitated early travel of fire into the roof space which contained a heavy timber fire load.
8. Numerous internal and external staircases were missing treads, risers and handrails (due to removal by vandals) making passage of the stairwells extremely dangerous.
9. Numerous floorboards had been removed by vandals making passage across floors hazardous.
10. The limited installed fire safety equipment that had existed prior to the fire (hose reels) had been vandalised and was unusable.
11. The building surround was overgrown with vegetation and contained numerous dumped and abandoned materials, creating obstructions and trip hazards to firefighters.
12. Metal pipes, electrical cabling and other fixtures that extended through the building's walls had been removed by thieves, creating large openings facilitating internal fire spread.

In November, 2015, firefighters responded to the first of a series of major fires at the site

Major fire incidents: Over the years, firefighters have attended to the building on many occasions due to reports of relatively small fires (internal camp fires, rubbish fires, mattresses alight, abandoned materials alight etc.). These fires remained relatively minor in nature, able to be extinguished quickly via a single attack line. However in November, 2015, firefighters responded to the first of a series of major fires at the site.

Fire # 1: At 1544 hours on 4 November 2015, FireComs received the first of numerous Triple Zero calls to reports of a building fire at Mundy Street, Goulburn. The total FRNSW response consisted of Hazmat Pumper 305 (Goulburn), Composite 305, Rescue Pumper 271 (Crookwell), Pumper 385 (Moss Vale), CAFS Pumper 31 (Busby), Ladder Platform 92 (St Andrews), Duty Commander RS2 and Zone Commander RS2. NSW Rural Fire Service, Ambulance Service of NSW, Police and electricity authority also attended the fire.

Hazmat Pumper 305 under the command of SO Darrell Law was the first appliance to respond to the fire. En route firefighters observed large volumes of grey and black smoke and SO Law sent a RED message reporting the smoke column and requesting the additional response of Rescue Pumper 271. As Hazmat Pumper 305 got closer, the plume was increasing in size. Upon arrival firefighters found the second level of the middle section of the main building heavily involved in fire and fire was extending into the roof space. A short time later, flames began to break through the roof and vent from windows on the eastern side of the building. SO Law sent a RED message at 1551 hours reporting the building was heavily involved in fire, flames were venting through the roof and requesting the attendance of four pumpers and the closest available aerial appliance. As a result of this message Ladder Platform 92 was assigned to the incident. Due to the seriousness of the fire, Commissioner Mullins directed the response of CAFS Pumper 31.



The abandoned building contained a large quantity of dumped materials significantly increasing fire load and fire intensity



ACT Fire and Rescue Ladder Platform operates safely outside of the collapse zone in Alpha Sector. Major wall collapse occurred a short time later

Hazmat Pumper 305 was positioned in a laneway to the north of the fire building in close proximity to a hydrant (that had been identified during an earlier pre-incident planning exercise). SO Law assumed Incident Command, the incident was called "Goulburn Command" and a command point was established at HP305. SO Law conducted a rapid external size-up and deemed that all firefighting would be conducted externally and a defensive firefighting strategy would be adopted. Due to the size and advanced state of the fire, a 70mm line with a stack tip fitted was placed in operation from the Alpha side of the building outside of the collapse zone and the stream directed onto the main body of fire within the building in an attempt to reduce fire intensity and slow fire spread. At this time a strong wind was blowing from the east causing fire to spread rapidly in all directions through the building. Almost as soon as the 70mm handline was in operation, the Incident Commander directed that the single line ground monitor be set up to enable a more effective stream to be directed onto the fire, releasing firefighters to establish further attack lines. Water supply from the hydrant in the laneway was very poor, necessitating the establishment of a second supply from a hydrant in nearby Mundy Street. Once a water supply was established, a second 70mm defensive stream was placed into operation from the Alpha side of the building.

Duty Commander Southern Highlands Inspector Trent Lawrence arrived at the fireground and following a handover briefing, command was transferred to Inspector Lawrence and SO Law was designated Alpha Sector Commander. 305 Station Deputy Captain Kerri Borchard was appointed Safety Officer. Composite 305 under the command of Deputy Captain Chris Brassel arrived on scene and was directed to the Charlie side of the building. Collapse zones had been established on all sides of the building. Poor water supply continued to hinder firefighting, resulting in the IC requesting the attendance of the NSW Rural Fire Service to assist establishing a water relay. The fire continued to intensify and the roof began to collapse. A water relay was established from hydrants on Combermere Street consisting of NSWRFs tankers (Goulburn Mulwaree Support), supplying Composite 305 with one 70mm supply line and Rescue Pumper 271 with a second 70mm supply line. Composite 305 firefighters directed a 70mm attack stream onto the fire from the Charlie side. Rescue Pumper 271 was positioned on the Delta side of the building. RP271 firefighters attacked the fire with a 70mm attack stream. Attack lines on all sides were now positioned to enable the spreading fire to be cut off. The fire was now surrounded on all sides by attack streams and fire activity was beginning to diminish.

Ladder Platform 92 arrived at the fireground and was directed to set up on the Bravo side of the building. Handlines on the Alpha side of the building being supplied by HP305 were shut down and water diverted to the aerial appliance. The aerial attack was extremely effective at extinguishing remaining fire within the building, particularly fire involving the roof structure. It was highly advantageous attacking the fire with the aerial as this removed the need to deploy firefighters internally within the significantly weakened and unstable structure. Following knockdown of the main fire, a fire duty remained at the scene overnight, ensuring the fire was completely extinguished. As a result of this fire, the second level and roof space of the middle section of the building were severely damaged by fire; approximately 80% of the large structure remained intact. A large section of the structural timber frame (including the roof) had been severely weakened.

At this time a strong wind was blowing from the east causing fire to spread rapidly in all directions through the building



Firefighters safely operate longer reaching 70mm streams well out of collapse zones in Charlie Sector

Fire # 2: At 1813 hours on 3 November 2016 FireComs received the first of numerous Triple Zero calls to reports of a building fire at Mundy Street, Goulburn. The total FRNSW response consisted of Hazmat Pumper 305 (Goulburn), Rescue Pumper 271 (Crookwell), Pumpers 242 (Bundanoon), 234 (Bowral) and 378 (Mittagong), Composites 305 and 271, Hazmat Tanker 234, Rehabilitation Vehicle 389 (Harden), Duty Commander RS2 and Zone Commander RS2. ACT Fire and Rescue (Fyshwick Pumper, Belconnen 44m Ladder Platform and Aranda Commander), NSW Rural Fire Service, Ambulance Service of NSW, Police and electricity authority also attended the fire.

Firefighters aboard first responding Hazmat Pumper 305 observed large volumes of smoke en route. Officer-in-Charge of HP305 Deputy Captain Kerri Borchard sent a **RED** message, reporting large volumes of smoke visible. At 1824 hours, HP305 arrived on scene, to find the second level of the southern end of the building heavily involved in fire and flames venting through the roof, which was already beginning to collapse.

Deputy Captain Borchard assumed the role of Incident Commander, sending a further RED message, describing incident conditions and requesting the attendance of an additional four stations. Due to the advanced state of the fire and the size of the building, a request was made for the attendance of the ACT Fire and Rescue 44metre Ladder Platform aerial appliance. From the outset, the IC declared that all operations would be defensive and a collapse zone was established. From outside the collapse zone, firefighters attacked the fire with defensive streams. Poor water supply was again a critical issue, necessitating the establishment of water relays from remote mains. The NSWRFs assisted firefighters setting up water relays. As additional stations arrived on scene, firefighters were deployed to Alpha, Bravo and Charlie sides of the building to the east, south and west of the fire building. Sector Commanders were appointed in each sector and firefighters directed defensive streams onto the fire safely from outside collapse zones. The RFS established a water relay, supplying attack pumpers operating within Charlie Sector. The defensive streams from all sides of the fire enabled the fire to be contained, fire spread halted and the large fire slowly brought under control.

ACT Fire and Rescue resources arrived at the fireground. Following a briefing with the IC, ACTFR crews were deployed to Bravo Sector. ACTFR Commander was appointed Bravo Sector Commander. The ACTFR Ladder Platform was deployed to Bravo Sector. HP305 relayed water to ACTFR Fyshwick Pumper, which supplied the aerial appliance with water. All firefighters were withdrawn to safe areas due to the risks associated with debris being displaced once the aerial stream commenced operating. At the direction of the IC, the Ladder Platform was then placed in operation, directing a large aerial deluge into the roof and southern end of the building, bringing the fire under control and completing extinguishment. Again, use of an aerial appliance was highly advantageous, providing good access to parts of the building that were difficult to reach from the ground. Extinguishment was completed with minimal risk to crews. The cut-off strategy employed by the IC ensured the fire did not reach proportions where it could not be safely extinguished using the aerial master stream attack.

As a result of this fire, the second level and roof space of the southern end of the building were severely damaged by fire; approximately 60% of the large structure remained intact. A large section of the structural timber frame (including the roof) had been severely weakened.

Fire # 3: At 2106 hours on 4 November 2016, FireComs received the first of numerous Triple Zero calls to reports of a building fire at Mundy Street, Goulburn.

The FRNSW response consisted of Hazmat Pumper 305 (Goulburn), Rescue Pumper 271 (Crookwell), Pumpers 242 (Bundanoon), 234 (Bowral) and 378 (Mittagong), Composites 305 and 271, Hazmat Tanker 234, Aerial Pumper 92 (St Andrews), Rehabilitation Vehicle 389 (Harden) Duty Commander RS2 and Zone Commander RS2. ACT Fire and Rescue (Charnwood Pumper, Belconnen 44m Ladder Platform and Aranda Commander), Ambulance Service of NSW, Police and electricity authority also attended the fire.

Prior to firefighters arriving on scene, passers-by reported a small fire on the ground floor that escalated rapidly, spreading quickly to the second level, leading to flashover and total involvement of the second level of the building in minutes. A short time later, fire had gained access to the heavily timbered roof space and flames were venting through the roof. En route to the fire, Officer-in-Charge of HP305 Deputy Captain Kerri Borchard observed large flames visible and sent a RED message, reporting heavy fire showing. Upon arrival, firefighters found the first and second levels of the northern end of the building heavily involved in fire. Flames were venting through all windows and through the roof at the northern end of the structure. The fire was spreading laterally through the building and large sections of wall collapse were beginning to occur on the Charlie and Delta sides of the building. Deputy Captain Borchard assumed the role of Incident Commander, sending a further RED message, reporting incident conditions and requesting the attendance of a further four stations. A request was also made for a FRNSW aerial appliance and an aerial appliance from ACTFR, due to the size and extent of the fire. The IC directed all firefighting would be defensive, collapse zones were established and a Safety Officer was appointed. From outside collapse zones, firefighters directed the first defensive stream onto the fire, in an attempt to reduce some of the fire's intensity and slow its spread.

As additional crews arrived on scene, firefighters were deployed to the Alpha, Bravo, Charlie and Delta sides of the building and Sector Commanders appointed. Water shortages again hindered operations, necessitating establishment of water relays. A water relay, consisting of base Pumper 242 supplied water to attack pumper Rescue Pumper 271. From the fire flanks in all sectors, firefighters deployed defensive streams from seven attack lines onto the fire, successfully containing the fire, stopping fire spread and reducing the fire intensity.

The ACT Fire and Rescue 44m Ladder Platform arrived on scene and was deployed to the Alpha Delta corner, enabling the aerial to position outside of the collapse zone, although at a location that enabled an effective aerial stream to be directed onto the fire. HP305 relay pumped supply lines to ACTFR Charnwood Pumper, which in turn supplied water to the aerial appliance. Operations in Alpha Sector were conducted under the command of ACTFR Aranda Commander. All crews were withdrawn to a safe area and the IC instructed Alpha Sector Commander to commence aerial operations, enabling an aerial stream to be directed into the fire building. Aerial operations were extremely effective, resulting in significant fire extinguishment. Approximately three hours into firefighting operations, when very few visible signs of fire remained, a major collapse of the two-level brick wall at the northern end of the building occurred. The wall fell harmlessly into the collapse zone and firefighting continued uninterrupted. Prior to the collapse, the wall showed no signs of impending failure. The aerial attack continued for a further hour, enabling the fire to be completely extinguished.



Taken by a passer-by, fire (Fire # 3) that was initially observed as a small rubbish fire, quickly spread to levels one and two and the roof within minutes. Image credit Darryl Fernance Goulburn Post

As a result of this fire, the first and second levels and roof space of the northern end of the building were severely damaged by fire; approximately 40% of the large structure remained intact. A large section of the structural timber frame (including the roof) had been severely weakened.



The Incident Commander Deputy Captain Kerri Borchard confers with Bravo Alpha Sector Commander, ACT Fire and Rescue Commander



Hazmat Pumper 305 relay pumped water to ACT Fire and Rescue Charnwood Pumper

Notes:

1. The building had been abandoned for almost 30 years and contained numerous hazards associated with vacant, abandoned and derelict structures (as described at the beginning of the report).
2. Neighbours reported observing what appeared to be only a small fire, that suddenly escalated and spread rapidly, resulting in heavy involvement of the first and second levels and the roof space within minutes. This is consistent with fire that is able to travel uncontained due to internal structural openings, including unobstructed access to the heavily timbered roof space.
3. Safe operations at all three fires was not a matter of chance, guessing or good luck; firefighters had conducted ongoing pre-incident planning exercises at the site and were therefore familiar with many of the hazardous conditions present. This information was critical, enabling the IC to perform a rapid size-up, assess the likelihood of building collapse and establish a firefighting strategy that ensured firefighters operated safely. If firefighters have not familiarised themselves with a vacant building in their response area, they are responding to any fires in that building “blind” and the ability to perform a proper size-up will be severely limited.
4. A key to safe operations at this building was the early establishment of a defensive strategy and implementation of collapse zones. The use of larger diameter hose lines and master streams enabled firefighters to remain well outside collapse zones.
5. During fire # 3, at a time when most signs of visible fire had been extinguished and operations were beginning to wind down, without any warning a major collapse of the two-level brick wall at the front of the building occurred. Due to strong adherence to safety procedures, all firefighters remained safe. Firefighters must remain vigilant to the dangers that vacant buildings present at all times, even when it might appear conditions are improving.
6. Congratulations to all crews who responded to the above fires, for the professional and determined manner these fires were fought and for the adherence to safety that ensured all firefighters remained safe.



The roof fire was extinguished by Ladder Platform 92. It was a significant advantage using an aerial appliance removing the need to deploy firefighters internally into an unstable structure

7TH ALARM REVESBY VEHICLE DISMANTLING AND STORAGE YARD FIRE

Incident summary: Fire broke out in a large open motor vehicle disassembly and storage yard on a warm November morning when high 70km/h winds were gusting. Fire rapidly spread into highly combustible motor vehicles and automotive parts stored on elevated metal racking and a large fire quickly developed. Many things were going against FRNSW firefighters, even before they had arrived on scene; numerous furniture manufacturing factories and a rubber tyre warehouse were located in close proximity to the fire occupancy, numerous houses were just beyond the exposure buildings, water supplies in Mavis Street were extremely poor and in addition to the usual highly volatile fuel loads associated with motor vehicles, numerous LPG powered forklifts were located at various locations within the site. The high winds turned the fire into an inferno, however, the determined efforts of firefighters ensured this fierce and dangerous fire did not spread past the occupancy of origin; and all of this on a day when firefighters were still on the scene of an 8th Alarm the previous day at Mulgrave, 10th Alarm non-structure fire at Cranebrook, a 4th Alarm from the previous day at Goulburn and major bushfire emergencies were beginning to unfold that morning at Cessnock, Port Kembla, Shoalhaven and Port Stephens.

Incident type: Motor vehicle disassembly and storage yard fire.

Time, date and place of call: 1106 hours on Saturday 5 November 2016, Mavis Street, Revesby.

FRNSW response: Pumpers 48 (Mortdale), 29 (Arncliffe), 49 (Cabramatta), 64 (Lakemba), 20 (Hurstville), 90 (Menai), 52 (Campsie), 19 (Silverwater), 21 (Kogarah) and 16 (Concord), CAFS Pumper 30 (Lidcombe), Bulk Tanker 92 (St Andrews), Rescue Pumpers 62 (Bankstown) and 8 (Liverpool), Tanker 90, Aerial Pumpers 47 (Revesby) and 92, Ladder Platforms 21 and 27 (Parramatta), Hazmat Pumper



Firefighters battle to stop the forward spread of fire towards Mavis Street

85 (Chester Hill), Heavy Hazmat 85, Heavy Rescues 8 and 20, Logistics Support Vehicle 1 (City of Sydney), Mobile Command Centre Alpha and Rehab 1.

Duty Commanders MS2 (Kogarah) Inspector Dave Polson and MS3 (St Andrews) Inspector Brett Ryan, Zone Commander Georges River Superintendent Paul Bailey, Commissioner Greg Mullins, Fleet Operations Officer SO Serge Meunier, Deputy Commissioner Graeme Finney, A/Deputy Commissioner Malcolm Connellan, Operational Media Coordinator Superintendent Ian Krimmer, Manager Command Leadership and Management Superintendent Andrew Faunce, Assistant Director Operational Capability Chief Superintendent Roger Mentha, Manager Fire Investigation and Research Unit Superintendent Jeremy Fewtrell and Tactical Operations Research Analyst.

In addition to the above, a further 16 FRNSW appliances and numerous other senior officers and specialist support staff responded to the incident over the following 28 hours for relief and fire duty purposes.

Additional agencies/services in attendance: NSW Police, Regional Emergency Management Officer, Ambulance Service of NSW, local Council, Bankstown Hospital, gas and electricity authorities.

Fireground description: The fire occupancy consisted of a motor vehicle disassembly and storage yard, 100m x 150m, comprising numerous rows of multiple level metal storage racks up to ten metres high, containing an assortment of motor vehicles and dismantled motor vehicle parts. A number of motor vehicles contained LPG cylinders. Numerous 30kg LPG-powered forklifts were located throughout the site. Two workshops, 20m x 25m and 20m x 40m, were located in the centre of the site. An office building, 20m x 30m, was located at the front of the site. A two-level stack of approximately 20 steel shipping containers containing assorted motor vehicle parts was located on the western edge of the site. There were approximately 800 motor vehicles stored at the site.

Exposure Bravo consisted of a furniture factory, 100m x 50m, located five metres to the west of the fire occupancy. Exposure Charlie One consisted of a Korean cultural centre, located less than one metre from the fire occupancy. Exposure Delta One consisted of a furniture joinery, also located less than one metre from the fire occupancy.

Weather at time of call: West/southwesterly winds at 35km/h, gusting to 70 km/h (recorded at 1056 hours), temperature 26°C, relative humidity 23% and mean sea level pressure 1003.8 hPa recorded at Bureau of Meteorology Bankstown Airport automatic weather station (approximately 1.5km from the fire building).

Situation prior to FRNSW arriving on scene: Staff were working in the wrecking yard using cutting equipment when sparks ignited nearby combustible materials, resulting in rapid fire development. At this time, winds had just started to gust at 70km/h. Attempts were made unsuccessfully by the occupants to control the fire with portable handheld extinguishers; one worker received burns and two further workers sustained smoke inhalation. The fire rapidly took hold among the stored automotive parts, producing fierce flames and a large column of thick black smoke. Numerous callers began to ring 000 to report the fire. Fire Communications staff obtained building intelligence indicating the fire premises was a 100m x 50m car wrecking yard, containing a large quantity of motor vehicles. On the basis of this information and the volume of 000 calls being received, the Communications Centre supervisor increased the response to a 2nd Alarm assignment.

The ferocity of the fire was indicated by the heavy black smoke plume produced by the burning oil based products



FRNSW operations: Firefighters aboard first responding appliance Rescue Pumper 62 under the command of SO Craig Vincent had just left the station and travelled a short distance when they saw a large column of thick black smoke coming from the direction of the call address. SO Vincent immediately sent a RED message at 1110 hours increasing the response to a 2nd Alarm. Upon arrival, firefighters found the main workshop in the centre of the site totally involved in fire and burning fiercely. As Rescue Pumper 62 pulled into Mavis Street, SO Vincent sent a RED message at 1113 hours increasing the response to a 3rd Alarm. Strong winds were blowing and fire conditions were ferocious. Fierce flames were erupting 20 to 30 metres above the roof of the fire building, at least 30 cars were totally involved in fire on the Delta side of the fire building and an enormous column of thick black smoke was rolling upwards above the fire. Numerous explosions were occurring within the fire area. SO Vincent sent a RED arrival message at 1114 hours, as follows: **“RESCUE PUMPER 62 RED! RED! RED! CODE 3, MAVIS STREET REVESBY. HAVE A LARGE MOTOR VEHICLE WRECKERS WELL ALIGHT. WE ARE OPERATING IN THE DEFENSIVE STRATEGY. BRAVO AND DELTA EXPOSURES ARE UNDER IMMINENT THREAT. REQUIRE A STRUCTURE FIRE THIRD ALARM. SO 62 WILL BE THE IC, THE INCIDENT WILL BE KNOWN AS REVESBY COMMAND.”**

SO Vincent observed the fire was being pushed by a strong wind towards Exposure Delta, which was now under immediate threat and in imminent danger. The first priority of the IC was to protect Exposure Delta, which was now being impacted by fierce 20-30 metre high flames. As second arriving Aerial Pumper 47 under the command of SO Shannon Jones arrived on scene, the IC realised an aerial master stream attack was going to be the most effective way of stopping the fire's easterly spread and protecting the threatened factory. The IC directed Aerial Pumper 47 to position along the Exposure Delta driveway, at a location where the aerial boom could direct a protective stream onto the heavily impacted western wall of Exposure Delta. SO Jones was appointed Delta Sector Commander. As AP47 was setting up and preparing to go into operation, Pumper 49 Firefighters Peter Nicholson and Deryck Salfus, under the command of SO Adam Smith, advanced a 70mm attack line to the southwest corner of Exposure

Delta and began to direct a protective stream across the wall of the heavily impacted joinery factory, in a desperate attempt to protect the exposure. Firefighters being impacted by thick smoke and intense radiant heat were located on the downwind side of the fire, battling 70km/h winds, necessitating this defensive line being tied off to protect the Delta Exposure wall. Water supply from the 150mm Mavis Street mains to AP47 was poor and the effectiveness of the aerial stream was significantly limited. Nevertheless, the AP47 crew conducted a desperate and determined attack, using what limited water they had to protect the wall of the exposure. AP47 firefighters were operating downwind of the fire, working in horrendous conditions; high winds forced large volumes of thick smoke onto the area firefighters were working in, the area was being impacted by fierce radiant heat and numerous major explosions were occurring in close proximity to firefighters. Pumper 48 firefighters, under the command of Captain Wayne Challinor assisted by Pumper 49 firefighters, deployed a 38mm attack line to the southwest corner of Exposure Delta, which was used to extinguish car fires burning down low against the wall of the joinery factory that could not be reached with the 70mm stream and to cool the LPG cylinder attached to a forklift being heavily impacted by fire located against the Exposure Delta wall. Aware that if the fire could not be contained, the joinery factory would be the next building the fire would spread to, firefighters gained entry to Exposure Delta and removed a number of forklift LPG cylinders from the factory, isolated power and remained within the factory to investigate the building interior for signs of fire extension using a thermal imaging camera.

The fire rapidly took hold among the stored automotive parts, producing fierce flames and a large column of thick black smoke



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Firefighters faced intense fire activity and managed to establish cut-offs around the fire edge



Firefighters attempt to stop the fire spreading towards vulnerable Bravo exposures

At this time, Rescue Pumper 8, under the command of SO Glenn Jobbins arrived on scene. With protection in place on the Delta side of the fireground, SO Vincent's next objective was to stop the fire from expanding by establishing a cut-off from the southern side of the fire edge. Rescue Pumper 62 and Rescue Pumper 8 firefighters donned SCBA and began to advance hose lines along a site access pathway via the eastern driveway, in an attempt to stop the forward spread of the fire towards the Alpha side of the complex. The workshop immediately in front of fire attack crews was totally involved in fire. Fire activity was fierce and numerous explosions continued to occur. Early collapse of this structure prevented any form of offensive operation being undertaken. The fireground continued to be impacted by high wind, blowing directly from the west, pushing the fire directly into Exposure Delta. Firefighters continued to be hindered by poor water supply, however they pressed home a determined attack that halted any southerly spread of the fire.

The workshop immediately in front of fire attack crews was totally involved in fire. Fire activity was fierce and numerous explosions continued to occur

The next objective of the IC was to contain the fire along the western flank. The IC directed Pumper 64 SO Ross Jones to go to the Bravo side of the building and set up operations to stop the fire progressing into Bravo exposures on the western side of the fire occupancy. SO Jones was appointed Sector Bravo Commander. At this point, the wind direction changed from westerly to south westerly, placing exposures on the Charlie side and Charlie/Delta corner of the fireground under threat. SO Vincent was concerned these exposures could be in danger and increased the response to enable additional pumpers to investigate the Charlie side of the fireground and secure any exposures under threat. At 1120 hours, the IC sent the following RED message:

"FIRE COMS, REVESBY COMMAND RESCUE PUMPER 62 RED! RED! RED! DUE TO HIGH WINDS, WE NOW HAVE NUMEROUS EXPOSURES UNDER THREAT. EXPOSURES CHARLIE AND DELTA ARE BEING IMPACTED. AERIAL PUMPER 47 IS AT WORK ATTEMPTING TO PROTECT DELTA EXPOSURE. INCREASE THE RESPONSE TO A STRUCTURE FIRE 5TH ALARM. WE REQUIRE TWO PUMPERS TO GO TO JELICOE STREET AT THE REAR OF MAVIS STREET TO INVESTIGATE POSSIBLE EXPOSURES UNDER THREAT ON THE CHARLIE SIDE OF THE FIREGROUND. THE FIRST ARRIVING PUMPER IN JELICOE STREET IS TO GIVE A SITREP. FURTHER INCOMING APPLIANCES ARE TO STAGE IN MAVIS STREET."

Water supply was extremely poor and fire attack largely ineffective, necessitating firefighters withdraw from this position

From the Bravo side of the fireground, Pumper 64 firefighters under the command of SO Ross Jones donned SCBA and began to advance a 70mm attack line along a site access pathway via the western driveway to the complex, in an attempt to establish a cut-off and stop the fire's westerly spread back towards the Bravo side of the fireground. Water supply was extremely poor and fire attack largely ineffective, necessitating firefighters withdraw from this position.

Zone Commander Georges River Superintendent Paul Bailey arrived at the fireground and following a handover briefing with SO Vincent, Incident Command was transferred to Superintendent Bailey and SO 62 appointed Alpha Sector Commander. Water supply was now a critical issue, necessitating the IC increase the response at 1134 hours to a 7th Alarm to facilitate sufficient pumping appliances to establish a water relay from the large 375mm mains located 600 metres away on Canterbury Road. Aware the fire was now spreading towards the Charlie side of the fireground (which was out of sight of the Incident Command Point), the IC requested the first arriving Duty Commander go to the Charlie side to supervise operations.



Firefighters attempt to stop the fire spreading towards vulnerable Bravo exposures



The operations of Aerial Pumper 47 were critical to stopping the fierce fire spreading into an adjoining large timber furniture factory

Hazmat Pumper 85, under the command of SO Chris McAuliffe, was the first appliance to arrive on the Charlie side of the building at Jellicoe Street. SO McAuliffe observed heavy fire conditions impacting the eastern side of a large two-level building being used as a Korean cultural centre and in imminent danger of ignition. Firefighters advanced a 70mm attack line to the southeastern corner of the exposure and began to direct a protective stream across the face of the exposure. Fierce radiant heat was impacting numerous 5m x 8m glass windows located on the southern side of the cultural centre, causing them to fail and exposing the interior of the building to direct fire impact. At least 30 motor vehicles located only one metre from the cultural centre were fully involved in fire and fierce fire activity was impacting the building. Firefighters maintained their position and continued to direct water across the face of the exposure, preventing fire from entering the building. Duty Commander South West Inspector Brett Ryan went to the Charlie side of the building and assumed duties as Charlie Sector Commander. Exposure Charlie remained under severe threat and the next exposure in the fire's path was identified as a rubber tyre warehouse. Inspector Ryan sent a message to the IC requesting the attendance of two further pumpers to Charlie Sector to assist stopping fire spread into Charlie Exposure. Pumpers 28 and 90 and Ladder Platform 27 were deployed to Charlie Sector. Fire began to burn through cars located on racking on the western side of the Korean cultural centre, necessitating firefighters repositioning the attack line from the eastern to the western side of

the building. This line was used to protect the building from severe fire impact, as motor vehicles located on racking to the west of the exposure became fully involved in fire. Pumpers 28 and 90 firefighters operated inside the building, preventing internal fire spread through the large breached windows directly facing the fire. Firefighters extinguished fire that had burnt through roof skylights, penetrating the roof space and igniting roof insulation. Firefighters forced entry into adjoining exposures, including a tyre warehouse, to ensure there had been no fire spread to these exposures.

From Bravo Sector, the priority of Sector Commander SO Jones was to stop the fire extending to Bravo exposures, which included a furniture factory and numerous houses. A single line ground monitor (supplied by a 70mm line) was positioned along an area of concourse to the west of the burning car stacks to protect Bravo exposures. This stream was reinforced with a second 70mm protection stream, deployed to the same location. SO Jones reported the ground monitor was a highly effective piece of equipment, delivering an efficient attack stream. Ladder Platform 21 was positioned in Bravo Sector, on the southwest corner of the complex. CAFS Pumper 30 supplied LP21 with a CAFS A class foam supply. The crew of Ladder Platform 21 reported the high winds had a significant on the aerial CAFS stream, breaking up the stream and largely making it ineffective. The CAFS line was shut down and the attack switched to water. The aerial appliance operated with extreme caution, due to the numerous explosion hazards that existed at the fireground, including LPG powered

forklifts, LPG cylinders within vehicles, acetylene gas cylinders and other explosive materials present. Numerous explosions continued to occur throughout the operation of the aerial appliance. LP21 operators were trying to stop the fire progressing towards the western side of the complex. The aerial stream was used to cool LPG cylinders exposed to fire and provide a water deluge onto the western side of the fireground. The aerial stream from LP21 was directed onto car stacks, however limited success was achieved due to fire burning at the base of the racking that was being shielded by vehicles on the upper levels of the racking, preventing the aerial stream reaching the fire.

Duty Commander Kogarah Inspector Dave Polson was the next Duty Commander to arrive on scene. Establishing an effective water supply was now the key priority to fighting the fire and Inspector Polson was appointed Operations Officer, with the initial primary task to establish a water relay from Canterbury Road. Firefighters began to establish a water relay from the 375mm Canterbury Road main to the fireground via Pumpers 29 (base pumper), 19, 21, 52 and 20. Once the relay was in place, lines from the relay were directed to CAFS Pumper 30 and Rescue Pumper 8. The establishment of the water relay had a significant impact on firefighting operations, greatly improving water supplies for fire attack crews and enabling the major firefighting operation underway to press home an effective attack.

Mobile Command Centre Alpha arrived on scene and was immediately placed in operation, providing a high technology command platform to support firefighting operations. The Incident Management Team operated from within the MCC, consisting of Chief Superintendent Roger Mentha (Logistics Officer), Superintendent Jeremy Fewtrell (Safety Officer) and Superintendent Andrew Faunce (Planning Officer). The MCC provided a comfortable environment for conducting briefings with members of all services, the Regional Emergency Management Officer and site owners. Safety Officer Superintendent Fewtrell conducted a dynamic risk assessment of the fireground, identifying risks and appropriate control measures that enabled a comprehensive strategy to be developed for the incident. The FRNSW Remotely Piloted Aircraft System (RPAS) was operated, providing the IC and the IMT with a complete overview of the entire fireground, identifying critical features including areas of fire, location of exposures and hazardous situations (in particular LPG cylinders). Images obtained from the RPAS were transmitted to the Department of Works structural engineer for assessment of a suspect concrete slab wall heavily impacted by fire attached to Exposure Delta. The establishment of a rehabilitation area by the crew of Pumper 16, supported by the rehabilitation pod, enabled firefighters to be rotated away from firefighting operations for periods of rest, rehabilitation and recovery. Firefighter welfare was a critical factor on a day of high winds, warm temperatures and physically demanding operations.



Firefighters battled fierce conditions, due to the impact of 70km/h winds

As always, Ambulance paramedics were on standby at the rehabilitation area, providing a critical layer of safety for firefighter welfare.

At the height of the fire, Commissioner Greg Mullins attended the fireground and was given a full briefing of firefighting operations by the Incident Commander and members of the Incident Management Team. Commissioner Mullins conducted a tour of the fireground and witnessed first-hand the determined efforts of firefighters to control the fire and protect the numerous exposures that were under threat and the difficult conditions under which the fire was being fought. The Commissioner met with members of Incident Command and provided advice in a command/expert senior advisory capacity. Assisted by Operational Media Coordinator Superintendent Ian Krimmer, Commissioner Mullins provided a detailed briefing to the large contingent of assembled media present, which became the lead story throughout the day across national news bulletins. Incredibly, this was the third time in less than 18 hours the Commissioner had attended a fire scene where 7th Alarm or greater FRNSW resources were working (Cranebrook 10th Alarm and Mulgrave 8th Alarm the previous afternoon). While in attendance at this fire, the Commissioner was receiving news of unfolding major fires where FRNSW crews were committed at Cessnock, Port Stephens, Shoalhaven, Wollongong and northern Sydney.

Heavy Hazmat 85 firefighters played a key role at the fire, monitoring and testing water run-off in conjunction with local council and EPA representatives and placing booms in water run-off paths to ensure contaminant did not enter local water courses. Heavy Hazmat 85 firefighters set up AreaRAE monitors at strategic points around the fireground to conduct atmospheric monitoring and also used four-headed gas detectors to monitor the atmosphere. The strong winds were causing the large smoke plume to blow almost horizontally, close to the ground. FRNSW received reports the heavy smoke plume was impacting Bankstown Hospital (located only 200 metres from the fire) and hospital staff were considering a general evacuation of all patients and staff. Firefighters and Ambulance paramedics responded to the hospital and were able to have the air conditioning and ventilation systems shut down, stopping smoke from entering the hospital and enabling the hospital to remain functioning.



Heavy fire involvement of automotive parts stored on racking

Ambulance paramedics were on standby at the rehabilitation area, providing a critical layer of safety for firefighter welfare

Several major LPG cylinder explosions occurred involving vehicles located on racking close to Charlie Sector. An LPG cylinder attached to a forklift being heavily impacted by fire was located in proximity to Charlie Sector and in danger of exploding. The dangers of an LPG boiling liquid expanding vapour explosion (BLEVE) necessitated establishment of a 30-metre exclusion zone around the cylinder, resulting in firefighters being withdrawn from the exclusion zone.

The 70mm protection line being used by Hazmat Pumper 85 firefighters was tied off enabling a protective steam to continue to be operated. Police evacuated a number of residents inside six houses located within the exclusion zone. Reports were received that a number of nearby houses were being impacted by fire. Firefighters were dispatched to these locations to conduct investigations and found the properties were not under threat.

From Alpha Sector, firefighters continued to attack the fire, successfully holding the cut-off line and stopping fire spread in a southerly direction. Firefighters operated in the face of extremely hostile fire conditions and had to be withdrawn by Alpha Sector Commander on a number of occasions due to structural collapse, elevated steel pallet racking collapses and gas cylinder explosions. Throughout these operations, numerous materials, including metal, were raining down on firefighters in Alpha Sector. Heavy Rescue 20 firefighters were deployed as the Rapid Intervention Team located in Mavis Street.

Fire spread into a group of approximately 12 steel shipping containers located stacked on two levels at the western end of the site. SCBA crews directed 70mm handline streams onto the involved containers, however fire control was difficult to achieve due to many of the containers remaining closed. Although

a number of openings within some of the shipping containers existed, the stored materials within the shipping containers were tightly packed, shielding the fire from attack streams. Bulk Tanker 92 directed a CAFS attack onto the container stack, using the front monitor, set at 1% wet at 1,000 kPa, however the strong winds severely limited the effectiveness of the CAFS stream. BT92 operators reported the wind was breaking up the CAFS stream and deflecting the foam stream away from the target area. Firefighters used a 38mm handline attached to BT92 to conduct a CAFS attack on the shipping containers, although similar access problems previously encountered by hose stream crews were experienced. Although it would take many hours before the shipping container stack fire was fully contained, significantly, the container stack was surrounded on all sides, preventing fire spreading to further exposures.



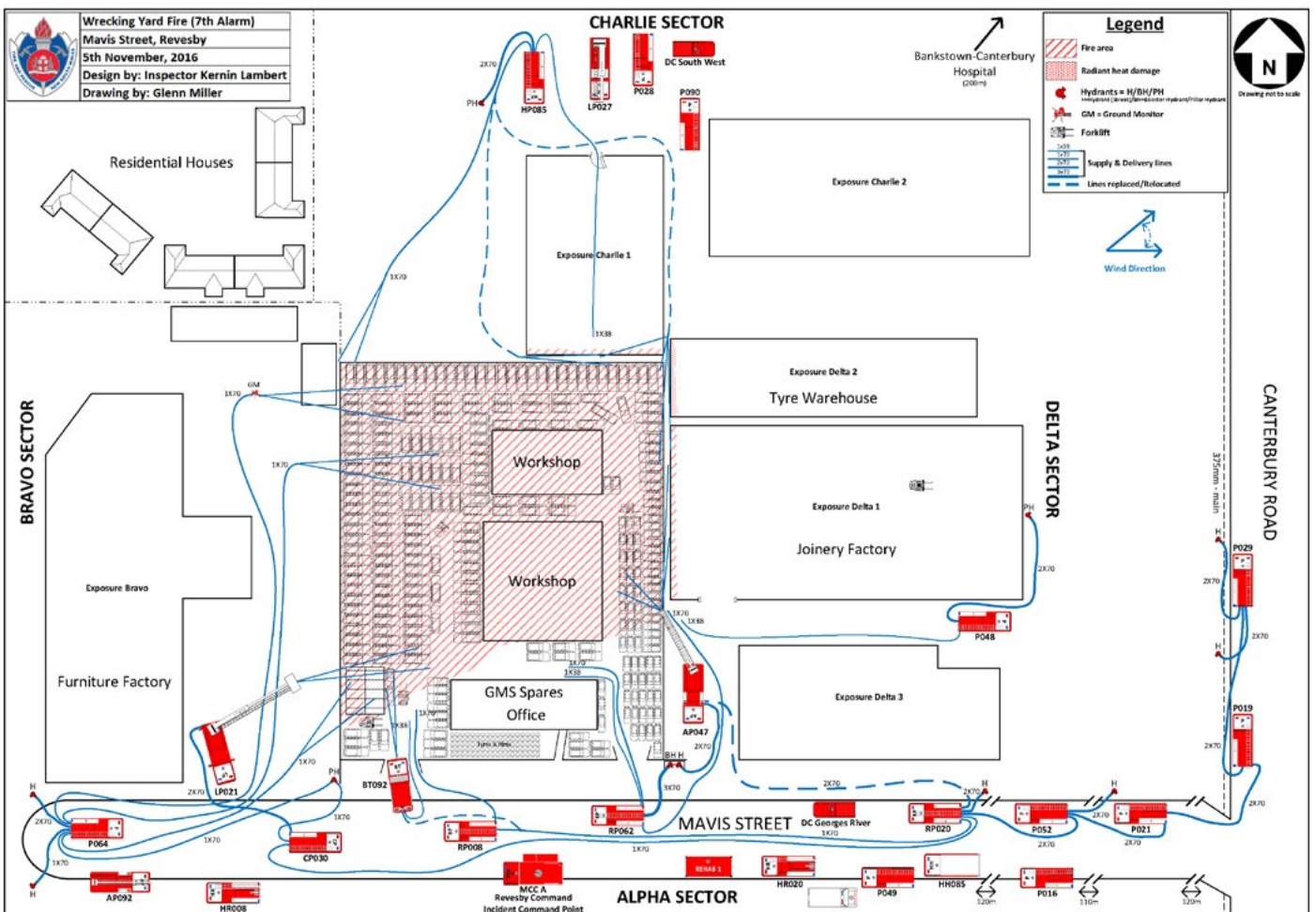
Firefighters battled ferocious fire conditions, created by heavy fire involvement of motor vehicles



Commissioner Mullins tours the fireground, talking to crews battling the fire

With the water relay in full operation, firefighters were now attacking the fire on all sides. All fire flanks were secure and all exposures were being protected. After several hours of intense firefighting, fire conditions began to diminish and by mid-afternoon the IC placed the fire under control. By 1500 hours the first fire duty crews began to arrive and firefighting operations began to scale down. All Bravo exposures were protected. Minimal fire spread to Exposure Charlie occurred. Despite severe fire impact, exposure Delta was protected. Within the wrecking yard, firefighters halted the southerly spread of fire at the cut-off line, saving the office and preventing fire extension to further elevated racks of cars, car parts and a large stack of rubber tyres. A fire duty remained at the scene for a further 24 hours, ensuring the fire was completely extinguished.

After several hours of intense firefighting, fire conditions began to diminish and by mid-afternoon the IC placed the fire under control

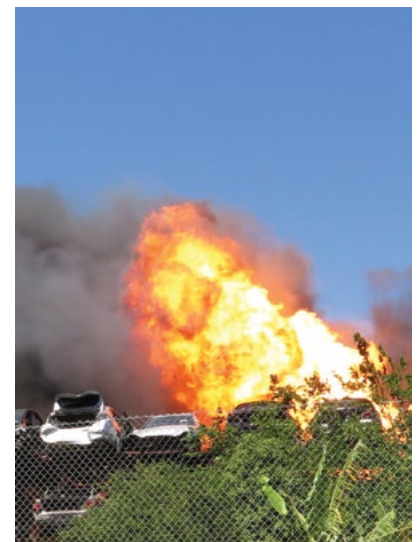


Notes:

1. Wrecking yard fires contain many hazards and dangerous conditions for firefighters. At the Revesby fire, firefighters were confronted with a site containing numerous and assorted hazards of many kinds, including the following.
 - LPG-powered forklifts, stored motor vehicles containing LPG tanks, acetylene cylinders and oxygen cylinders, presented boiling liquid expanding vapour explosion (BLEVE) hazards. Several BLEVEs occurred, resulting in gas cylinders becoming dangerous projectiles. Exposure to intense heat of sealed and pressurised motor vehicle components including tail-shafts, compressed gas struts, suspension struts, bumper struts and airbag compressed gas inflation devices (6-12 per vehicle) resulted in continuous explosions occurring throughout the fire.
 - Collapsing steel elevated racking supporting motor vehicles and heavy motor vehicle components (engines, gearboxes, tail-shaft differentials etc.) due to exposure to intense heat.
 - Structural collapse of large steel frame and iron sheet clad workshops.
 - Involvement in fire of typical motor vehicle components, including acrylics, polyurethane foams, polyvinyl chloride, plastics, synthetic rubbers, adhesives, hydrocarbon based materials and other synthetic products. Under fire conditions, these materials produced fierce fire behaviour, producing high heat release rates (2.5 to 5 megawatts), extreme radiant heat, significant flaming activity and temperatures in excess of 1,000°C.
 - Production of large volumes of heavy concentrations of hydrocarbon-based pressurised smoke and super-heated convection gases.
 - Occurrence of extreme fire events including rapid fire progression and fire gas ignitions. Fire activity resulted in rupturing of fuel tanks and fuel lines, causing fuel to spill, creating flammable liquid fires further increasing fire intensity.
 - Magnesium-based metal fires, due to involvement of magnesium motor vehicle parts such as transmission cases, door frames, intake manifolds, steering columns, wheels and engine components, resulting in intense fire activity (releasing extreme amounts of heat) that reacts violently and explosively to the application of water.
 - Assorted miscellaneous hazards including motor vehicle batteries (containing sulphuric acid), presence of brake and transmission fluids, uneven surfaces, slippery surfaces due to oil and automotive fluids, vehicle components scattered around the site and sharp/jagged metal debris attached to motor vehicles involved in crashes.

- NB: For further information regarding unique fire behaviour associated with motor vehicles located on elevated storage racking, the report author recommends reading "Milperra 4th Alarm Car Stacker Fire", Fire & Rescue Operations Journal Edition 4, Page 44, Fire & Rescue News, Autumn 2016.
2. Wrecking yards are generally located in areas where surrounding services (in particular reticulated water supplies) are sometimes quite poor. Once again, firefighters responded to a wrecking yard that was serviced by a single 150mm water main, resulting in poor water supplies that were quickly overrun by firefighters. Recognition of poor water supplies by local firefighters at this fire resulted in an early response of a higher Alarm level for the provision of adequate pumping appliances to establish a water relay. This greatly assisted firefighting operations.
 3. The first arriving Station Officer conducted a rapid size-up that identified the incident critical factors and initial incident objectives. This size-up ensured the most effective use was made of the limited resources available (particularly owing to the poor water supply) to achieve the most critical goals (ie protection of the most seriously threatened exposures). As additional resources arrived at the fireground, they were deployed in accordance with the incident objectives, enabling firefighting operations to be undertaken in a calculated, systematic and deliberate manner.
 4. A robust command structure, underpinned by an effective communications plan, ensured all operations were carried out in a safe, effective and coordinated manner. Sector Commanders in all sectors ensured firefighting operations were carried out in accordance with the Common Operating Picture and that these operations were consistent with the Incident Action Plan. This was particularly important on such a dynamic fireground, where numerous hazards, challenges and difficulties were present and where a number of sectors were located out of sight of the Incident Command Point.
 5. Safety was a critical factor to firefighting operations at this extremely hazardous fireground and all firefighters operated cautiously with full regard to the hazardous conditions present and appropriate safety measures required. The establishment of a Safety Officer via the attendance of Superintendent Fewtrell strengthened the safety strategies in place and the process of ongoing risk assessments identified the development of hazardous conditions as the incident progressed and implementation of appropriate control strategies to manage these hazards.

6. The fire ferocity was worsened due to the combination of volatile materials being stored on elevated racking and exposed to high winds. Under these conditions, the high winds increased the oxygen supply to the fire combustion, significantly increasing fire intensity. The nature of elevated storage results in rapid vertical and horizontal fire spread, due to the drafting effect created by air being drawn vertically through the racking; materials involved in fire stored on elevated storage racking result in higher convective heat release rates, in-rack gas temperatures, in-rack gas velocities and in-rack flame heights (fire growth and fire heat release rates double at each level of racking), facilitating accelerated vertical fire spread, due to very rapid flame propagation.
7. The fire occurred on a day when FRNSW crews were involved in large scale commitments around the state, including 4th, 8th and 10th Alarm fires from the day before (that were still ongoing) and developing major fire emergencies at Cessnock, Port Stephens, Shoalhaven, Wollongong and Sydney's northern beaches. The commitment and dedication of FRNSW firefighters enabled a "business as usual" approach to be undertaken at all emergencies, ensuring reasonable outcomes could be achieved.
8. The fire was particularly intense and ferocious, largely due to the high impact of high winds and the involvement of very volatile fuel loads. However the determination and skill of all firefighters enabled all exposures to be protected and saved, despite the impact of inferno-like fire conditions. Firefighters worked in conditions that were at times horrendous and must be congratulated for a job well done.



A violent explosion occurred due to the occurrence of an extremely dangerous Boiling Liquid Expanding Vapour Explosion (BLEVE) within a vehicle LPG tank.



Firefighters rescued an occupant from the second level of this "vacant" Newcastle shop. Firefighters encountered ferocious conditions, due to the unexpected presence of polyurethane foam mattresses, causing a violent flashover



Removal of interior walls by vandals will allow rapid interior horizontal fire spread through a building

FIREFIGHTING OPERATIONS AT VACANT BUILDING FIRES

“One of the most dangerous buildings to fight a fire in is the vacant building.”

Deputy Assistant Chief (retired) John Norman
Fire Department of the City of New York

Firefighters are routinely called to fires involving vacant buildings (NB: For the purpose of this report, vacant buildings include buildings that are disused, derelict, abandoned or subject to demolition). Fires within vacant buildings are highly unpredictable, hazardous and dangerous places for firefighters.⁹ These dangers cannot be underestimated; in North America, the firefighter death rate at vacant building fires is more than five times that of fires in occupied buildings.¹⁰ Tragically, on most occasions at vacant building fires, firefighters are the only life risk present.⁴

Recently, the report author attended a training event hosted by the Fire Department of the City of New York (FDNY), where the hazardous and dangerous conditions within these buildings have proven costly and fatal for New York City firefighters⁷. The very same conditions within vacant buildings that have cost the lives of New York City firefighters exist in NSW.

Vacant buildings present some of the most dangerous environments firefighters operate in.¹³ A vacant building can be transformed into a situation where unexpected fire behaviour can occur, including rapid horizontal and vertical fire spread, extreme fire events and early structural collapse. Numerous other hazardous conditions exist in vacant buildings and no two vacant buildings are alike. Regular familiarisation visits to vacant buildings by local crews are a key factor to ensuring safe operations at these buildings. It must be emphasised that it is impossible to identify all of the hazardous conditions that could exist at a vacant building; those listed in this report are the most common and it is critical that each building is visited individually to determine the specific conditions present.⁶

In conjunction with this report, two further reports are contained in this edition of Fire and Rescue Operations Journal, detailing recent FRNSW operations at vacant building fires, in particular focusing on the unique hazardous conditions that existed at these fires and the strategies and tactics employed that enabled firefighters to safely and effectively carry out fire control.

Deterioration and transformation of vacant structures

All buildings require constant maintenance and repair to prevent deterioration and to maintain a safe level of performance in the event of a fire. When a building becomes vacant, it becomes subject to the process of ongoing deterioration and transformation. Some of that transformation (including the effect this will have on fire behaviour and building performance) includes the following.



Removal of interior ceiling tiles by vandals will allow rapid interior vertical fire spread through a building; a metal truss roof [vulnerable to early collapse] is located above the ceiling line

“When it comes to vacant and abandoned buildings, we do not belong there.”

Battalion Chief Frank Montagna, Battalion 58
Fire Department of the City of New York

1. Installed fire systems such as automatic fire alarms, automatic sprinklers, hose reels and hydrant systems can quickly fall into disrepair, become inoperative, are disconnected or are removed. Installed fire systems can also be subject to vandalism and theft. The loss of this equipment can allow a fire to grow undetected until it reaches a size that is difficult and dangerous to contain. Occasionally, hydrant mains may be disconnected if demolition is planned for a site. Firefighters may find the installed systems they are relying on to support firefighting operations may be defective or inoperative, increasing the dangers present.¹⁰

NB: It is a common misconception to think a building that has had a sprinkler system disconnected or removed is the same as a building that was never fitted with a sprinkler system in the first place; this is a mistake.¹⁰ Under the BCA, exemptions are made to strict prescriptive compliance to the code, providing there is an installed automatic sprinkler system (eg, unprotected structural steel, large open plan/ non-compartmented areas, storage of large quantities of combustible materials etc.).

2. Exposure to the weather can lead to damage, deterioration and weakening of structural members (particularly timber frames), leading to early (and total) building collapse in a fire situation.¹⁴
3. Uncontrolled rainwater leaks can lead to water soaking of interior structural components, in particular plasterboard lining, resulting in weakened plaster falling away and exposing critical elements of structure (timber and steel frames). Under these conditions, a minor rubbish fire in a vacant building is able to quickly enter an exposed roof space and attack roof timbers, rapidly bringing the building to a state of heavy fire involvement.⁴
4. Removal, deterioration and failure (due to the effects of vandalism, exposure to weather, water penetration and wear and tear) of critical protective fire-rated covering (such as fire-rated plasterboard lining) from around elements of structure vulnerable to fire impact (such as steel columns and beams). Fire activity can attack exposed and unprotected structural steel, leading to early failure and building collapse.⁴
5. The actions of thieves and vandals to remove building components such as floor boards, sections of walls, ceilings and internal doors that ordinarily restrict, slow and/or stop the horizontal and vertical spread of fire. Uncontrolled fire spread through a building can now occur.¹⁴
6. Removal and breaking of external components to a building such as window glass, doors, walls etc., can result in greater aeration of the fire area and therefore increased fire intensity.¹⁰
7. Vacant buildings can become targets of dumping of large quantities of combustible materials, increasing fire loads, resulting in increased and unexpected fire activity. Sometimes, what appears to be only an empty shell may in fact contain a very high load of abandoned combustible materials¹⁰. The quantity and type of fuel load stored in a “vacant” building may completely transform the occupancy status of a building to something it was never intended. FRNSW firefighters have responded to vacant buildings supposedly “empty” containing thousands of rubber tyres, hundreds of rolls of carpet and rubber underlay, medical waste, industrial batteries containing hundreds of litres of acid, dumped chemicals, hundreds of plastic chairs, tonnes of abandoned building materials and hundreds of timber pallets.

8. It is not uncommon for vacant buildings to be the subject of numerous small fires over time, each one weakening the structure further.¹⁴
9. Removal by thieves of interior fittings such as pipes, metal ducting, electrical and communications cables etc., can create openings, voids and pathways for unexpected and uncontained horizontal and vertical fire spread through the building.³
10. Sometimes, buildings are abandoned midway through construction, renovation, alteration or demolition works. Under these circumstances, there are often large openings that exist within the structure, facilitating uncontained vertical and horizontal fire travel. Similarly, critical areas of the structure could be exposed and unprotected, leading to early collapse if exposed to fire. Similarly, the removal (without replacement) of key elements of structure can lead to early collapse in a fire situation. Sometimes during major renovation works, large holes are cut in building floors to assist builders in the removal of waste materials.²
11. It is not uncommon for gas and electricity services to be still connected to vacant buildings, even many years after they were last occupied.¹⁵

Fire behaviour

Fire behaviour within vacant buildings can be surprisingly rapid, extreme and unexpected. Structural breaches can result in rapid vertical and horizontal fire spread through the structure, quickly involving all floors of a building at a speed that quickly outstrips the ability of fire attack crews to achieve containment. This type of fire behaviour can occur quite early during firefighting operations. It is surprising how many rubbish fires in vacant structures quickly develop into fully involved building fires.¹⁰

Structural performance

The actions of vandals, weather, thieves, uncompleted works and previous fires may lead to a severe weakening of key elements of a structure. The effects of uncontained and rapid fire spread and intense fire activity, combined with an already weakened structure, can result in rapid and early structural failure and collapse of the building.¹⁰

Other hazardous conditions

Vacant buildings contain numerous hazardous conditions for firefighters (as explained further, the only way to properly identify the specific hazardous conditions within a particular building is via regular familiarisation visits). Some of the more common hazards include the following.

1. Before firefighters even reach the fire building, the building surrounds may be covered by overgrown vegetation, concealing various assorted dumped materials presenting significant trip hazards. The poor condition of building surrounds could hinder access for fire appliances. Structures are often boarded up and access for firefighters is made difficult by fortified security measures.³
2. Holes within floors, missing stairwell treads, missing safety railings, large unprotected openings within buildings and within the building surrounds can present significant fall hazards. Fire isolated passageways, fire doors and fire exits that may be needed for alternative/emergency egress could be locked, blocked, barricaded or containing combustible materials, making them impassable when they are most needed. Structure interiors are often confusing and complex, with building layouts significantly altered by boarding up, blocking and other internal changes. Weakening of the internal structure could result in internal collapse onto areas firefighters are operating in.⁴
3. Building interiors contain large amounts of abandoned, damaged and destroyed material, making progress by SCBA crews attempting to advance hose-lines slow, laborious and difficult. Building interiors may also contain smashed glass, syringes and other damaged, vandalised or destroyed material containing sharp edges, presenting injury risk to firefighters.³
4. Buildings may be inhabited by vagrants, illegal occupants or persons engaging in illegal activities, whose behaviour is unpredictable and who may react in a hostile, violent and aggressive manner to the presence of firefighters. These persons are often affected by alcohol, drug and substance abuse. It is also not uncommon for hazardous waste to be illegally dumped inside vacant buildings.²



Deterioration of ceiling plaster exposes the timber frame and timber floor above, allowing a relatively small fire to rapidly travel vertically through the building

Vacant buildings and the Building Code of Australia

When firefighters respond to occupied buildings, there is a degree of predictability about fire loads, fire behaviour, building performance under fire conditions and the general safety of the premises. This is because on most occasions, occupied buildings are generally well maintained and therefore capable of meeting the performance requirements as specified within the Building Code of Australia. However, once a building becomes vacant, the status of BCA compliance is completely unknown; there is no way of knowing what the fire behaviour or building performance will be in such a building.

The need for a culture shift

The FDNY found that a significant culture change was necessary among its members following a number of tragic firefighter fatalities that occurred at vacant building fires. For many years, firefighters had operated successfully in these buildings, however tragedy struck when a series of firefighter fatalities occurred within vacant buildings. FDNY Chief Officers reported that it was the natural tendency of firefighters to want to carry out aggressive internal attacks to extinguish fires within vacant buildings as quickly as possible in the same manner that operations were being carried in occupied structures. However, the risks were just too great for the benefits, particularly when there was no life risk (except the lives of firefighters, who were now the only life risk in these buildings).^{7,8,10,12,14}



This change in mindset and approach has resulted in a significant drop in firefighter fatalities and injuries at vacant building fires

Part of the problem was that firefighters had been successfully operating at vacant building fires without incident for many years. Firefighters were being lulled into a false perception that firefighting operations at vacant buildings were straightforward and routine, with no hazards and no significant threat to firefighter safety. Firefighters were becoming complacent. FDNY Chief Officers experienced difficulty convincing firefighters of the need for caution at these fires, because they had operated so successfully at them for years without any problems. It was only after tragedy struck repeatedly that a significant culture shift occurred within the FDNY, resulting in a more cautious approach to firefighting operations being adopted at vacant building fires. Emphasis is now placed on a careful survey of the building before firefighters are committed to the building interior and a process of intense size-up is carried out once firefighters enter the building. This change in mindset and approach has resulted in a significant drop in firefighter fatalities and injuries at vacant building fires. Tragedy caused firefighters to understand that these buildings could not be taken for granted.^{4,6,7,8,13}

The key is being prepared: familiarisation visits

The FDNY believe it is critical to firefighter safety that vacant buildings within a station’s response area be visited frequently to ensure firefighters are familiar with the unique and constantly changing hazardous conditions present within each individual building.

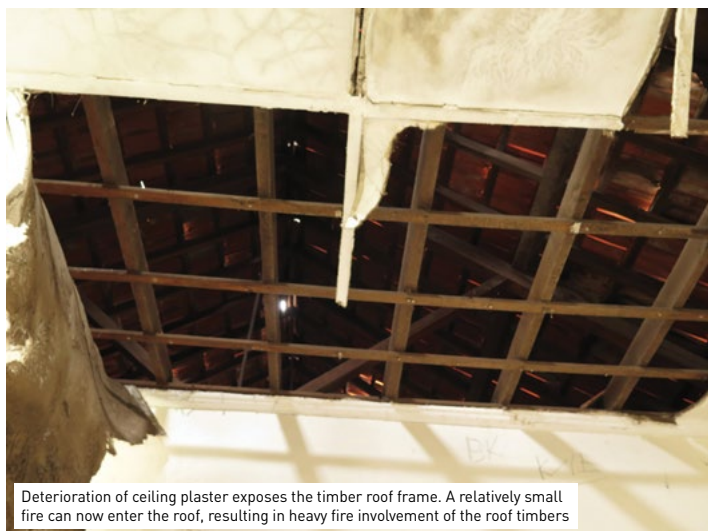
Frequent familiarisation visits are critical to enable safe operations at fires involving vacant buildings. Vacant buildings are in a constant state of deterioration and change; the more frequently the building can be visited, the more familiar firefighters will be with any changes that have occurred and any unexpected conditions that could exist. During visits, firefighters should pay particular attention to the following.^{5,10}

1. The condition and operating status of any installed systems, in particular automatic fire alarm, sprinkler and hydrant systems.
2. The condition of interior separating walls, floors, ceilings and doors, noting any openings, breaches and/or weaknesses and assessing the likelihood of uncontained horizontal and vertical fire spread.
3. The condition of the structural frame (due to the effects of weather, vandalism, previous fires etc.), noting any signs of weakening or defect that could cause early collapse.
4. The condition of protective plasterboard lining and any other cladding that could allow fire penetration to vulnerable elements of structure (structural timber and steel) if removed.
5. Any exposed elements of structure (due to removal of protective lining) that could be subject to direct fire travel, in particular structural timber and steel.
6. Any accumulation of combustible materials, the size and nature of materials and the likelihood these materials could produce extreme fire behaviour.
7. Any weakening of the structure due to previous fires.
8. The status of access/egress paths (whether they are locked, blocked or functional), particularly possible emergency egress paths for firefighters.
9. Any incomplete renovation work present, that could allow uncontained fire spread through the building, plus any removal of structural elements that could weaken the structure and lead to collapse.

10. The status of electricity and gas supplies at the site.
11. Evidence of illegal occupancy within the building.
12. Missing/broken windows, missing exterior doors, wall breaches, other openings etc., that could result in increased ventilation of any fire in the building and resulting increase in fire intensity.
13. Coverings/security devices on windows, doors etc., that could delay entry of firefighters, hinder hose stream operation, ventilation etc.
14. Any other unsafe conditions, such as the general condition of the buildings, broken glass, syringes, holes in floors, missing stair rails, etc.

Pre-incident planning and familiarisation visits will help to identify the hidden hazards specific to each individual site. Familiarisation visits will also enable firefighters to assess the likelihood of rapid/uncontained fire spread, potential for extreme fire behaviour and probability of structural collapse. All of this information will assist the IC to make the critical decision as to whether a building is safe enough to risk committing internal crews to enter. Through the process of familiarisation visits, the FDNY have identified some vacant buildings that are considered so hazardous that interior firefighting cannot be conducted safely, no matter what the circumstances. Defensive operations are mandated at these buildings.^{4,10,13}

Safe operations at vacant building fires is not just a matter of good luck; firefighters who regularly conduct pre-incident planning exercises will become familiar with many of the hazardous conditions present. This information is critical, enabling the IC to perform an informed size-up, assess the likelihood of building collapse and establish a firefighting strategy that ensures firefighters operate safely. If firefighters have not familiarised themselves with a vacant building in their response area, they are responding to any fires in that building “blind”; the ability to perform a proper size-up will be severely limited and the firefighting strategies and tactics will not be as informed as they could have been.¹⁰



Deterioration of ceiling plaster exposes the timber roof frame. A relatively small fire can now enter the roof, resulting in heavy fire involvement of the roof timbers



Deterioration of the protective lining around a section of structural steel I beam to heat and fire impact. Under fire conditions, the steel could fail resulting in building collapse

Operating safely at vacant buildings

As we know, firefighters will risk a lot to save a lot, however should only risk little to save little. A theme from the FDNY is that no building is worth the life of a firefighter ... especially a vacant building that is probably only going to be demolished anyway. This doesn't mean that we stand on the footpath at every vacant building fire we are called to (it is far more advantageous to conduct an expedient interior extinguishment of a small fire that is safely containable than it is to allow the fire to grow to such proportions that it threatens surrounding exposures and becomes dangerous for firefighters); it means that we must apply a higher standard of caution to vacant buildings, because of the inherent risks they contain. This process will have commenced during previous familiarisation visits to the site and an understanding and appreciation of the various hazardous conditions that may be present and the necessary precautions that must be taken to ensure safe operations.^{2,3,4,5,7,8,10,12,13}



The access stairs to a vacant Newcastle shop. Firefighters were not expecting a ferocious flashover due to involvement of numerous polyurethane foam mattresses being used by vagrants

Size-up prior to committing firefighters to operations is critical at vacant building fires. In particular, the IC must assess the location, size, duration and intensity of the fire and the potential for horizontal and vertical fire spread. The IC must assess the impact of the fire on key structural elements, any significant weakening of the structure and the likelihood of collapse. The IC must survey important factors that could impact basic firefighter safety, such as the stairwell and floor conditions. The IC must consider whether there is a known life risk. Persons who may be found within vacant buildings can include children, vagrants, trespassers, workers, squatters, etc. Most importantly, the IC must assess the risk versus benefit of any offensive strategy and decide whether operations should be internal or external, with firefighter safety being the highest priority.^{5,8,10,13}

The operating doctrine of the FDNY at vacant buildings is to deploy the minimum fire attack crews into the building under the maximum level of supervision. During firefighting operations, size-up by the IC must be ongoing. It is critical that the officer supervising interior firefighting operations provide frequent CAN (Conditions, Actions and Needs) reports to the IC, with particular emphasis on interior conditions: fire intensity, fire spread (particularly any unexpected vertical or horizontal fire spread), any signs of weakening of the structure and the effectiveness of fire attack. Internal lines are advanced slowly and cautiously, in accordance with internal conditions.

A back-up line must always be in place to support the initial attack line. Firefighters use the reach of the attack stream to sweep the floor ahead of them, to remove from their path dangerous materials including broken glass, syringes, burning materials etc. This action also assists to clear debris, exposing any holes in the floor that might exist. Fire attack crews must maintain an awareness of interior conditions because they constantly change and can be a determining factor to ensure a safe operation.^{3,4,5,7,8,10,12,13}

Once the decision has been made to adopt a totally defensive strategy, it is important that collapse zones be established and sufficient resources are on hand to protect exposures. A master stream attack from a flanking position is the safest and most effective means of operating at a defensive vacant building fire.^{4,10,12,13}

Conclusion

Vacant buildings are highly unpredictable, hazardous and dangerous places for firefighters, which cannot be underestimated. Conditions in a vacant building can deteriorate very quickly and with little warning. Fire spread (horizontal and vertical) can be unexpected and surprisingly rapid, quickly overcoming the abilities of fire attack crews. Buildings may be significantly weakened and structural failure can occur quite unexpectedly and early. Critical installed fire systems often do not operate, allowing fires to develop to magnitudes difficult to control. Vacant building interiors can be confusing and complex. The only way to combat the hazards presented by vacant buildings is to carry out constant pre-incident planning exercises at these buildings.



This vacant building was designed and constructed as an entertainment venue. Firefighters encountered heavy fire conditions due to abandonment of hundreds of rolls of carpet and rubber underlay inside the building. Note exposed and unprotected steel beams. Partial collapse of the building occurred



Sections of sprinkler pipe removed from a large vacant factory

There is no limit to the hazards that can be present within vacant buildings. Only regular familiarisation visits will provide firefighters with the knowledge of exactly what the hidden hazards are within each vacant building and the most appropriate strategies and tactics to safely control any fire situation that may occur in these buildings. It is vital that we take the dangers these buildings present seriously; too many firefighters have already needlessly lost their lives in these buildings.

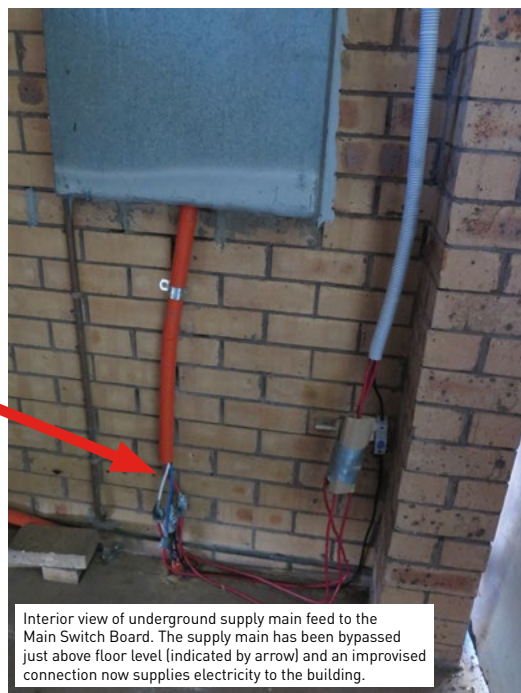
1. AVILLO, Anthony, Fireground Strategies, second edition, Penwell, 2012.
2. BURKE, William F, Deputy Chief, 6th Division and QUINN, John J, Deputy Chief, 9th Division, FDNY (1975), "Arson in the South Bronx", WNYF 4/1975.
3. CRONIN, Michael F, 28th Battalion, FDNY (1983), "Vacant Buildings", WNYF 4/1983.
4. DUNN, Vincent, Deputy Assistant Chief (retired), Commander Division 3 Manhattan, FDNY (1999), "Building Construction and Collapse", WNYF 4/1999.
5. FDNY FIREFIGHTING PROCEDURES, Vacants, Volume 1, Book 3, Private Dwellings, Book 6, Volume 1.
6. KEENAN, Shaun, Lieutenant, Ladder 77, FDNY (2014), "Operating at Vacants", WNYF 2/2014.
7. KILDUFF, Edward S., Chief of Department, presentation FDNY Training Academy, March 2014.
8. LAPOLLA, Thomas, Deputy Chief, FDNY, Battalion Chiefs Command Course.
9. MONTAGNA, Frank, 58th Battalion, FDNY (2003), "My Firefighting Epiphanies", WNYF 3/2003.
10. NORMAN, John, Deputy Assistant Chief (retired), FDNY, "Fire Officers Handbook of Tactics", 4th Edition, ISBN 978-1-59370-279-3, Pen Well Corporation 2012.

11. PFIEFER, Joseph W, Deputy Assistant Chief, FDNY, "Firestorm at the Greenpoint Market Terminal", WNYF 4/2006.
12. PFIEFER, Joseph W, Deputy Assistant Chief, FDNY, presentation FDNY Training Academy, March 2012.
13. RAYNIS, Stephen, Chief of Safety, FDNY, presentation FDNY Training Academy, March 2012.
14. SCANLON, Kevin, Battalion Chief, 44th Battalion, FDNY (2000), "Abandoned and Vacant Buildings, A Blight on the Landscape and a danger to Firefighters", WNYF 3/2000.
15. SMITH, James P., Strategic and Tactical Considerations on the Fireground, 3/e, Brady / Pearson Education, 2012.
16. VISCUSO, Frank and Deputy Chiefs and Michael TERPAK, Fireground Operational Guides, Fire Engineering, 2011.

There is no limit to the hazards that can be present within vacant buildings. Only regular familiarisation visits will provide firefighters with the knowledge of exactly what the hidden hazards are within each vacant building



This large hole had been cut through the second level floor of this vacant building. This hole was extremely difficult to see due to smoke logging and was partially concealed by light debris



Interior view of underground supply main feed to the Main Switch Board. The supply main has been bypassed just above floor level (indicated by arrow) and an improvised connection now supplies electricity to the building.



Close-up view of improvised electrical bypass (indicated by arrow)

HYDROPONIC GROW HOUSES: WHAT EVERY FIREFIGHTER NEEDS TO KNOW

Firefighters are now responding to a new and dangerous menace: hydroponic grow houses (HGHs). Just how dangerous they are was seen recently in New York City when an explosion occurred at a HGH, displacing debris onto the command post located on the other side of the street from the fire building, killing FDNY Battalion Chief Mike Fahy (Battalion 19). Over the past 18 months, FRNSW crews have been responding to an average of at least one HGH fire per month. That response rate is increasing. HGHs contain numerous new and dangerous hazardous conditions for firefighters, many that are hidden. The aim of this report is to assist firefighters to identify the warning signs that a building fire you are operating at could be a HGH. The key to safe operations at HGHs is through recognition of the signs and then taking appropriate action.

The most significant hazard encountered at HGHs involves illegal modifications to electricity circuits and equipment

HGHs contain numerous modifications that make them extremely hazardous for firefighters. The modifications to the structure (including false walls, windows, ceilings, doors and hidden passageways) create early risk of internal collapse, are confusing for SCBA crews, contain increased fire loads resulting in escalated fire activity, are difficult to ventilate, resist defensive fire attack streams, contain numerous obstacles, contain numerous entanglement and entrapment hazards, contain explosion hazards and contain risks of chemical contamination, in particular exposure to tetrahydrocannabinol (THC).

The most significant hazard encountered at HGHs involves illegal modifications to electricity circuits and equipment. In all cases, improvised electrical bypasses have been installed, diverting electricity from the supply main past the electricity distribution board to the improvised installed circuit, illegally put in place by the occupants and used to supply power to electrical equipment within the HGH. Electricity authorities describe this supply as unregulated and unprotected. Normal domestic current draw is approximately 40 amps per

house. With an improvised electrical by-pass installed there could be as much as 300 to 400 Amps being drawn into a HGH. None of the usual electricity protection devices found within the electricity distribution board are present within the improvised installed circuit. The improvised installed circuit consists of large quantities of electric cables, connected to numerous items of electric equipment. These circuits are fully exposed, installed within the roof space and beneath the ceiling. In the event of a fire, cable insulation is rapidly burnt off exposing bundles of live conductors, presenting a significant electric shock or electrocution risk. Cable bundles are precariously supported and almost always drop in fire situations. Numerous electrical conductors are present within the HGH, capable of becoming live in the event of contact being made with live conductors. A common scenario is for FRNSW crews to “switch off” electricity at the electricity distribution board (not knowing the occupancy is a HGH), then believing it is safe to deploy crews internally, only to discover internal circuits are still live. NB: when an improvised electrical bypass has been installed, electricity supply cannot be turned off and will remain live until power has been disconnected by a qualified representative of the responsible electricity authority.



Under fire conditions, insulation is burnt from electrical cables, exposing live conductors. Cables drop from the ceiling and can easily contact anyone in the room



External view of windows to GHG. Note "false" window/blind/curtain assemblies (indicated by arrows). Next photo shows the same window from the inside

An HGH is a structure that has been converted for the sole purpose of illegally growing indoor cannabis crops on a commercial/ industrial scale

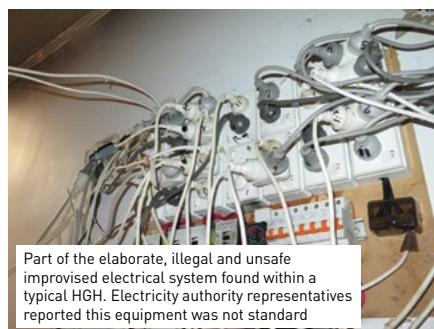
Hydroponic grow houses (HGHs)

Information from NSW Police Force suggests that due to the increasing efficiency of Police operations, activities associated with traditional outdoor cannabis plantations are now changing to indoor HGHs, in an attempt to avoid detection. An HGH is a structure that has been converted for the sole purpose of illegally growing indoor cannabis crops on a commercial/industrial scale. Although such an occupancy may exist in any structure, it is has thus far been the experience of the author that they have been found almost exclusively within residential buildings (i.e. houses). HGHs are commonly found in the middle of suburban areas.

Significant hazards

The following significant hazards to firefighters were identified at HGH fires (NB: these will be discussed in greater detail further in this report).

1. Electric shock or electrocution resulting in death
2. Entanglement
3. Disorientation, due to confusing layout and locked/blocked internal doors
4. Increased fuel loads, resulting in increased fire activity
5. Obstruction to SCBA crews
6. Fall hazards
7. Explosion hazards
8. Structural collapse
9. Chemical contamination
10. Inability to ventilate
11. Difficulty directing fire attack streams onto fire
12. Booby traps
13. Illegal operations.



Part of the elaborate, illegal and unsafe improvised electrical system found within a typical HGH. Electricity authority representatives reported this equipment was not standard

General features, hazardous conditions and difficulties found at HGHs

Once entry is gained to the structure past the front door "façade", firefighters will observe the interior change very quickly (NB: like most house fires, visibility may be extremely poor and difficulty may be encountered visually identifying some of the signs). Following are common features found within most HGHs attended by FRNSW so far. The purpose of this section of the report is to assist firefighters to identify the warning signs that the structure they are operating in could be a HGH. This section of the report also contains specific hazardous conditions and difficulties associated with the various features identified. Learning to identify the warning signs is the first step to remaining safe at these occupancies. An additional part follows this section, dealing specifically with the very hazardous electrical risks at these occupancies.

Feature: High intensity discharge lights (and assemblies), either metal halide or high pressure sodium. These can be either 600 or 1,000 watts. Large internal ceiling mounted overhead carbon filters are fitted to all rooms for odour removal.

Hazard/difficulty: Explosion (lights) when exposed to heat, electrical conductor due to metal construction (electric shock risk), obstruction for internal SCBA crews and fall/entrapment risk.

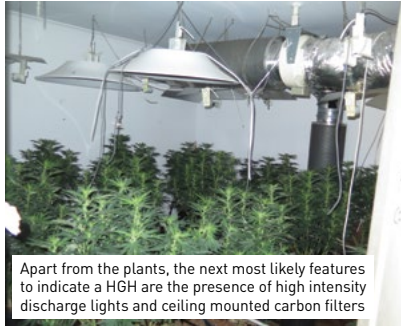
Feature: False walls constructed to conceal the building interior, false interior doors, internal doors fixed shut, hidden passageways and false ceilings.

Hazard/difficulty: The structure is difficult to ventilate, conceals fire, firefighters will encounter difficulty directing hose streams onto fire, additional fuel load/increased fire activity, confusing for internal SCBA operations and entrapment hazard. Rapid early failure and collapse.

Feature/difficulty: Interiors walls and floors covered with white plastic sheets to provide maximum efficiency of lighting. Plastic sheets covering windows to conceal interior.

Hazard: Difficult to ventilate, conceals fire, additional fuel load/increased fire intensity, can't direct defensive hose streams through windows.

Feature: Aluminium sheets on the walls and ceilings to reduce heat signature for aerial infra-red detection equipment by law enforcement agencies.



Apart from the plants, the next most likely features to indicate a HGH are the presence of high intensity discharge lights and ceiling mounted carbon filters

Hazard/difficulty: Electrical conductor (electric shock risk), difficult to ventilate, can't direct defensive hose streams through windows and retains large amount of heat.

Feature: False windows concealing structure interior, in particular lights. Some have curtains and lights, connected to timers between window and false wall, to give the appearance to neighbours of normal house.

Hazard/difficulty: Difficult to ventilate, conceals fire, additional fuel load/increased fire intensity, can't direct defensive hose streams through windows. Everything looks normal from the outside, concealing hazardous environment.

Feature: Ventilation ducting, air extraction system including intake and exhaust fans, used to pump CO2 into room and remove oxygen.

Hazard/difficulty: Potential oxygen depleted atmosphere, obstruction for SCBA crews, entrapment hazard, increased fuel load/fire intensity and possible explosion hazard.

Feature: Mixing baths. Found in the bath room and laundry, consisting of bath tubs, sinks and chemical drums. 20-litre chemical containers containing hydroponics nutrients. A combination of hydrogen, nitrogen, phosphorus, calcium, potassium and magnesium. Trace elements such as boron, chlorine, copper, iron, manganese, copper, sodium, zinc, nickel, cobalt and silicon may also be present. Soil pots, bags of soil/growing medium, irrigation systems, water pumps and hoses.

Hazard/difficulty: Increased fuel load. When mixed, complex compounds of sulphates and nitrates can be produced. The various mixtures are unpredictable, depending on the particular growing requirements and chemical mixture being used. Obstruction for SCBA crews, increased fuel load.

Feature: Cannabis plants (up to 3m high).

Hazard/difficulty: Increased fuel load, production of tetrahydrocannabinol (THC) when exposed to heat/fire (potential contamination), obstruction to SCBA crews.

Feature: Sparse living arrangements, minimal (if any furniture), usually only a mattress on the kitchen floor.

Hazard/difficulty: Nil.

Some have curtains and lights, connected to timers between window and false wall, to give the appearance to neighbours of normal house



It is difficult to believe this is the interior of one room in what appears from the outside to be a normal residential house



Firefighters are making entry to a "routine" house fire; there were no signs to indicate this house had been completely transformed into a HGH (picture courtesy Inspector Cheryl Steer).

Electricity hazards

Feature: Normal supply main to point of attachment.

Hazard: There is no way of identifying externally that internal electrical equipment has been modified.

Feature: Improvised Electrical By-Pass. Improvised installed circuit connected to the supply main, before the supply main reaches the meter/electricity distribution board, bypassing the meter and electricity distribution board and delivering electricity to the (illegally installed) improvised internal mains.

Hazard: This circuit is completely unprotected and lacks all of the protection installed within the electricity distribution board. The electricity supply is completely unregulated. Normal current draw is 40 amps per house. With an improvised electrical bypass there could be as much as 300-400 Amps going into the improvised bypass main. The closest protection is at nearest Pole Transformer or pad mounted substation, which are generally protected by a 400 Amp fuse.

Feature: For all appearances, the switchboard appears to be functional.

Hazard: The electricity mains switch may be placed in the off position by FRNSW (per SOGs) however power and electricity supply remains live to the premises.

Feature: Large demand for power for lights (600 Watts per light, up to 100 lights), pumps and ventilation fans, drawing 250-300 Amps of current.

Hazard: Current going to the house could be up to 10 times greater than normal supply.

Feature: Contactor switches and timers.

Hazard: Delay Timers are generally present and will ensure that illegal connections remain difficult for energy authorities to locate, these can allow the power to re-energise hours after the main Switch Board has been 'tuned off'. Although the circuit breakers will provide limited protection against an over current, they will not protect against electric shock /electrocution if contact is made with live wires.

Feature: Transformers and control gear.

Hazard: These are normally very hot. Control boxes control operation of the lights, are very heavy and can be roof space mounted, presenting a significant fall/impact hazard.

Feature: Large amount of electricity cables forming home-made consumer main through roof and suspended beneath roof, to sub-board, control gear and electrical equipment.

Hazard: If insulation is burnt off in a fire, exposed conductors are now live and electric shock risk exists. These cables can electrify anything else of a conductive nature. They also become an entanglement and entrapment hazard. An additional risk of arcing and explosions may occur as exposed wires contact each other.

Feature: It is not uncommon for the round pin to be cut off the extension lead power plug leaving only the active and neutral pins attached to the plug.

Hazard: Main is unearthed presenting a shock risk if contact is made with the metal surrounding of the light fitting.

External signs a fire could be an HGH

Those who establish the HGHs go to elaborate lengths to disguise the external appearance of the occupancy to conceal the building's internal illegal activities. These measures have included installing false window assemblies and window lights (with on/off timers) to create the impression of a normal "lived in" house. The entrance interior that is visible when the front door is opened is furnished like a normal house (book cases, pictures on wall, etc.).

Prior to entering a structure to commence firefighting operations, there are few (if any) indicators that a structure could be an HGH. Everything will seem normal. It is not until firefighters enter the structure that they will first learn they are at an HGH. Some external signs that a building fire could be an HGH include the following (NB: the following signs were observed at most HGH fires attended by FRNSW).



When firefighters made entry to the garage at the above fire, they discovered a false wall, hidden passage way, hidden door and materials associated with a HGH



Large bundles of electricity cables hung below the ceiling. Every light fitting is supplied by a separate cable between the lamp and the lightning control equipment.



Mixing baths

The key to effectively identifying that a premises is an HGH is an awareness of the features of an HGH, enabling recognition

1. Occupants not in attendance.
2. Neighbours have rarely seen occupants.
3. Fire/arcing that is observed at or near the point of attachment.
4. Fire within the roof space or appears to be of an electrical nature in the roof space.
5. Significant electrical arcing can be heard from inside the house.
6. Electrical arcing continues to occur after power switched off at the electricity distribution board.
7. Occupants/"minders" departing rapidly upon the arrival of emergency services and/or discovery of fire.

Precautions for conducting operations at HGHs

It is highly unlikely firefighters will identify a structure is being used as an HGH, prior to firefighters making entry into the building to conduct offensive firefighting operations. As per standard FRNSW operations, use of the thermal imaging camera by firefighters will most likely be the most effective tool to identify the interior components of a building that form an HGH.

The key to effectively identifying that a premises is an HGH is an awareness of the features of an HGH, enabling recognition. Upon observing the signs, this information should be immediately communicated to the IC.

Upon discovering that a building is suspected of being a HGH, the following operations and precautions have been used by responding FRNSW crews and enabled objectives to be safely and effectively achieved.

1. Withdrawal of all firefighters to structure exterior, conduct a defensive attack.
2. Call for electricity authority.
3. Request attendance of Police and Ambulance.
4. Increase response to a minimum 2nd Alarm to ensure adequate crews are available for SCBA operations and establishment of hazmat decontamination operations.
5. Request response of Hazmat for specialist advice.
6. Consider special response of a rescue unit, due to possibility of internal fortifications and/or internal collapse and entrapment risks.
7. Establish an exclusion zone.
8. Establish a control point to liaise with the various agencies likely to be in attendance.
9. Establish a decontamination zone.
10. Remain in defensive strategy until electricity authority confirm power disconnection.

11. Recommence offensive operations when power confirmed disconnected by electricity authority.
12. Minimal disturbance of scene which will become evidence during police investigation.
13. Fire control and search and rescue operations.
14. Hazmat to conduct investigations and identify any hazardous materials.
15. Render safe.
16. Decontaminate all persons leaving hot zone.
17. Hand over to Police.

Conclusion

FRNSW are responding to fires involving HGHs at an increasing rate. These occupancies contain unique and dangerous hazardous conditions for firefighters. In particular, there is a considerable risk of electrocution at an HGH, due to illegal modifications made, significantly the presence of improvised electrical bypasses, which cannot be made safe by FRNSW firefighters. The key to safe operations at HGHs is through recognition of the signs by firefighters, communication of this information to the IC and appropriate actions taken by the IC and all firefighters.



High intensity discharge lights are essential component of HGHs

HISTORIC GLOBAL AGREEMENT ON CLIMATE CHANGE



COP21 · CMP11
PARIS 2015
UN CLIMATE CHANGE CONFERENCE

A historic agreement to combat climate change and work toward a low-carbon, resilient and sustainable future was recently agreed by 195 nations, including Australia.

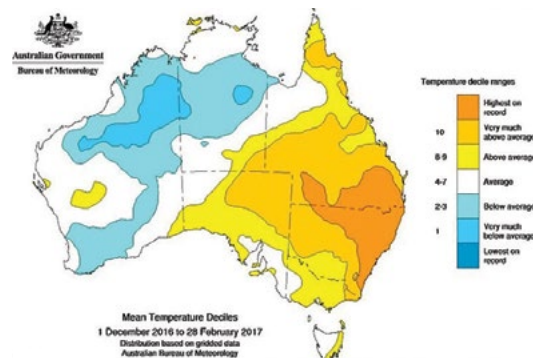
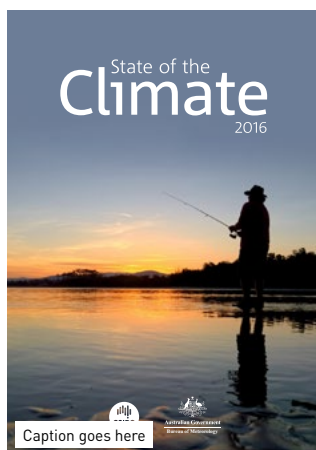
The United Nations Climate Change Conference was held in December 2015 in Paris, France. It is widely recognised that the earth's atmosphere is growing warmer due to greenhouse gas emissions generated by human activity. To address this issue, the conference negotiated the Paris Agreement, an international consensus on the urgent need to take actions in order to slow the pace of global warming.

The agreement aims to keep the increase in global temperature this century to less than 2°C above pre-industrial levels, and to attempt to limit this temperature rise even further to 1.5°C.

Reporting on the outcome, Australia's Foreign Minister Julie Bishop said: "Australia is part of an international agreement that for the first time has all countries committed to reducing greenhouse gas emissions while balancing economic growth."

By 12 December 2015, 186 countries had published the action plan which sets out how they intend to reduce their greenhouse gas emissions. The Paris Agreement asks all countries to review these contributions every five years from 2020; they will not be able to lower their targets and are encouraged, on the contrary, to raise them.

In addition, emissions should peak as soon as possible, with countries aiming to achieve carbon neutrality in the second half of the century. **END**



HOW AUSTRALIA'S CLIMATE IS CHANGING

Changes to global climate are reported regularly by agencies such as the World Meteorological Organisation, NASA and the US National Oceanographic and Administration, all of which declared 2016 the hottest year on record – and that all but one of the 16 hottest years on record have occurred this century.

State of the Climate (www.bom.gov.au/state-of-the-climate/), produced every two years by the Bureau of Meteorology and CSIRO, outlines long-term trends in Australia's climate. Key points from the 2016 report:

- Australia's climate has warmed in both mean surface air temperature and surrounding sea surface temperature by around 1°C since 1910.
- The duration, frequency and intensity of extreme heat events have increased across large parts of Australia.
- Since the 1970s, large parts of Australia have experienced increased extreme fire weather and a longer fire season.
- May–July rainfall has reduced by around 19% since 1970 in the southwest of Australia.
- The April–October growing season rainfall in the continental southeast has declined around 11% since the mid-1990s.
- Rainfall has increased across parts of northern Australia since the 1970s.
- Oceans around Australia have warmed and ocean acidity levels have increased.
- Sea levels have risen around Australia. The rise in mean sea level amplifies the effects of high tides and storm surges.

Looking to the future, the report projected Australian temperatures to continue increasing with more extremely hot days and fewer extremely cool days.

The number of days with weather conducive to fire in southern and eastern Australia is projected to increase. Winter and spring rainfall is projected to decrease across southern continental Australia, with more time spent in drought.

The independent Climate Council's latest report, "2016 Global Heat Record Broken, Again" analysed the latest climate data both globally and in Australia. Once again, its results are an urgent wake-up call.

It warned: "We are rapidly closing the window of opportunity to limit warming to 2°C above pre-industrial levels – this is the "guardrail" temperature referred to in the Paris Agreement to stabilise the climate and limit the catastrophic impacts of climate change".

The Climate Council reported an unprecedented 16 months in a row of record monthly temperatures that broke global records between May 2015 and August 2016.

Its report showed Australia experienced its fourth warmest year on record and temperatures for 10 of the 12 months of 2016 were above the 1961–1990 average. Ocean temperatures around Australia were record breaking at 0.73°C above average.

Read the Climate Council report at <https://www.climatecouncil.org.au/2016-hottest-year-report>. **END**



THE CHALLENGE FOR EMERGENCY SERVICES

FRNSW and other Australian emergency services are now constantly dealing with the impacts of more severe weather events brought about by the now undeniable effects of climate change. This is a major challenge confronting FRNSW as it plans for the future.

Scientific research and current trends predict a continuing increase in the frequency of extreme weather and weather-related events such as heatwaves, severe bushfires, cyclones, storms, floods and winds. Climate change, and the roughly five-year weather cycle of El Nino delivering drought conditions followed by La Nina delivering persistent flooding, pose significant challenges to all fire, rescue and emergency services. Energy costs for electricity, gas, fuel and water will also increase placing further pressure on budgets.

In light of these developments, FRNSW will review and modify the way it operates, introducing more efficient and environmentally sustainable practices to ensure the continuity, reliability and sustainability of its service. It will increasingly work with communities to increase their preparation for and resilience to major climatic events and continue working collaboratively to support other emergency services. **END**

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NSW'S SUMMER O

Writing in respected online publication The Conversation on 3 March, a group of eminent climate scientists concluded what many had thought: "Australia's summer is officially over, and it's certainly been a weird one."

Central and eastern Australia experienced severe heat with many temperature records falling, particularly in NSW and Queensland.

For much of the country, the heat peaked on the weekend of February 11-12, when many places hit the high 40s. Overall, Australia experienced its 12th-hottest summer on record. NSW had its hottest recorded summer.

In NSW, the 2016/17 bushfire pre-season and season was driven by many weather factors. A wet winter and an early spring postponed hazard reduction work.

This meant the Bushfire Section supported Operational Commands managing urban bushland interface risk with hazard reduction well into the bushfire danger period. The early rain led many to believe the season would be a non-event.

Australia's summer is officially over, and it's certainly been a weird one

That belief ended abruptly from 4 November, when FRNSW and NSWRFBS began responding to a season of significant bush and grass fires.

The pinnacle of this summer's relentless heat culminated in a catastrophic weather event on 12 February 2017. The conditions experienced were potentially the worst in NSW's history and across the largest area of the State ever affected. This led the RFS to report that "this is as bad as it gets". The RFS previously stopped fire danger ratings at 100 -however some of the catastrophic ratings experienced on that day were Mudgee with a 128, Scone 133, Coonabarabran 114, Walgett 128 and Coonamble with a 147.

The public were urged to considering moving to safer locations and enact their Bushfire Survival Plans while fire services worked together to position themselves for the inevitable outbreak.



It was a summer of challenges across NSW

Major bushfire incidents

4 November 2016 — FRNSW responded to an apparently deliberately lit bushfire at Cranebrook and Llandilo. With strong winds, high temperature and very low humidity, the fire rapidly escalated and spotted, threatening dozens of houses.

A 10th Alarm was responded and together with the NSWRFBS, about 300 firefighters were needed to control the fire. RFS water bombers, including the Very Large Air Tanker, a specially converted DC10 aircraft carrying 45,000 litres, and the Large Air Tanker, a C130 Hercules carrying 15,000 litres, played a major role in controlling the fire.

High temperatures were noted, but they did not forecast the record breaking conditions ahead.

OF BUSH AND GRASS FIRES



8 November 2016 — FNRSW assisted RFS at the Kundabung fire in Kempsey LGA. It burned 3,791 hectares and threatened Kundabung township. FRNSW crews from Region North 1 assisted with containment and were tasked to protect Kundabung against a predicted change in conditions and potential fire escalation.

13 November 2016 — 85 Chester Hill was first on scene at a quickly developing grass fire in the Lansdowne Reserve, Lansdowne, within Metropolitan East 3. Firefighters reported a large area of bush alight and developing quickly due to strong, erratic winds, high temperature and low humidity. The fire was being pushed towards multiple houses in surrounding streets and further assistance was requested. The response grew to a 9th Alarm as the fire began impinging on the rear of several houses.

The RFS assisted FRNSW and provided aviation support. The fire was another clear reminder that crews must be prepared for the predicted difficult bushfire season.

13 December 2016 — By late November, a series of fires affected the Kurri Kurri area, alerting Metro North Area command that a busy bushfire season was inevitable for the Lower and Upper Hunter areas.

It started on 13 December with a fire at Forbes Street, Abermain. The prevailing winds, high temperatures and low humidity caused constantly changing conditions which kept crews busy, racing from job to job to protect lives and property.

The fire affected residences in Kurri Kurri, Loxford and Heddon Greta. Some 650 hectares were burned out.

Exceptional efforts by FRNSW, the NSWRFSS and water-bombing aircraft restricted residential property damage to outbuildings and minor damage to some homes.

As FRNSW maintained its presence in the area after the fire, strike teams were deployed from Sydney and Newcastle to relieve tired crews.

Cat 2 USAR operators also made rapid dynamic assessments of structural properties and local strike teams were formed to use thermal imaging cameras to check for hotspots in eaves.

This risk mitigation strategy was deployed as, historically, when bushfires passed through the area, embers had settled in roof voids and igniting coal dust which had been deposited over many years.



February 2017 — The State experienced significant bushfires, with FRNSW and NSWRFSS responding to many incidents.

Record breaking temperatures saw the first catastrophic conditions since 2013, but over a much larger area of the State. It was a testing time for the community and firefighters.

Fire Danger Ratings are determined by the predicted wind, temperature, humidity and rainfall. In Australia, there is a system of assessing these in conjunction with the state of the available fuels to determine a measure of “fire danger” or the difficulty of putting out any fires which may occur. Catastrophic is the worst possible rating.

There were large responses to fires that included Carwoola in Queanbeyan-Palerang LGA, Sir Ivan in the Warrumbungle LGA, Papinbarra Road in Port Macquarie-Hastings LGA, Kains Flat fire in Mid-Western LGA, Boggabri fire in Narrabri LGA, Red Hill Road at Limekilns near Bathurst and Fig Tree Hill Drive at Lennox Head.

Record breaking temperatures saw the first catastrophic conditions since 2013, but over a much larger area of the State

The RFS calculated that 56 houses were lost, plus two community buildings and 198 outbuildings. FRNSW had responded to 989 bush or grass incidents at the time of writing

FRNSW answered the call with both initial responses by local resources and strategically placed Strike Teams throughout NSW. Regional and Metropolitan Commands provided incident management support with Liaison Officers and FRNSW Commanders coordinating command and coordination.

The FRNSW Strategic Operations Centre (SOC), its Bushfire Incident Control Centre (BICC), and its Bushfire Officers delivered support and incident intelligence to the Commands. This was reinforced by Operational Logistics, Operational Staffing and other administration sections.

Summary — There was no direct loss of life this fire season. The RFS calculated that 56 houses were lost, plus two community buildings and 198 outbuildings. FRNSW had responded to 989 bush or grass incidents at the time of writing.

In summary, 2016/17 did not result in the type of campaign fire season seen in 1994, 2001/02 and 2013. It differed despite significantly high fuel loads across the State, large fires in Region West, North and South and the State’s hottest temperatures on record.

The main differences were:

- humidity remaining relatively high along the eastern seaboard – and the main urban bushland interface
- winds not reaching the ferocity experienced in those earlier campaigns.

Fire services must be mindful that weather trends are causing longer fire seasons. This means less opportunity to do the important hazard reduction work required to protect our communities.

While rain tumbles along the coastal fringe and fuel continues to grow across NSW, one thing is certain: bushfires will continue to impact on our growing communities. We must be prepared.

END

TAKING THEIR PLACE IN HISTORY



For the very first time in FRNSW's history, half of Class 6/2016, who graduated as Permanent Firefighters on 15 December 2016, are females.

The class is the result of Commissioner Greg Mullins's 'Pledge for Parity' and subsequent changes to FRNSW's recruitment process made in 2016.

Chief Superintendent Operational Recruitment & Staffing, Wayne Phillips, said changes to the process have made it equitable for all candidates, regardless of gender.

"We have provided a level playing field for intelligent, fit, healthy and community-minded men and women to join the permanent firefighter ranks," said Chief Supt Phillips. "But make no mistake, it is still one of the most competitive recruitment campaigns in NSW and those who make it through have proved they are the best people for the job."

In his final graduation before retiring in January 2017, Commissioner Mullins attended with his own family, including his grandson Eamon dressed in miniature turnout gear.

Commissioner Mullins said he had loved being a firefighter for almost 39 years and would do it all again if he had his time over. He spoke of the importance of creating a culture where everyone is respected, supported and listened to, and said he was very proud to see equal numbers of men and women graduate.

"This class will always have a place in the history of FRNSW as there are equal numbers of men and women. They are the new face of our emergency service."

Women have been on the frontline at FRNSW for more than 30 years but currently represent only a small number of the permanent firefighter ranks. Taking bold steps to change this is one of the many legacies Commissioner Mullins leaves.

The Recruit Merit Award, which is given to the highest performing recruit, was presented to Genevieve Holden, who also sang the National Anthem at the ceremony. **END**



Graduating Class 6/2016, taking their place in FRNSW history

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AROUND THE WORLD IN 60 DAYS

Winning a Winston Churchill Fellowship to research the recruitment of women in the Urban Fire Service was the culmination of four years of building networks and advocating for change.

Story by SO Bronnie Mackintosh

I became a member of WAFA (Women and Firefighting Australasia) in 2010, having first attended their inaugural forum in 2006. Joining such a group was a natural and obvious decision for me since I've always participated in teams and enjoy the group dynamics of engaging with people of shared interests. My participation in the WAFA events, particularly the learnings from keynote speakers, inspired me to become a board member and contribute.

As anyone who's been involved with not for profit organisations can attest, they are usually a labour of love that tests your patience with group decision-making and the frustrations of being insufficiently resourced. I didn't realise the skills I was developing by participation, but by 2015 I had been involved with conference planning, recruitment events, writing for publications, running board meetings, and speaking at emergency management conferences both here and overseas.

I first heard of the Churchill Fellowship when I was a recruit instructor and then I attended an information evening about the types of projects that are selected. The landscape for diversity in the fire service was changing rapidly and it was high on the agenda for all government departments. Unfortunately, one of the key drivers of the changing landscape was the independent investigations into adverse workplace behaviour which shone a damning but necessary spotlight on aspects of fire service culture that needed to go. Every recommendation made from these investigations suggested workforce diversity as an imperative to ensure workplace standards are raised and enforced. My exposure through WAFA to this shared landscape across urban, rural and land management fire agencies provided the impetus for my Churchill application. Right place, right time.

Being an avid traveller and maximiser of opportunities, I made the utmost of the privilege of this award. The Churchill Fellowship generously allows for travel anywhere in the world for up to eight weeks to research best practice in your area of interest. In preparing my Churchill application I started with some broad outcomes and then mapped my itinerary to them. I subsequently narrowed the outcomes to three categories of recruitment strategies. These were quotas (government or court mandated requirements), targeted recruitment (programs aimed at increasing the applicant pool by providing equitable support) and social change programs (development programs such as cadets, mentoring and girls fire camps).

I travelled through June and July to catch the European and North American summers. I visited Japan, Hong Kong, India, UK, France, Sweden, Canada and the USA in what was a very hectic itinerary. Armed with cameras, videos, recording devices and notebooks, I visited 40 cities in nine countries, went to 27 fire departments and conducted over 100 interviews and meetings. I missed the warning from other Churchill fellows about trying not to do too much.

I saw how effective quotas had been for increasing the numbers of women and ethnically diverse people in Tokyo, India (Mumbai, Tamil Nadu and Rajasthan fire services) and San Francisco fire departments. The Tokyo Fire Department used a quota for 20 years and women currently make up 6.4% of their operational work force.

India has just implemented a 33% quota for women in all government jobs in the past two years. Seeing the women in India recruited on this program was one of the trip highlights. In a country of such social disparity and gender-defined roles, these women and their male colleagues inspired me by their courage. A few who I met in Jaipur from the Rajasthan Fire Service were recruited from villages where 50% of women are child brides. As well as improving the social position for women, these initiatives were implemented so women were available to serve and protect other women in the community.

In San Francisco, where a consent decree (court-ordered quota) was in effect for 20 years, diversity was conspicuous. The various nationalities reflected the community and issues surrounding inclusion appeared to be centred on promotional systems rather than people differences.

Targeted recruitment means identifying the desired demographic and providing support programs to ensure a level playing field for non-traditional groups to compete for recruitment. This is the most common approach and has been widely adopted by all first world countries. One of the most robust targeted recruitment programs belongs to the Los Angeles Fire Dept. (LAFD). After a combination of litigation and social enquiry, the City Mayor ordered a review of the entire recruitment process and set performance targets for recruitment. Battalion Chief Alicia Welch was appointed and led a team of firefighters and officers to review every stage of their process and develop selection tools that ensured equality, fairness and high standards for all applicants.

LAFD developed specialist marketing campaigns, ran career expos and assistant programs throughout the city, supported cadet and camp programs and provided the necessary financial and human resources to guarantee success. LAFD receives 10,000 applications to sit their entrance exam and this year the successful applicants are a good reflection of the demographic breakdown of Los Angeles. I spent a few days in L.A with Chief Welch and attended their cadet academy and a career expo in South Central LA. Chief Welch also shared their entire strategy and demonstrated the importance of data analytics in identifying and removing the barriers for achieving gender and ethnic diversity.

Other countries I visited to research the effectiveness of targeted recruitment were England, France, Sweden and Canada. England provided a great insight into best practice and I was amazed at the extent of their strategies to not only recruit and promote for diversity, but also to assess the impact of all decisions and services on their diversity communities.

I spent time with London Fire Brigade and Staffordshire Fire & Rescue, both of whom have excellent statistics for diversity and have invested time and effort into workplace inclusion. Like most of the UK, these fire services have had freezes on recruitment due to austerity measures imposed by government reform. Many fire services had forced redundancies, others have re-negotiated contracts and most are having to expand their roles in the community (medical calls). Both these fire agencies had recorded data of the impacts on inclusion and had achieved diversity despite the restrictions of budget cuts.

To research the use of social change programs as a long-term recruitment strategy, I looked at cadet programs, school pathways and girls fire camps. Once again LAFD demonstrated best practice with their well-established cadet program. These volunteer programs allow young people to volunteer their time and learn basics of firefighting, community service, discipline and team activities. Their corps are attached to a fire department/station and paid firefighters are involved with mentoring the cadets.

At a recruitment expo in South Central LA, the LAFD cadets provided information to potential applicants and also helped with the running of activities such as the Candidate Physical Aptitude Test and equipment handling. Cadets have the opportunity to gain qualifications in first aid and sometimes basic fire science classes.

The girls fire camps provided excellent qualitative research for the use of these social change programs within a recruitment strategy. I visited camps in Upstate New York, New Hampshire, Washington State and Ontario, Canada. They were all similar in terms of program content and outcomes for both the participants and the volunteers. They are run in partnership with youth groups and fire departments and give young girls aged 14–19 exposure to the roles within fire and medical services. Some are day camps, others are live-in, and all are staffed by career and volunteer firefighters. In some cases, the volunteers are young men and women seeking employment in the fire service and needing to boost their portfolios of experience or demonstrate community service.

My findings and recommendations now form the basis of presentations I have delivered at industry conferences such as AFAC (Sept, 2016), Fire Department Instructors Conference (FDIC) in Indianapolis (April 2017) and will at a Global Fire Services Diversity Summit in Montreal (June 2017).

The recommendations are also guiding best practice for Australasian fire services in both recruitment strategies and inclusion policy and practice.

For a compilation of research and interview reports visit <https://www.churchilltrust.com.au/fellows/detail/4045/Bronnie+Mackintosh>. ■■■ END

Targeted recruitment means providing support programs to ensure a level playing field for non-traditional groups to compete for recruitment



FIREFIGHTERS SAY NO TO VIOLENCE AGAINST WOMEN

Firefighters pledge their support for White Ribbon Day, an initiative aimed at protecting women from violence.



In November and December 2016, firefighters across the State participated in community events designed to educate men and boys about the roles they can play in furthering women's safety.

Commissioner Greg Mullins joined the NSW Governor David Hurley, MPs, White Ribbon Ambassador Adam Goodes, emergency services commissioners and ADF officers in a march from Randwick to Coogee. Firefighters from 52 Campsie, 64 Lakemba, 47 Revesby and ME3 D Platoon formed one of 30 teams in the Canterbury Bankstown Tug-O-War Cup. In Region South, 472 Turvey Park SO Chad Kennis and crew joined other emergency and defence services to form a human white ribbon filmed by The Today Show.



We are proud to support such an important cause. Domestic violence is an issue affecting so many Australians, and we gained a valuable insight into exactly how this is affecting our communities

Firefighters from 460 The Entrance, the NSW Police Force and RFS met with representatives from White Ribbon Australia and more than 500 members of the public in Memorial Park. "It was truly heartwarming to experience such an overwhelming display of community spirit and motivation toward a common goal," said Deputy Captain James Henderson. "We are proud to support such an important cause. Domestic violence is an issue affecting so many Australians, and we gained a valuable insight into exactly how this is affecting our communities."

88 Stn Campbelltown and 84 Macquarie Fields firefighters joined NSW Police, Wests Tigers representatives, Youth off the Streets and community members in two convoys to encourage as many men as possible to get on board the White Ribbon Campaign and make the oath to end domestic violence. **END**

IFARES ON SHOW AT NSW ABORIGINAL RUGBY LEAGUE KNOCKOUT



Over the October long weekend, thousands of Aboriginal rugby league fans gathered at Leichhardt in Sydney's inner west for the 46th NSW Aboriginal Rugby League Knockout. The event returned to Sydney for the first time in a decade, with the knockout attracting more than 70 mens, boys and womens teams.

For FRNSW, the knockout is an exceptional opportunity to showcase the Indigenous Fire & Rescue Strategy (IFARES) and cement links between firefighters and the Aboriginal community.

A fire appliance was staffed over the weekend with firefighters and visiting senior officers, including Deputy Commissioners Jim Hamilton and Graeme Finney, handing out IFARES fact sheets, fire safety brochures and plastic fire helmets.

Last year's winners – the Redfern All Blacks – retained their title in a 40-12 win over the Newcastle All Blacks which means the knockout will return to Sydney in 2017. **END**

HOME FIRE SAFETY CHECKS AND THE NEW STATION RISK PROFILE

The home fire safety checks (HFSC) Program which started last year is a prevention and early intervention initiative which builds home fire safety resilience in disadvantaged and vulnerable communities.

During HFSC deployments firefighters visit households to ensure they have at least one working smoke alarm and provide home fire safety advice and information.

The HFSC is in the midst of a three-year rollout to all fire stations across the State. As part of this process, the existing Smoke Alarm Battery Replacement (SABRE) program will be gradually transitioned into the HFSC. All firefighters are encouraged to adopt the HFSC now to provide education, advice and intervention to 'at-risk' households. If your station would like to schedule HFSC training earlier than planned, please contact ceu@fire.nsw.gov.au.

The newly improved station risk profile (STRP) is a community profiling tool that has been developed to help better understand the types of people FRNSW serves. The STRP maps community segmentation data and incident data to identify houses at risk of accidental fires in the home. The STRP is the ideal planning tool to target households identified as 'at risk' through Home Fire Safety Checks. **END**

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New STRP a powerful tool

APPS HELP RAISE TRIPLE ZERO AWARENESS

Public awareness of how to call Triple Zero (000) in an emergency can be the difference between life and death.

Unfortunately, not all understand the legitimate uses of the Triple Zero service, or have enough information when calling the service. Two apps have been developed to help educate the community – the 'Triple Zero Kids' Challenge' and 'Emergency+'.

Triple Zero Kids' Challenge

The 'Triple Zero Kids' Challenge' is a game for primary school children using colourful, animated 3D characters and different safety scenarios for police, fire and ambulance. It provides children with practical advice about how to identify and seek help in emergencies, and the correct uses of Triple Zero.

The game is available in English, Hindi, Vietnamese, Chinese (Mandarin), Thai, Arabic and Sudanese. The challenge app is free for Android and Apple devices.

Emergency+

With approximately 66% of calls now made from smartphones, the 'Emergency+' app uses smartphone GPS functionality to tell callers exactly where they are. The app enables callers to provide emergency call-takers with their location information, as determined by their device. This means call-processing times are shorter and call-takers are then available to take the next incoming emergency call. The app includes the option of calling the national State Emergency Service number and Police Assistance Line numbers, along with information on other relevant national numbers, such as Crime Stoppers, Poisons Information Line, the National Relay Service and Health Direct Australia. 'Emergency+' is a free download available for Android, Apple and Windows smartphones.

Firefighters are encouraged to advise their community of these lifesaving resources. You can use your station noticeboard, or discuss with members of the public during a community engagement event or activity.

For more information on the Triple Zero Kids' Challenge and Emergency+ Apps visit <http://emergencyapp.triplezero.gov.au/>. **END**

IN AN EMERGENCY

Save the app that could save your life

triplezero.gov.au

TRIPLE ZERO
kids' challenge



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2017 OPEN DAY – YOUR WORK BRIEF

FRNWS's Open Day for 2017 has shown yet again just how much the event has become part of the community's calendar.

Almost all of FRNSW's 338 fire stations were either open or joined with neighbouring stations to welcome the public.

News media throughout the state swung right behind the day, promoting the opportunity take fire station tours, to get fire safety messages and to see equipment and trucks firefighters use when responding to fires and other emergencies.



Demonstrations of rescue equipment used to free trapped occupants of cars involved in crashes remained a firm crowd favourite.

With winter close, and the season in which most home fires occur, D Platoon crew spoke to visitors about home fire safety, including how to install and maintain smoke alarms and how to develop a home escape plan to ensure they can quickly and safely escape a fire.

Many stations used kitchen fire simulators to promote the central message of this winter's home fire safety campaign, "Keep Looking When Cooking".



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BRIGADES BIG CROWDS



Mr Baxter meets the Lego firefighter



LEGO HELPING FRNSW BUILD COMMUNITY FIRE SAFETY

The 2017 Open Day marked the second year of a two-year partnership between LEGO and FRNSW to assist in building fire safety knowledge for children.

As part of the partnership, LEGO designed a range of new promotional materials and tools, including a refreshed Brigade Kids website featuring LEGO City stop motion videos, interactive educational games and mini movies. LEGO also promoted the partnership via the TV and digital Multi Channel Network (MCN) and articles in kids' publications Mania and Just Kidding.

With LEGO as FRNSW's partner, now is a great time for brigades to contact their local schools and book in a FireEd program to teach kids about fire safety. The new resources are available on the Electronic Supply Catalogue. For further information on the partnership, contact the Community Engagement Unit on 9742 7400. **END**

Brigade Kids Champion Competition

A new Brigade Kids Champion Competition was launched in March to help FRNSW educate children about fire safety by harnessing their creativity.

The competition, which ran from 13 March to 23 April, encouraged children to submit a poster design to communicate one of three key fire safety messages consistent with FRNSW's FireEd program.

Senior representatives from Lego, NSW Department of Education and key celebrities joined the FRNSW Commissioner in judging the short-listed entries.

Prizes for winners and runners-up in three age categories (Kindergarten, Year 1 and Year 2) included an Xbox, Lego City packs and Scholastic vouchers for schools. The overall winner also saw their design printed and displayed at fire stations across NSW on Open Day.

For more information visit www.brigadekids.com or Toolkits → Operational → Community Safety → Brigade Kids.





KEEP LOOKING WHEN COOKING THE FOCUS

With around 45% of house fires originating in the kitchen, the catchphrase ‘Keep Looking When Cooking’ will again be the centrepiece of FRNSW’s 2017 winter home fire safety campaign.

The ‘Keep Looking When Cooking’ campaign is designed to educate the community about fire safety in the kitchen and what to do in the event of a fire.

The campaign includes a mini mag featuring recipes from five firefighters, which will be distributed in cafés, bars, community centres and at selected fire stations across NSW. The Community Engagement and Media Units will also be using the hashtag #KeepLookingWhenCooking to share the message on social media through a mix of paid and free posts.

In addition, major television networks have already given the campaign a major boost, with the Seven Network’s Better Homes & Gardens and the Nine Network’s Today Show strongly promoting our fire safety messages in May. Partnerships with high profile outlets such as Sydney’s Knafeh Jerusalem Street Food Bakery are also helping spread the word.

Fire stations can get involved by spreading the word to the local community at events, FireEd programs and via station noticeboards and social media profiles.

For more information, visit the intranet toolkit (Toolkits → Operational → Community Safety → Winter Fire Safety Campaign).

‘KEEP LOOKING WHEN COOKING’ WINS NATIONAL MARKETING AWARD

In October last year, FRNSW’s 2015 winter fire safety campaign took out the top gong at the Australian Marketing Institute (AMI) Awards.

Against some very strong competition, FRNSW won the national marketing excellence award in the public sector marketing category for its ‘Keep looking when cooking’ Winter Fire Safety Campaign. There were 215 entrants in the awards and four finalists in the public sector category.

To win, the campaign was required to demonstrate effective use of marketing elements, creativity in designing the campaign, delivery of the marketing strategy and communication programs, and return on marketing expenditure.

“It’s great to have all the hard work validated and recognised by our peers,” said Partnerships, Evaluation and Marketing Manager Chris Fish. “This award is a reflection of all the team work to make this campaign such a success, particularly given the very limited budget and the strong competition we were up against,” he said. **END**



Susan Broomhall and Chris Fish accept the award

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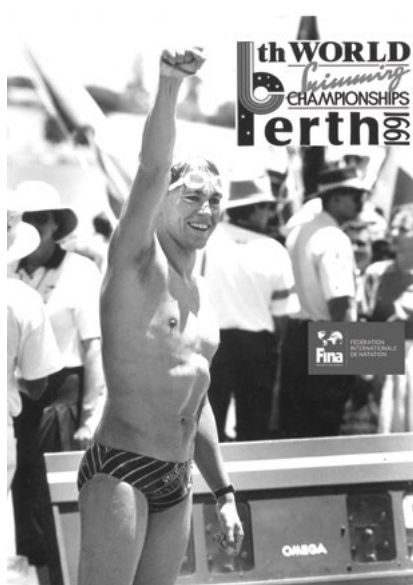
QUIET ACHIEVER MAKES A SPLASH

Senior Firefighter David O'Brien has been described as a "quiet achiever", which is something of an understatement considering his incredible list of honours in both his work and swimming careers.

David, who was awarded the Australian Sports Medal in 2000, has been swimming since he was seven years old. Throughout his swimming career he progressed from pool swimming into surf lifesaving, open water swimming and marathon swimming. He became the first Australian athlete to represent his country internationally in three separate disciplines: pool swimming, surf lifesaving and marathon swimming which took him all over the world. "I've been to all the continents on the planet," he said. "When I worked for Qantas they provided me with incredible assistance for my swimming career. Wherever I needed to be in the world, Qantas made it happen. I'm very grateful for that."

David officially retired from international competition in 1996 but represented FRNSW in the 2011 World Police and Fire Games in New York where he won nine medals in pool and open water events. Although David has retired from competitive swimming, he swims regularly to keep fit. "I am still a member of Cronulla Surf Life Saving Club (SLSC)," he said. "I visit the pool once or twice a week while my daughters are doing their squad sessions."

David is currently a Fire Research Officer with FRNSW's Fire and Research Unit (FIRU), and has also been a Helicopter Rescue Crewman and an Offshore Marine Rescue Crewman with 20 years of dedicated community service. "I used my swimming skills to help rescue people," David said. "Open water is a natural environment for me, so I was the one winched down into the water to conduct a rescue. The doctors and paramedics in the helicopter took it from there."



He also spent some time in the USA training and flying on invitation with the US Coast Guard and worked for four months in Japan as a water retrieval crewman with the Japan Self Defence Force.

It was actually the rescue work that led him to the emergency services and in particular, FRNSW. "I do my best to help people as much as I can, and FRNSW was a great fit," he said.

David was recently selected as an Honour Swimmer in the International Marathon Swimming Hall of Fame and travelled to Windsor, England for the Induction Ceremony in April 2017. The chairman of the International Marathon Swimming Hall of Fame describes David as "... a much-heralded elite Australian marathon swimmer with a remarkable career at the top level of world racing. David was for years Australia's top and fastest marathon swimmer." He was recently asked to sit on the Board of Australian Swimming in an advisory role.

David is philosophical about his career so far. "It's not about what you've done or achieved, it's about relationships. Relationships with family, friends and work – that's the most important thing to me."

"In 1996 I represented Cronulla SLSC in the Australian Surf Lifesaving Championships in Queensland. I managed to win gold in the Open Men's surf teams' event in dangerous and huge seas. Tragically, later that day, a young boat rower lost his life in the worsening surf conditions. This made me realise several things: Always respect and recognise your own capabilities. Never turn your back on Mother Nature. Know your abilities and use them to help others less fortunate."

Being a Senior Firefighter with FRNSW provides the perfect opportunity for David O'Brien to do just that. **END**



David O'Brien, and above, after one of his multiple winning Rottneest Island swims



Deaf Liaison Officers and representatives of the emergency services are presented with the Community category award

FRNSW RECOGNISED AT RESILIENT AUSTRALIA AWARDS

The Resilient Australia Awards are a national program to recognise and promote initiatives which strengthen community disaster resilience.

The awards, which are co-sponsored by the Commonwealth Attorney-General's Department and the state and territory governments, are open to all sections of the community, including individuals, businesses, governments, schools & non-government organisations.

In the NSW sections of the Awards, the 'Get Ready: A Model for Deaf Community Leadership' won in the Community category. This highly successful emergency preparedness program is a partnership between the Deaf Society, Fire and Rescue NSW, NSW State Emergency Services, NSW Rural Fire Service, Red Cross and the University of Sydney. Get Ready helps deaf, deaf/blind and hard of hearing people to increase their readiness and ability to bounce back after disasters. It shares responsibility for preparing for, responding to and recovering from natural disasters.

Get Ready has trained nine Deaf Liaison Officers (DLOs) who have delivered 10 workshops to 275 people, providing a bridge between emergency services and the deaf community. Two new DLOs are about to deliver a further five workshops.

Deaf awareness training is delivered to emergency services staff so they are more prepared to communicate with deaf people. So far 295 emergency services personnel have been to eight Deaf Awareness sessions.

In conjunction with the Deaf Society, FRNSW has delivered 6 workshops to deaf schools.

The 'Measuring Community Engagement' project, which developed the first common framework for evaluating community engagement activities by emergency services across NSW, won a Highly Commended in the Government category. This was a joint project by FRNSW, NSWSES and NSWRF. **END**

FRNSW has worked extensively with the Deaf Society of NSW (DSNSW) including partnering in the Smoke Alarm Subsidy Scheme (SASS) for people who are deaf and hard of hearing. Under the SABRE program, in the last six years FRNSW assisted in installing almost 2,050 specialised alarms in the homes of NSW residents who are deaf or hard of hearing.

The \$2 million grant that FRNSW and DSNSW obtained from the Department of Ageing, Disability and Home Care in 2011 to fund the six-year SASS program, runs out in June 2017. Firefighters are therefore encouraged to urge the deaf and hard of hearing community to apply for a subsidised smoke alarm (only \$20) with flashing light and vibrating pad through the Deaf Society before these are no longer subsidised and will increase to \$500. For more information see the intranet toolkit (Toolkits → Operational → Community Safety → Smoke alarms for deaf and hard of hearing).

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GOLFERS RAISE FUNDS FOR THE BURNS UNIT

On 2 December, Supt Phil Lindsay, Karen Richardson, Station Officer Tony Colbran and his crew from 7 Horningsea Park attended The Children's Hospital at Westmead to hand over a cheque for \$10,000 to Dr John Harvey from the Burns Unit. The money was raised thanks to the fundraising efforts of the Stephen Richardson Memorial Golf Day. SO Richardson was tragically killed in the line of duty some years ago.

The 2016 golf day was the 10th and final fundraising event. Over the past decade, this event has raised and donated over \$103,000 which has enabled the Burns Unit to buy specialised equipment and has helped to fund staff. **END**



PAYROLL DEDUCTIONS DELIVER \$80,000 TO BURNS UNIT



Commissioner Mullins said FRNSW had a long history in supporting the Burn's Unit. "As one of the founding donors to The Children's Hospital at Westmead's Burns Unit, FRNSW has raised more than \$3.3 million over the past 30-plus years. Much of this money has come from voluntary \$1-a-week payroll deductions from firefighters," he said.

Commissioner Mullins also said that the money raised by FRNSW is critical to the running of the Burns Unit.

"I am proud that firefighters' donations have funded the purchase of cutting-edge equipment which has enabled doctors and nurses to provide the best possible care to young patients," he said.

"Firefighters readily give up their time and their money for this cause, because they see the children at the scene of horrific fires, and want to ensure that they get the best possible care. The staff at the Burns Unit are truly miracle workers and make a huge difference in children's lives."

Approximately 1,500 children are treated at The Children's Hospital at Westmead's Burns Unit every year. The unit delivers acute burns care, reconstructive surgery, rehabilitation and burns prevention, education and advocacy initiatives. **END**

On 4 November last year, Commissioner Greg Mullins presented a cheque for \$80,000, raised by FRNSW firefighters and staff, to the Burns Unit at The Children's Hospital at Westmead.

The cheque was presented during the hospital's annual 'On Air for Sick Kids' Radiothon Appeal, which raises much-needed funds for the specialised healthcare facility. Senior FRNSW officers and Wentworthville C Platoon also attended the day.

Over the past three years, the hospital's Radiothon event has raised almost \$3 million. The fundraiser ensures the vital and life-changing work of doctors, nurses, surgeons, allied health professionals and researchers at the hospital can continue.

HOUSE FIRE SURVIVOR LINDA BUCHAN LAUNCHES AUTOBIOGRAPHY

House fire survivor and home fire safety advocate Linda Buchan launched her book, *Step by Step*, at a special event at Ravenswood School for Girls last December.



Chief Superintendent Chris Lewis and a handful of FRNSW staff, including 37 Gordon D Platoon, were privileged to attend the launch where friends, family and long-term supporters gathered to congratulate Linda on her inspiring story of recovery.

Linda has worked with FRNSW to promote home fire safety for many years and she is a remarkable example of strength and determination.

Linda has worked with FRNSW to promote home fire safety for many years and she is a remarkable example of strength and determination

Linda was just 18 years old in 1998 when she returned home from a night out in the middle of winter. She turned on the heater and went to sleep, waking up in hospital several weeks later to the news that a house fire had claimed the life of her beloved sister, Kim, and that she herself had sustained horrific injuries, including third degree burns to 30% of her body and a significant brain injury from smoke inhalation.

After 18 years recovering from her injuries and loss, Linda summoned the strength to write about her long and difficult journey of recovery. She describes what happens when a house fire shatters someone's future and how it is possible to forge ahead with courage and determination to live a fulfilling and purposeful life.



In her book, Linda says: "On a winter's day, Saturday June 27 1998, my young life ended and my new life began. A life that was to be so completely different to the one that I had envisaged, the one that I had expected ... In the days, weeks, months and years that followed I was often stricken with pain, sadness, despair, distress and heartbreak but I never for one moment thought about giving up. I didn't know where it came from but I always had hope, I always knew that I would not only survive but that my life would get better."

To read more of Linda's inspirational story, visit www.theauthorpeople.com/step-by-step. **END**

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BEGA FIREFIGHTERS CELEBRATE 100 YEARS OF SERVICE

On 28 September, firefighters and community members joined Bega State MP Andrew Constance and FRNSW A/Deputy Commissioner Mark Whybro to celebrate Bega's centenary of service. The celebrations also marked the arrival of a new \$95,000 hazardous materials Sprinter van.

A/DC Whybro praised the work of Bega firefighters past and present. Those who attended heard stories of how the local community fought for more than 15 years to set up a fire brigade in Bega, which was finally formed in 1901.

Over the years the Brigade has responded to all sorts of emergencies, including the most severe bushfire in Bega's history in January 1952 that saw more than 260 sq km devastated, and a series of arson attacks in June 1923 that destroyed several buildings. **END**



CESSNOCK FIRE STATION TURNS 100

NSW Parliamentary Secretary for the Hunter, Scot MacDonald MLC, and Commissioner Greg Mullins gathered with firefighters and the Cessnock community to celebrate Cessnock Fire Station's centenary of service to the local area on 6 October.

Mr MacDonald said it was an honour to acknowledge the courage and dedication of firefighters who had served there over the past century.

"For 100 years, Cessnock firefighters have responded to all manner of emergencies from the Cumberland Street fire station, from protecting the community from bushfires and floods, to responding to major building fires," he said.

A fire brigade was first formed in Cessnock in 1909. At the centenary celebrations, guests listened to stories of past emergencies, including a fire in December 1934 at Baker's Furniture store where firefighters bravely saved a woman and child from an adjoining building. **END**

1 AMARINA BECOMES NEW FIRE HQ



FIRE NSW's new headquarters at 1 Amarina Avenue, Greenacre is now open for business. The move to the new purpose-built two storey office was completed over two weekends in February thanks to the hard work and dedication of the 1 Amarina Project Team. Around 230 staff, including the Commissioner and Executive Leadership Team, now call 1 Amarina home and are embracing the transition to activity based working.

Acting Commissioner Jim Hamilton thanked leaders, managers and all staff for taking on the change with such positivity and dedication. "There has been such a great vibe in our new headquarters. I've been particularly impressed to see employees at all levels of the organisation moving around to work in the various work spaces, whether it be a quiet area, collaborative zone or even the coffee shop, No. 9 Station. I encourage all staff to visit the new headquarters and see our new way of working or join us for a coffee in the café."

All phone numbers for staff at 1 Amarina remain the same. The street address is 1 Amarina Avenue, Greenacre, NSW 2190 and postal address is Locked Mail Bag 12, Greenacre, NSW 2190. **END**

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NEW STATIONS AND ZONE OFFICES OPENED

Ropes Crossing

Minister for Emergency Services, David Elliott MP, and Commissioner Greg Mullins officially opened the new \$3.4 million Ropes Crossing Fire Station on 11 November.

The new station replaces the old Dunheved Fire Station and will improve response coverage in the area. The station is staffed with a mixture of permanent and retained firefighters. It has a double fire engine bay, improved and larger staff accommodation areas and training facilities, separate male/female amenities, and improved storage.

Lambton

Parliamentary Secretary for the Hunter and Central Coast, Scot MacDonald MLC, and Commissioner Greg Mullins unveiled the new \$4.6 million Lambton Fire Station and Newcastle zone and area headquarters on 3 November.

The new building provides a bigger and better base for fire brigades from Lambton, New Lambton and Hamilton. The new super station is in a more suitable location that is improving overall response times.

As part of the ceremony, awards were presented to the men and women who risked their lives to save others during the storm and flood emergency in the Maitland area in April 2015. **END**



Ropes Crossing officially opened



A BEARE FAMILY AFFAIR – FOUR GENERATIONS OF FIREFIGHTING



Chief Officer Beare

The following is an extract from *Leading from the front* by SO David Tai. Copies are available exclusively in store or online at the Museum of Fire for \$49.95 with all proceeds donated to the Burns Unit at Westmead Children's Hospital.

Approaching his retirement, Chief Officer [William Henry] Beare was asked in an interview with the Daily Telegraph, what advice would he give young firemen. He replied: "Study as you go along; pay attention to discipline; take pride in your work and don't look for trouble."

Chief Officer William Beare retired on 31 December 1947, having provided over 47 years of dedicated service to the NSW Fire Brigades. Mr Beare said that on his retirement, he intended to devote most of his time to playing bowls.

However, less than eight years later he was brought back into the fold, when in 1955 the Board invited him to fill the role of Special Recruiting Officer. With the introduction of the 40-hour week, several hundred extra firemen were required. Thus at the age of 70 years, Mr Beare's dedication to the NSW Fire Brigades was clearly evident as he used his contacts with prominent local citizens/officials, and participated in public functions, radio talks and newspaper interviews, to spread the word about the fire service. But not content with that, Mr Beare also travelled to Grafton, Lismore, Coffs Harbour, Tamworth, Armidale, Glen Innes, Inverell, Moree, Narrabri and other country towns in an effort to attract the necessary recruits.

Mr William Henry Beare passed away on 23 January 1965, at 80 years of age. Mr Beare was cremated at Northern Suburbs Crematorium.

From his Bateman's Bay residence, Mr David Beare, the eldest grandson of William Henry Beare, recalled treasured memories of his grandfather.

"My memory of grandfather has wilted over time, but I still remember him as a softly spoken, gentle man," he said.

"A fond memory, that I cherish ... is my grandfather sitting out on the back veranda – with his westerns, smoking cigars, and drinking a glass of scotch.

"He loved reading paperback westerns. He would pick out the best ones, and give them to me – it really started me reading at a very early age.

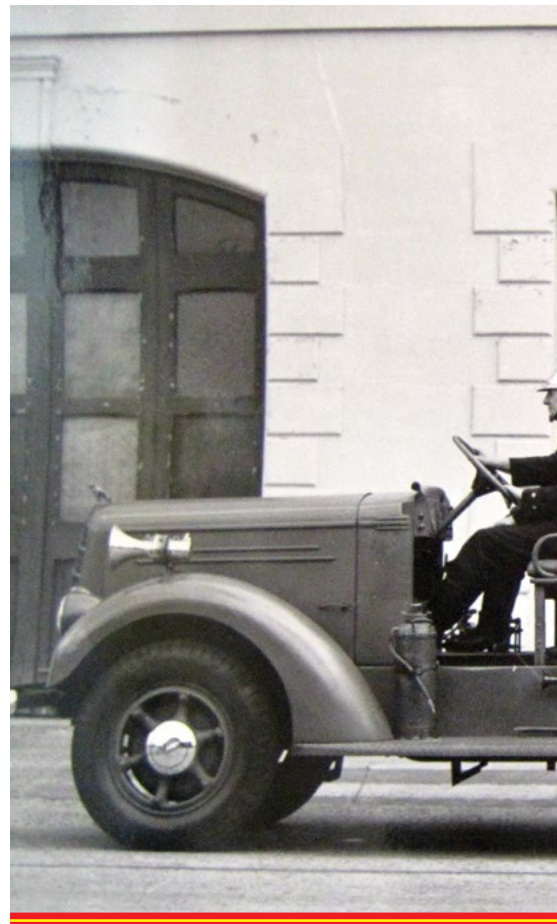
"My grandfather used to save up all the old newspapers, and when I visited, we would wander down to the butcher's and exchange them, for slices of devon. We'd eat most of it on the way home.

"When he moved up to Ettalong, he had this old Austin A30, a really small car for a pretty big man."

Mr Beare's dedication to the NSW Fire Brigades was clearly evident as he used his contacts to spread the word about the fire service

For the uninitiated, the Austin A30 is a compact economy car – it was Austin's answer to the Morris Minor. It was produced in Australia from 1952 to 1954. The A30 was capable of attaining a top speed of 70 mph (110 km/h) but as David Beare commented:

"He would stick it in 2nd gear, and that's where it would stay for the whole trip. But, he would let me steer... I suppose you could say, he taught me to drive.

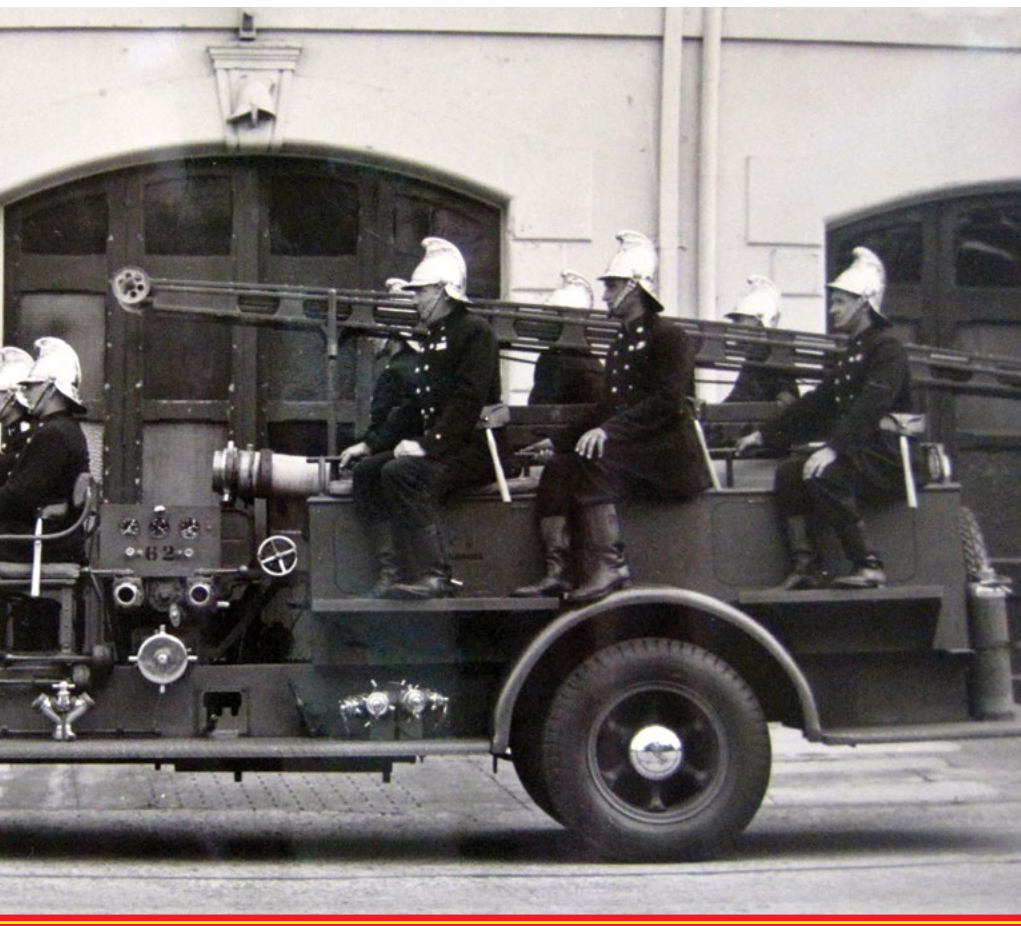


"He really didn't talk much about his time in the Brigade, but one story he loved telling, was when the Japanese attacked Sydney Harbour. My grandfather was Deputy Chief Officer, and he had taken my Dad, and the rest of the family to the movies. He had attended the theatre in uniform, as he was on call. When news filtered through of what had occurred, grandma and my two aunts grabbed their handbags and locked themselves in the toilet.

"Through her research, my wife, Christine, found out that my grandfather was a senior organiser in the NSW Fire Brigades Art Union."

The money that was raised by the NSW Fire Brigades Art Union is detailed in Chief Officer Frank Jackson's profile (1922-1928).

In total, the Beare family had provided 123 years of dedicated service to Fire & Rescue NSW



Then in 1985, Chief Officer Beare's grandson Mr Mark Beare, joined the NSW Fire Brigades as a firefighter. Mr Mark Beare served for 22 and a half years, working at Campsie, Miranda, Cronulla and City of Sydney Fire Stations. In total, the Beare family had provided 123 years of dedicated service to Fire & Rescue NSW.

However, just as this writer was lowering the final curtain on the marvellous contribution made by the Beare family... another amazing discovery occurred. While in attendance at the Recruit Graduation on 30 May 2013, a young man came up to me, and introduced himself as 'Peter Beare'. He is the great-grandson of Chief Officer William Henry Beare, and grandson of William Robert (Bill) Beare. Most importantly, Mr Peter Beare had been accepted into Fire & Rescue NSW. He commenced at the Training College on 4 June 2013, and graduated on 5 September 2013. Thus, the Beare family name will continue on proudly for many years to come.

■ END

Extract from letter to SO David Tai from radio broadcaster Alan Jones AO, 9 November 2016.

... this is far more than a book, David – it is a magnificent piece of history.

I was interested to look back on the tales of each Commissioner and, in particular, the wonderful array of photographs and clippings you've compiled – where you've found them, I'll never know!

But David, this is an absolute credit to you and everyone involved.

We've seen, just this past weekend, how important the Fire & Rescue Services are, so I'm pleased you've been able to encapsulate its history on such an elegant and enduring way. Congratulations to you.



The Beare family has a proud longstanding firefighting tradition. While Mr William Henry Beare reached the pinnacle rank of Chief Officer, his father Mr John Clement Beare, was a Board representative from 1890 to 1902, and he also served as an Alderman in the City of Sydney's Fitzroy Ward.

Chief Officer Beare's son, Mr William Robert Beare, who was better known as Bill Beare, commenced working for the Board in 1940 as a records clerk. He worked his way up to become the Secretary of the Board in 1974, and remained in this position until his retirement in 1982. Mr Beare was awarded the Queen's Silver Jubilee Medal in 1977 and the Medal of the Order of Australia on 26 January 1983, 'in recognition of service to public service.'



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From left: Captain Brian Clarke, Chief Supt Greg Wild, Commissioner Paul Baxter, Deputy Commissioner Jim Hamilton, SO Ian Grimwood and Chief Supt Dave Felton

AWARDS AND HONOURS

Four firefighters were recognised in the 2017 Australia Day honours. Australian Fire Service Medals (AFSM) were awarded to Chief Superintendent David Felton, Captain Brian Clarke and Station Officer Ian Grimwood. The Emergency Services Medal (ESM) was awarded to SF Shannon Crofton.

Chief Supt Felton was recognised for 30 years of service and leadership within FRNSW, particularly in the demanding areas of far western NSW. More recently he served as Metropolitan North Area Commander, which incorporates the Central Coast, Newcastle, Lower Hunter and Port Stephens areas; then the Commissioner’s Chief of Staff. Captain Brian Clarke was recognised for 38 years of dedicated service to the people of Forbes and to the wider regional communities of NSW. He is a highly regarded leader in the emergency management community. SO Grimwood has given 23 years of outstanding service – 20 in Northern Rivers communities – and has dedicated considerable personal time to ensure that the military history of serving firefighters is recognised and recorded.

The Emergency Services Medal was awarded to SF Shannon Crofton, based at 20 Hurstville, for his contributions since 1989 to both FRNSW, and also to NSWSES where he is the Sydney Southern Region Unit Flood Rescue Officer. His work in swiftwater rescue has been awarded internationally and nationally.

In the Queen’s Birthday Honours, AFSMs were awarded to four firefighters: Chief Superintendent Kenneth Murphy, Chief Supt Training; Inspector Kernin Lambert, Rel Duty Commander MW2; 295 Forster Captain Paul Langley; and 406 Nyngan Captain Robert Avar. A presentation ceremony will be held later this year. Retained Firefighter Michael Abigail of 483 Queanbeyan was also awarded the Ambulance Service Medal. **END**

Outstanding Community Service award for QF Matt Pridham

On Australia Day, QF Matt Pridham of 36 Crows Nest was presented with a Northern Beaches Council Outstanding Community Service award for tireless fundraising for motor neurone disease.

In just two years, QF Pridham’s Firefighters Climb for Motor Neurone Disease has become a Sydney headline community support event, raising almost \$700,000 for the Macquarie University MND Research Centre.

Last October more than 440 firefighters, with FRNSW officers joined by colleagues from Victoria, the ACT, NSW Rural Fire Service, Aviation Rescue, and overseas, took on the 1504 stairs of the Sydney Tower Eye in full PPC to beat the 2016 goal of \$500,000.

Matt said the award for “tireless fundraising for Motor Neurone Disease” was not really for him, but for all the firefighters who have supported the initiative. **END**

Firefighter Troy Hughes receives bravery award


In October last year, the NSW Governor, David Hurley, presented bravery awards on behalf of the Royal Humane Society of NSW at an investiture at Government House. A total of 26 medals were presented in recognition of those who put their own lives at risk to save someone in immediate danger. Retained Firefighter Troy Hughes was presented with a bronze medal for his brave actions while off-duty in rescuing a trapped and seriously injured female motorist following a MVA and fire on the Hume Highway near Holbrook in July 2015. **END**




Adam Regal, who inspired the climb, and Matt Pridham

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THE PUBLIC SAYS THANKS

 **Glenn Andrews**
2 September 2016

My family would like to thank FRNSW for their support they showed during the passing of my brother Jon. FRNSW showed us that they are part of our family. I will remember this for the rest of my days, the amount of effort and support they gave us and my brother received a grand send-off because of this. Thank you.

 **Karen Rayner**
23 November 2016


Bit of an oopsie today with a big old tree in our street and wild winds. Within minutes of calling, the fires were there and cleared the road in no time at all.

 **Milena Konovalov**
5 September 2016


Thanks to the team at Lane Cove who invited two little two-year-olds to get on board the truck in Willoughby today when you were out on a training drill. You really made their morning!

 **Coral Peri**
15 December 2016

This morning the Penrith fire brigade rescued my 16-year-old blind dog from over the cliff near the weir reserve. They were fantastic, worked really hard to bring him up. Thank you so much, I really appreciated it.

 **Tressia Horton**
21 November 2016

Jorjah, my gorgeous 8-yr-old granddaughter who has a genetic disorder, was so excited to see a fire truck when we went to Penrith today. It was parked at the shops and the lovely fire lady got out and let Jorj get in the truck and even gave her a wooden spoon, she didn't have any colouring in books left lol. Thank you NSW Fire for having some of the bravest kindest people working for us all, my sweet Jorj was so happy.


 **Geraldine Lewis**
21 January 2017

A huge shout out to the guys at Marrickville Fire Station who came last night when our verandah blew off in heavy winds, dragging a power pole with it and blocking us in our house. You were great! Thanks for explaining it all to our real estate agent on the phone too. Above and beyond!

Dear Fire Brigade Personnel,

Thank you so much for all your efforts in helping Chris in getting out of the upstairs window on Father's Day [at Huxley Drive, Winston Hills]. We really appreciate it. He has a T4 fracture but will make a full recovery!

Thank you, Priscilla, Pete & Chris

 **Crystal Hickey**
1 March 2017

Massive thank you to the Blacktown service who saved my mum from her crushed car last night and kept the situation as calm as possible. A young blonde shorter man in particular was amazing in keeping myself, my mum and other bystanders calm, explaining the situation to me as I rushed over and keeping nousey idiots from live filming the situation. Cannot thank everyone who came to her rescue enough.

TAMWORTH CAPTAIN RETIRES AFTER SIX DECADES

In February more than 150 people, including Acting Commissioner Jim Hamilton, gathered at Wests Leagues Club in Tamworth to formally farewell the State's longest serving firefighter, Captain Gerry Cannon.

Capt Cannon had been a member of 452 Tamworth Brigade for his whole career, joining NSW Fire Brigades as an 18-year-old some 60 years ago, in January 1957.

Gerry told the gathering said it was the camaraderie and mateship that he would miss the most: "It's the fellowship with the rest of my crew."

Tamworth Regional Councillors delivered a tribute on behalf of Deputy Prime Minister and New England MP Barnaby Joyce. There were also congratulations from former NSW Premier Mike Baird, delivered by Tamworth MP Kevin Anderson, thanking Gerry for his service and achievements.

When the West Tamworth and Tamworth Brigades met for a combined drill session to discuss plans for the upcoming Country Music Festival on 17 January, Gerry was presented with an unprecedented 5th clasp to his FRNSW Long Service and Good Conduct Medal.

FRNSW Supt Tom Cooper, Zone Commander for the New England and North West, said a few firefighters have served 50 years but "Gerry is something special".

"We may not see an achievement like this again in FRNSW. He has attended many tragedies and serious incidents, including the Tangaratta Creek bus accident and the Fielders flour mill explosion to name but two," Supt Cooper said.

"Thank you, Gerry, and your family which has supported you, for your long years of dedication. Enjoy a long, healthy and rewarding retirement." **END**

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FAREWELL AND THANKS TO THOSE RETIRING

Name	Fire station	Date retired
Insp A McPherson	MS3 Zone Office	7-Jul-16
SO P Jentsch	Kincumber	1-Jul-16
SO R Mitchell	Kincumber	5-Jul-16
SF P Ashworth	Mona Vale	1-Jul-16
SO R Shires	City of Sydney	8-Jul-16
SF R Whiddon	Sydney Training Centre	1-Jul-16
SO J Smith	Penrith	4-Jul-16
SF R Isaac	Tingira Heights	4-Jul-16
RetF W Devonshire	Morpeth	6-Jul-16
SO P Llowarch	Newcastle Comms	8-Jul-16
SO R Hunter	Bulli	13-Jul-16
SO P Marsh	Regentville	13-Jul-16
SO P Nadin	Kincumber	8-Jul-16
SF C Gleeson		13-Jul-16
SF T Schmidt	Broken Hill	8-Jul-16
QF D Nash	City of Sydney	11-Jul-16
RetF R Ranse	Katoomba	3-Jul-16
SO S Nadin	Kincumber	8-Jul-16
Supt D Gray	RN1 Zone Office	22-Jul-16
SO G Susans	Silverwater	21-Jul-16
SO B Hanlon	Katoomba	22-Jul-16
SO W Staples AFSM	Regional & Retained Training	22-Jul-16
SO R Thompson	Gladesville	5-Jul-16
SF A Farrell	Manly	22-Jul-16
SF R Mitchell	Holmesville	21-Jul-16
SF C Hudson	Avalon	22-Jul-16
RetF R Whaley	Merriwa	22-Jul-16
QF J Green	Berowra	5-Aug-16
SF M Forbes	Charlestown	5-Aug-16
SO J Harris	Sydney Comms	2-Aug-16
Capt E Jeffree	Portland	31-Jul-16
RetF H Idziak	Thirroul	31-Jul-16
RetF R Moore	Denman	8-Dec-16
RetF S Gordon	Goulburn	8-Jul-16
RetF P Lymbery	Ulladulla	31-Jul-16

Name	Fire station	Date retired
SO S Pitts	Neutral Bay	19-Aug-16
RetF S Gordon	Goulburn	8-Jul-16
RetF J Buckley	Cowra	29-Jul-16
SO G Price	Miranda	22-Sep-16
SF M Cook	Berkeley Vale	30-Sep-16
SF G Weekley	Miranda	23-Sep-16
SF G Johnson	Belmont	30-Sep-16
SF C Hackfath	Arncliffe	10-Oct-16
RetF S Avasalu	Ulladulla	1-Sep-16
Supt E Mednis	Operational Staffing	23-Sep-16
Insp M Hofstadler	MW2 Zone Office	27-Oct-16
SO D Chard	Mona Vale	16-Sep-16
SO B Dorrington	Bankstown	16-Sep-16
SO M Wilmott	Warrawong	31-Oct-16
SF V Loft	Manly	16-Sep-16
RetF N Griffiths	Saratoga	23-Sep-16
RetF S Gibson	Broken Hill	7-Oct-16
SF G Chapple	Sydney Comms	3-Nov-16
RetF A Watts	Scone	4-Oct-16
RetF W McBey	Leura	14-Oct-16
RetF M Beetson	Nyngan	17-Oct-16
Chief Supt N Harris AFSM	Region West	26-Nov-16
SO S Docker	Springwood	18-Nov-16
DCapt P Dennis	Trangie	25-Oct-16
Capt J Hand	Finley	31-Oct-16
RetF A Christophersen	Wangi Wangi	18-Nov-16
RetF R Smart	Kempsey	26-Oct-16
RetF J Losurdo	Bellingen	8-Nov-16
RetF B Hall	Tumbarumba	18-Nov-16
DCapt R Carey	Muswellbrook	2-Dec-16
SF Colin Gleeson	Holmesville	13-Jul-16
SF Mervyn Gaut	Katoomba	19-Aug-16
SO Joseph Davy	Chester Hill	11-Nov-16
SF Gary Rolfe	Tingira Heights	24-Nov-16

SEND IN YOUR STORIES AND PHOTOS

Fire & Rescue News is the internal news magazine of Fire & Rescue NSW (FRNSW). FRNSW Media & Communications Unit (MCU) wants to publicise the incidents your crew attended, and the achievements of your unit.

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 E: internalcomms@fire.nsw.gov.au

FIRE & RESCUE NEWS

Send any high-resolution photos (larger than 1,000KB) to: frnews@fire.nsw.gov.au

VALE: WITH GRATITUDE FOR SERVICE TO THE PEOPLE OF NSW

Name	Fire station	Date deceased
Retired Transport Officer, Ernest Lenehan	Fleet	2-Jul-16
DCapt Les Newman	Thredbo	5-Jul-16
Retired SO Ray Sanders	Hurstville, Sutherland and Engadine	4-Jul-16
Retired SO Les Whiley	Hurstville, Kogarah and City of Sydney	12-Jul-16
Retired SO Ronald Cawdell-Smith		
Retired RFF John Langford	Penrith and Woolgoolga	20-Jul-16
Retired Captain Bruce Chick	Wangi Wangi	21-Jul-16
Retired RFF Ronald Mewett		
Retired SF George Reid	Manly, Mosman, Mona Vale	26-Jul-16
Retired SO Arthur Johnson	Headquarters, Beecroft, Crows Nest and Berowra	7-Jun-16
Retired DCapt Peter Nankervis	Blackheath	12-Aug-16
Retired SO John Death	Forestville	15-Aug-16
Retired Supt Norm Windeatt		23-Aug-16
Retired Insp Jon Andrews	MW2 Zone Office	26-Aug-16
Retired Capt Bob McAndrew	Narrandera	1-Sep-16
Retired SO Arthur Wallace		5-Sep-16
Retired Capt Stanley Cork	Dorrigo	26-Sep-16
Retired SO Ronald Clarkson		September
Retired Engine Keeper Eric Pearce		2-Oct-16
Retired Senior Admin Officer Geoff Gosch		3-Oct-16
Retired DCapt Peter Hugh Dewar	Boorowa	
Retired SF Henry Ward	Burwood and Liverpool	8-Oct-16
Retired SO Robert Ashforth	Marrickville, Parramatta and the Rescue Section	12-Oct-16
Retired Capt Normal Clulow	Tarro	7-Oct-16
RFF Bede Nichols	Cooma	15-Oct-16
Retired Capt George Grieve	Murrurundi	October
Retired SO Paul Faassen	State Training College	November
Retired SO Michael Guider	Headquarters and Bondi	9-Nov-16
Retired DCapt Desmond Campbell		November
Retired RFF Robin Moore	Denman	18-Nov-16
Retired SF Hans Battaerd	Wollongong and Bulli	23-Nov-16
SFF Chris Fuller	Regentville	December
Retired SO Ronald McLennan	Charlestown	December
Retired Ms Pat Feeney	Human Resources	5-Dec-16
Retired RFF Robert Whitehead	Ballina	December
Retired RFF Ronald Cotter	Grenfell	12-Dec-16
Retired SO John McCloghry	Willoughby & Eastwood	17-Dec-16
Retired SO Peter Smith	Lakemba	14-Dec-16
Retired RFF Andrew Douglas	Teralba	15-Dec-16
Retired SF Gary Overall	Sydney Comms	14-Dec-16
Retired RFF Rodney Taylor	Manilla	18-Dec-16
Retired FF Mark Williams		26-Dec-16
RFF John Duck	Richmond	28-Dec-16
FF Pat Conway		26-Dec-16
Retired SO Ray Fox	Kellyville	24-Dec-16
Retired District Officer Desmond Fox		24-Dec-16
Retired SF Bill Edgecombe		30-Dec-16

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 **Fire & Rescue NSW**



Keep
LOOKING
when
COOKING

DISTRACTIONS can quickly **LEAD** to a **KITCHEN FIRE**



Help us, help you
be home fire safe



www.fire.nsw.gov.au