FIRE & RESCUE NEWS

SUMMER 2015

The Minister WRITES

Recently the NSW Government adopted new branding displaying the key message of 'Making it Happen'.

This change highlights a sharper focus by the State Government on key priorities. These include delivering long-awaited infrastructure in places that need it most; delivering services in smarter, more flexible and user-friendly ways; and protecting the public to ensure safer communities.

As an emergency service, FRNSW is helping to deliver on the Government's commitment in these vital areas.

The NSW Government continues to invest strongly in infrastructure and capital projects for the emergency services sector. Within FRNSW, this has enabled the recent development and rollout of new firefighting helmets and a range of new equipment and vehicles, as well as an extensive station building and renovation program.

In August Commissioner Mullins and I officially opened the brand new $3.4 million Port Macquarie fire station as part of a co-located emergency services hub. The coming months will see a number of other new or renovated fire stations also opened including Windsor, Pyrmont and Yennora.

On 4 September, I announced that the construction contract for the Headquarters relocation build at Greenacre had been awarded to ADCO Constructions and work is now underway on this project.

Bureau of Meteorology forecasts confirm that a strong El Nino weather pattern is in place this year. However I remain very confident in the training, expertise and operational readiness of our State's emergency services to meet what is likely to a difficult bushfire season. This issue of Fire & Rescue News outlines heightened preparations for this year's bushfire operations, including the NSW Government-funded trial of two large aircraft for aerial firefighting and further support to the 7,000 strong army of Community Fire Unit volunteers helping to keep communities in high-risk areas well prepared.

I thank FRNSW for its professional performance and operational excellence in 2015, and I look forward to working with its management and staff during the year ahead.

David Elliott MP
Minister for Corrections, Emergency Services and Veterans Affairs

The Commissioner WRITES

As we move into 2016, the coming year will bring many challenges.

Climate change resulting in greater frequency and severity of weather events, demographic changes including an ageing population and major population shifts, rapidly evolving technology, a heightened security environment and changes in community and Government expectations are all important issues that will continue to impact on how we operate and expectations of us.

We are strongly positioned to meet these challenges. This issue of Fire & Rescue News again highlights what's new in our organisation. These initiatives include a range of new vehicles and equipment being rolled out, from new mobile command centres to remotely piloted aircraft systems, a remote controlled firefighting device, water delivery systems and large air tankers for bushfire fighting, to name just a few.

Technology is also playing a crucial part, with mobile data terminals and the two new CFUs apps the latest in a long line of technological achievements that are transforming how we operate and making us more effective.

However, in a rapidly changing environment, today's pioneer can often be tomorrow's dinosaur. Innovation is crucial if we are to continue to be a leading world class emergency service. This Summer issue also describes how we are using innovation councils to empower staff to lead change and constantly improve the way that we work.

Earlier this year, we commissioned a research company to assess community satisfaction with our services. The survey results showed that we significantly outperformed the NSW Public Service overall on goals and values, and satisfaction was generally high across our services, with some small exceptions. I congratulate all staff on your contribution in achieving these pleasing results, while cautioning that we must never become complacent or rest on our laurels.

As we enter the new year, I am proud that we are an effective can-do organisation with dedicated and highly professional staff who have a big heart and a genuine desire to make a difference. Most of all however, I am proud of the continuing culture change that has seen us become a more inclusive, welcoming organisation to people from diverse backgrounds and one where the credo, from top to bottom, is "be nice". I wish all staff season's greetings as we embark on another year of proudly serving and protecting the community of NSW.

Greg Mullins AFSM
Commissioner

Cover (Andrew Parsons/Design Davey) | In a not so far away galaxy, new technology is going 'live' on the frontline – designed to protect firefighters and the community. In this edition of Fire & Rescue News, we recognise our ground-breaking new technology... and pay homage to that most epic of epic franchises, Star Wars. May the Force be with you in 2016.

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External widescreens, sunshades and stairs facilitate outdoor media conferences and operational briefings

The MCCs are fitted with advanced IT capability

NEW MCCS TRANSFORMING INCIDENT COMMAND

FRNSW's latest big red truck, the new Mobile Command Centre (MCC), is about to hit the streets.

Two identical MCCs are almost ready for operational life after an 18-month custom build by Varley on a Scania chassis. The build and IT fitout follows more than two years on the drawing board with input from Operations, Logistics Support, Operational Capability and IT and a review of command vehicles interstate and overseas.

"On the ground research in the Middle East and the UK enabled us to take the features and benefits best suited to the needs of FRNSW," said Assistant Director Capability Management, Chief Superintendent Paul Mcguiggan. "When you combine this with feedback from Incident Commanders and Senior Officers – effectively decades of operational knowledge – the result is a highly refined specification worthy of the significant time and financial investment."

Once operational, the MCCs will replace the existing Incident Control Vehicles (ICVs) used at major incidents (usually exceeding 3rd Alarm) and for disaster and community recovery. The MCCs can comfortably accommodate up to seven officers (compared to 3–4 in the ICVs) with a computer-controlled expanding floor plan. The vehicles will provide access to critical information anywhere in the State and support other agencies when required.

With the help of experienced European IT specialist Excelerate Technologies Solutions, each vehicle will have an advanced technical fitout to provide services including high speed internet and a 100-metre wi-fi bubble. The latter will not just benefit FRNSW operations, but could also be invaluable to communities cut off from technology following a catastrophic fire or storm event.

Technology includes access to the ADASHI command platform, all FRNSW radio talkgroups, live video feeds, CB radio, high speed satellite, 4G communications and a weather station. Outdoor widescreens, retractable sun shades and pop-out stairs facilitate open air operational briefings and media conferences.

The vehicle will require a heavy rigid licence to drive and will be operated by staff from Sydney FireComs.

Director Operational Capability, Assistant Commissioner Jim Hamilton said the MCCs will complement and enhance the wave of technology FRNSW is already rolling out to Operations, allowing for seamless Incident Command.

On the ground research in the Middle East and the UK enabled us to take the features and benefits best suited to the needs of FRNSW

"FRNSW is currently undertaking some of the most technologically advanced changes in the service's history. The MCCs are an impressive addition to our fleet and will assist us in meeting the high demands placed on the organisation and planning for the future of firefighting and emergency management in NSW."

END

SF Michael Harvey demonstrates the RPAS, phablet and controller

The DJI Inspire in flight

FRNSW TAKES TO THE SKIES

FRNSW is currently trialling remotely piloted aircraft systems (RPAS, commonly known as drones) for a range of applications.

RPAS are small lightweight easily-manoeuvred machines that can fly considerable distances remotely controlled by a pilot.

Superintendent Brian Smart, Manager Counter Terrorism and Aviation, who manages FRNSW's RPAS capability, described their potential uses.

"We anticipate using RPAS as a tool to give FRNSW incident controllers real-time data resulting in greater situational awareness during incidents," said Supt Smart. "This in turn will improve firefighter safety on the incident ground as imagery can be sourced without personnel having to enter dangerous locations."

However, using RPAS at incidents represents only a small part of their potential capability. RPAS can also record, compile and disseminate information during the prevention, preparation and recovery phase of operations for data collection and information gathering purposes. This includes pre-incident planning and rapid damage assessment following major incidents such as floods and bushfires.

FRNSW's RPAS in profile

The RPAS that FRNSW has purchased can operate up to 500 metres from the pilot, providing the unit is always within visual line of sight (VLOS), a Civil Aviation Safety Authority (CASA) requirement.

The units can also be flown by first person view, using streamed footage from the onboard high definition camera. In this mode, a spotter is required to keep the unit in VLOS to provide situational awareness to the pilot.

The onboard cameras are capable of 12.8 megapixels stills in single or burst modes. Quality of video captured ranges from low definition through to ultra high definition (4K).

The units average 18 minutes flight per battery, dependent upon wind, travel, speed and flying attitude. Each kit comes with five batteries and a FRNSW-built field kit that charges batteries in rotation allowing almost unlimited flying.

The kits also have two FRNSW phablets and two controllers. This provides system redundancy, but also allows a pilot to fly the unit while a second person operates the camera, concentrating on getting the best imagery.

Safety features built into the unit include 'return to home' (RTH) if contact is lost with the controller, auto RTH on low battery, auto land on critical battery, underside ultrasonics and optical camera for visual positioning without GPS and landing protection.

Rollout of RPAS within FRNSW

As a commercial operator, FRNSW must comply with strict CASA guidelines to establish and operate RPAS. FRNSW owns two RPAS units at present and is currently applying to CASA to legally operate RPAS.

Six pilots have been selected and began training in October to gain a licence which will allow them to operate RPAS for FRNSW. The pilots are drawn from Aviation, Operational Capability, Operational Communications, FIRU and Rescue/USAR areas.

Currently pilots are required to individually hold a Remote Pilot Certificate, while FRNSW will be required to hold an Unmanned Aerial Vehicle Controllers Certificate. Pilots will also hold an Aeronautical Radio Operator Certificate. This will allow them to monitor and communicate with airport towers and aircraft in the area of operations if required. **END**

SPECIFICATIONS

Model:
DJI Inspire 1

Dimensions:
438mm x 451mm x 301mm

Weight:
2.935kg including battery

Maximum speed:
22m/s (79km/h)

Operates safely in winds up to 10m/s (36km/h)

VIEW VIDEO AT
fire.nsw.gov.au/frnews
OR
SCAN CODE TO WATCH NOW

Rydalmere SO Vince Pellagra checking hydrant locations in the MDT

Fitting the MDT in an appliance

SCIENCE IN THE APPLIANCE

More than 180 FRNSW appliances across NSW are now fitted with state-of-the-art mobile data terminals (MDTs) to provide instant access to critical live and stored information.

New mobile data terminals are giving firefighters fingertip access to SOGs, live weather information, pre-incident plans, navigation and maps, including hydrant maps. They also eliminate the need for many radio messages when crews respond to, arrive at and are released from incidents with push-button messaging linked directly to the computer-aided dispatch system (CAD).

Five teams of technicians worked tirelessly during the last quarter of 2015 to complete more than 160 Metro and Regional installs. The devices were installed in pumpers in permanent and mixed stations, plus some high workload retained stations capturing a significant percentage of FRNSW's incident traffic.

Project Manager Mike Hinton said that hitting 160 appliances across the State was a huge – but ultimately successful – logistical challenge.

"Getting the installers out there and coordinating training from Tweed Heads to Albury, and Bondi to Broken Hill, was no mean feat. However, after commencing in September, the Metro installs were completed by October, with Regional soon after."

The full rollout followed a five-month pilot in MS3 championed by Zone Commander Supt Phil Lindsay. During the pilot continuous improvement was channelled through a 'super user group' consisting of Inspectors, Station Officers and Firefighters from all four Platoons in the zone. Mr Hinton said many changes were made as a result of this feedback.

"We improved the education materials for firefighters and made standby statuses more visible. There are also further enhancements in the pipeline, for example we will be making audible navigation available. Quality control and improvements continue and we encourage firefighters to contact us with ongoing feedback as they use the devices in real time."

Following pilot feedback, the devices were first installed offline to allow familiarisation at the user's own pace. Integration to the CAD, or 'go-live', commenced in mid-October with training then provided to all Platoons.

93 Narellan D Platoon Station Officer Greg Wright said the data on the device assists his crew to find hydrants which have been covered.

"The addition of safety bulletins and SOGs also allows for revision while en route to calls," said SO Wright. "As the address for the call is entered into the navigation page on the tablet, there is no more fumbling with the street directory or trying to manually enter the address into the GPS on the truck. Other benefits are the CAD log, and ability to check automatic fire alarm status without having to radio the Communication Centre."

When receiving their devices in late September, City of Sydney B Platoon Station Officers said anything that made their jobs easier was a positive. In particular, they were looking forward to easing the frustration of radio congestion, quickly locating drainage/run-off sites and receiving calls en route.

Director Operational Capability, Assistant Commissioner Jim Hamilton said the project was made possible thanks to collaboration between IT, Operational Capability, Fleet and operational commands.

"The MDTs are part of a holistic approach to modernising technology and equipment said Assistant Commissioner Hamilton. "The new MDTs integrate with ADASHI command system tools across the organisation and are part of the jigsaw of improved situational awareness for first responders."

"With 182 MDTs now online across the State – and other recent advances, such as the mobile command centres, Hytrans, TAF20 and RPAS – we enter 2016 as a contemporary, well-equipped and highly capable fire, rescue and hazmat service."

END

VIEW VIDEO AT
fire.nsw.gov.au/frnews
OR
SCAN CODE TO WATCH NOW

EMPOWERING STAFF TO DRIVE INNOVATION AND LEAD CHANGE

The Commissioner's Participative Council and new Innovation Councils are improving how staff work.

Members of the Metro South Employee Innovation Council

In today's world of constant change and disruption, FRNSW must rely on the collective expertise and shared knowledge of all its employees. As Commissioner Greg Mullins said, "We can all accomplish things together that we can't accomplish separately – all with the ultimate aim of better serving the community by protecting and saving life, property and the environment".
In older traditional leadership models (i.e. leader-follower), an organisation is successful if it has a strong leader who manages through command and control. Over recent years, a more effective approach to leadership and management has emerged: the leader-leader model. In its simplest form, the leader-leader model gives control back to employees, recognising the intelligence, experiences and shared knowledge of all staff, not just those at the top. This new style of leadership allows people to become more passionate, engaged and committed to their jobs as well as giving them opportunities to grow as leaders. People in formal leadership positions become more adaptive and facilitative in their approach.

The Commissioner's Participative Council (CPC) is the leader-leader model in action. CPC members have been empowered by the Commissioner to show initiative and harness innovation within their workplaces. Experience shows that most of the great improvements to how FRNSW works have come from frontline staff. Since its inception in October 2014, CPC members have been working with each other and employees across FRNSW to act on good ideas and bring them to fruition.

The Holmatro window punch

For instance **SO Kevin O'Reilly** suggested replacing the rescue window punches ('centre punches') with the **Holmatro window punch**. "The previous centre punches were dangerous and expensive, not designed for the task of controlled glass breakage and often failed to work correctly. The new Holmatro window punch is a fit-for-purpose, safer and more reliable tool." The new tool will be made available to all stations. This is one example of how staff innovation can ensure FRNSW employees have the tools and equipment needed to do their job more safely and effectively.

Another good example of innovation from CPC members is the development of a **new incident management check sheet** by **Bangalow Deputy Captain Mellissa Madden**. The check sheet is designed to prompt firefighters with information they need at an incident and help simplify communication with Duty Commanders. When DCapt Madden and Superintendent Greg Wild discussed this idea at the 2015 AFAC Conference, it quickly progressed to the Capability Manager for Incident Management, Superintendent Greg Rankin, who has since brought the idea to reality.

CPC members have also helped drive change by progressing the ideas

of their colleagues. For instance **SO Glen Whitehead** noticed when an ambulance departs the scene of an incident with a casualty, friends and family at the scene often look to FRNSW for information and support. Given the distress faced by these community members, something written seemed the best way to serve their needs. However, there was no existing written information that served this purpose. SO Whitehead therefore suggested that FRNSW produce a **community support card** for firefighters to distribute at Community First Response or Ambulance Assist incidents, with a space on the back to provide relevant local community information. This support card can be found in the recovery kit which is distributed to stations through ESCAT. This great idea from SO Whitehead has led to more effective communication between responding crews and distressed family members, which means FRNSW is providing a better service to the community.

CPC members have driven many other improvements over the past year.

SF Brett Carle and **SO David Absalom** worked together to introduce **standardised first aid signage** across FRNSW's appliance fleet which strengthens workplace health and safety.

Olivia Blackburn sought inclusion of **information about Administrative staff in Commissioner's Orders** reminding all staff that they belong to one agency, 'one FRNSW'.

In November 2008, **SO Paul Smith** highlighted communication deficiencies experienced at multi-agency exercises. To address this need, **Kiama Captain Terry Dryburgh** advocated a **PA system extension cable** (with a push to talk handpiece) which can be used outside the appliance to allow for more effective and localised PA use at incidents and events. Capt Dryburgh collaborated with **Senior Engineer George Gabriel** who enthusiastically took on the project, developing and testing the prototype.

DCapt Madden has also introduced a **hydrant awareness media campaign** to regional and peripheral areas of the Greater Sydney Area to help firefighters locate water supplies, an often challenging task for firefighters sent to incidents outside their local station areas. This initiative also empowers community members to check the condition of hydrants in their area and report back to local councils if maintenance is needed.

Since October 2014, NSW Police no longer attend minor motor vehicle accidents where vehicles need to be towed unless someone is injured, intoxicated or fails to exchange details. Consequently, FRNSW is often the only authority at these minor motor vehicle accidents. Realising that FRNSW does not have official printed information to provide to affected members of the public, **DCapt Madden** and **SF Philip Agius** requested approval of a **'What to do after a crash' checklist** which will be distributed through ESCAT.

The community expects any firefighter who arrives on an emergency scene has the base level training and skills required for the job. **Retained Firefighter Peter McGill** discussed with **Assistant Director Education and Training Chief Supt Bob Murray** ways to **improve the retained qualifications system** so that permanent and retained firefighter training and skills are better aligned. The Commissioner has approved the development of a group who will work through both the finer details and the long term strategy of retained firefighter training and qualifications.

And the ideas are still coming! Ideas currently in the pipeline include introduction of **Moditech – a crash recovery application** to be placed on ADASHI First Responder MDT devices. **DCapt Madden** and **Capt Terry Dryburgh** submitted this app which contains up-to-date specifications of all vehicles on Australian roads, thus helping Rescue Operators with current information on new airbag systems, reinforced steel areas and extraction plans for all vehicles in a colour-coded, top and side view form. This information will assist FRNSW crews to take expedient and informed actions at incidents to quickly and safely extricate victims.

CPC members are also working with FRNSW management to increase innovation and drive change throughout the organisation. In August and September, CPC members presented to FRNSW's Executive and Senior Leadership Teams to discuss how they have been identifying and working through solutions, to communicate their recent achievements and to see how they might better work together.
Following these discussions, Director of Operational Capability, Assistant Commissioner Jim Hamilton, and Director of Logistics, Emmanuel Varipatis, invited CPC members to visit their teams for further discussions. On 2 October Emmanuel Varipatis met with his team and CPC members to do just this, highlighting a new, more collaborative and leader-leader style of working.

CPC members are also working with FRNSW management to increase innovation and drive change throughout the organisation.

Over the past year CPC members have also been given opportunities to develop their skills, capabilities and networks within the organisation. This development is central to embedding the leader-leader model and shifting FRNSW's culture to one that celebrates innovation and embraces change. For example, three CPC members – Capt Terry Dryburgh, DCapt Mellissa Madden and Senior Firefighter Daniel Pridham – attended the 2015 AFAC conference. The conference theme was "new directions in emergency management" and there were a range of presentations and displays from researchers, agencies and suppliers. FRNSW stood out as a lead agency in a number of areas. Many agencies were also interested in the CPC concept and its implementation including how FRNSW is empowering the workforce to increase innovation and drive change. Quite simply, no other urban fire service has made so much progress in terms of culture change and empowerment.

At the conference, FRNSW displayed the first remote controlled firefighting appliances acquired by an Australian fire service, the TAF20, and was awarded a Motorola Knowledge Innovation Award for the MOSAIC profiling tool that guides our community safety interventions.

The CPC's success has increased moves to empower FRNSW employees and give them the skills, knowledge and capability to improve their workplace. As a result, Innovation Councils have started up in the Community Safety Directorate and the Metro South Command.

Fire & Rescue NSW

Community Support

Department	Phone Number
Police I Ambulance I Fire	000
State Emergency Service	
Floods & Storms	132 500
Telephone Interpreting Service (TIS)	131 450
Police Assistance Line	131 444
Family & Community Services	
Ageing Disability & Homecare	9377 6000
Hearing Impaired	9377 6167
Aged Care Information Line	
Personal Care | Domestic Help | Transport	
Health Support | Meals	1800 200 422
Hearing Impaired	1800 555 677
Seniors Information Service	13 77 88
Health Direct Australia	
Speak to a Registered Nurse 24hr	1800 022 222
Kids Help Line	1800 551 800
Drug & Alcohol Information Service	9361 8000
NSW Victims of Crime Support Line	1800 633 063
Domestic Violence & Sexual Assault Helpline 24hr	1800 73 7732
Rape Crisis Centre	9819 6565
Salvation Army Crisis Line (Suicide Prevention)	9331 2000
Life Line – Crisis Counselling 24hr	131 114
Poisons Information Centre	131 126
Mensline Australia	1300 789 978

The Commissioner is pleased to see leaders, managers and staff across the organisation embracing this new way of working and hopes to see it grow further over the coming months. According to Commissioner Mullins; "changing the way we manage, nurture and listen to people is actually more important than technical innovation, because it is sustainable in the long term and will change how we do things from top to bottom. The CPC members are on a roll – they know they can make change and they're excited by it. So am I."

Update: Metro South Employee Innovation Council

The Metro South Employee Innovation Council (MSEIC) fosters increased innovation and collaboration across the command by sharing ideas and progressing good ideas to action. Following expressions of interest, 10 Metro South employees in admin and operations were selected. The council has met several times since September to develop skills in innovation management and problem solving, and to identify potential areas for improvement in the command as well as in FRNSW more broadly. The group is chaired by SF Greg Nottage from 39 Randwick who will, alongside the MSEIC members, continue working closely with A/Area Commander Chief Supt Gary McKinnon and members of the CPC to identify barriers to progress, and to foster innovation and communication.

Update: Community Safety Innovation Council

The Community Safety Innovation Council (CSIC) first met in May and continues to meet regularly to foster increased innovation and collaboration across the Community Safety Directorate. Since its inception, the CSIC has shared their experiences regarding the introduction of eAIRS. This has provided a valuable mechanism to gather feedback and address various concerns of staff. As a direct result, an eAIRS Working Group was established, chaired by Susan Broomhall. This working group is:

- increasing understanding of the eAIRS solution
- identifying issues
- proposing solutions
- allocating owners responsible for the resolution
- tracking and reporting on progress.

Feedback from staff indicated that this is a much needed vehicle to address the issues being encountered across the organisation.

CSIC also discussed the duplication and wastage caused by not being able to sign documents electronically (e.g. briefings that were stored electronically, but needed to be printed off in hard copy for successive approvals). CSIC chairperson and CPC member Lachlan Haar discussed this with the Director of Community Safety, Assistant Commissioner Mark Whybro, who then raised it with the IT Directorate. From these discussions, IT has launched a project to replace paper forms with e-forms and are consulting with all directorates who are custodians of forms to prioritise this conversion.

These innovation councils represent a new way of working that embodies the leader-leader concept. This new style of leadership allows people to be more passionate, engaged and committed to their jobs, and gives them the opportunity to grow as leaders. This approach is critical to ensure FRNSW can work through constant change and disruption, a hallmark of the world today.

If you have any innovation or improvement for your workplace, contact your local councillor (see Toolkits → About You → Committees and Networks → Commissioner's Participative Council). Also look out for an innovation council coming to a command or directorate near you!

END

Mapping data on CFU Activity App provides situational awareness

NEW CFU APPS IMPROVE SAFETY AND SERVICE DELIVERY

Following the devastating October 2013 Blue Mountain bushfires, FRNSW reviewed the activation and operation of its Community Fire Units (CFUs).

The review identified steps that FRNSW could take to enhance communication between its CFU Management Team and the large number of volunteers.

In response to the review, FRNSW is developing a new information and communication system which includes two apps, a portal and a management console. This system will:

- improve real time information provided to CFU volunteers on bushfire activity which will increase their situational awareness and safety
- improve communication flow between CFU management and CFU volunteers as well as between CFU volunteers themselves
- improve records management (training and activations)
- create easier, more reliable, accurate and streamlined activation and deactivation
- implement an alternate business process and communication channel (via a mobile application) for activation in lieu of notification from FRNSW's ComCens.

In November, FRNSW released the CFU Admin app and portal, an enhanced version of the SAP portal which allows CFU volunteers to view and update their contact and unit details, view their training records, and access maps and pdf documents.

The CFU Activity app was released soon after. This app makes it easier for CFU volunteers to activate and deactivate during a bushfire, automatically notifies teams when bushfires are within 5km of a CFU location, provides interactive maps, and allows volunteers to talk with other members of their unit.

The Admin app and portal were developed in-house; the Activity app was developed externally by Whispir. Half of the funding came from a government grant. Both apps are available for CFU members to download through the App Store and Google Play. END

Media filming at the Rumbler launch

RUMBLE IN THE (CONCRETE) JUNGLE

Following a successful trial, selected FRNSW fire appliances have been fitted with low frequency (LF) siren technology known as the 'Rumbler' – a first in Australia.

The LF sirens take an audio feed from the existing siren and amplify the sound at a much lower frequency through large subwoofers installed under the front bumper bars of appliances. The low frequency sound creates vibrations which can be 'felt' in high density pedestrian and traffic areas to tackle the problem of inattentive drivers, cyclists and pedestrians. The Rumbler is activated by a push button which operates the low frequency for 15 second bursts.

With improved motor vehicle soundproofing and the growing use of personal musical devices, technologies such as the Rumbler help to alert the public to approaching fire trucks. "It's important that our firefighters arrive quickly, but most importantly, also arrive safely without putting themselves or the community at risk," said Commissioner Greg Mullins.

The LF sirens, which are now being used in some locations in Europe and the USA, were successfully trialled on the City of Sydney Runner in the CBD with firefighters getting positive reactions from both drivers and pedestrians. Sixty firefighters from CoS gave feedback during the 12-month trial and the responses were overwhelmingly positive as to the siren's effectiveness. Feedback included:

- "It's a totally different sound"
- The LF siren has an enormous impact on cyclists who "definitely turn around and pull out their earplugs"
- Firefighters riding in the Flyer commented they could actually hear and "feel" the Runner LF siren over the sound of their own siren
- In some cases the air horn causes people to panic and stop suddenly, whereas the LF siren results in people "looking in the mirror and pulling to the side"
- Pedestrians were often seen removing earpieces as soon as the LF siren was activated.

Staff input indicated that the LF siren is mainly beneficial in high pedestrian and heavy traffic environments. Population densities and call rates were used to prepare a priority list of stations to receive the LF siren technology. That initial rollout has now been completed at a total cost of $50,000 with ongoing positive feedback being received from firefighters.

"Unlike other emergency services, our vehicles weigh upwards of 15 tonnes. They are large trucks that cannot stop suddenly when an inattentive pedestrian steps in their path," said Commissioner Mullins. "Despite our best efforts, there are still road users who do not hear our approaching vehicles."

Other states are also interested in the LF sirens with some currently used in areas of Victoria and the Northern Territory. Airport fire and rescue services across Australia are also installing the LF sirens to counter the issue of fire appliances responding across airports with enormous background noise from aircraft engines. END

THE TAF20 – TURBINE AIDED FIREFIGHTING

Testing the TAF20's water projection ability

"It's Robo-firey!" "Like a snow-making machine." "A sort of bobcat-thingy ..." "Imagine a giant hairdryer on a tank track fitted with a tractor scoop." "It's firefighting on steroids!"

These were some of the off-the-cuff comments from staff attempting to describe the TAF20 after seeing it for the first time.

So what exactly is the TAF20?

The TAF20 is a versatile remote control firefighting appliance consisting of a turbine fan and water delivery system mounted on a compact crawler vehicle. The turbine is fitted with a nozzle ring which atomizes water and foam to form a fine mist which is distributed by propeller. The spray action is variable, ranging from a mist which can be projected up to 60 metres to a water jet able to be projected up to 90 metres. The mist is a very efficient fire fighting medium and has a much higher cooling capacity than conventional systems.

The TAF20 is operated by remote control, allowing direct attack on fires without exposing firefighters to the same level of risk. For example, in a tunnel fire, the TAF20 can be sent on ahead while crews follow behind at a safe distance. The operator can be as far as 500 metres away from the unit.

In June Commissioner Greg Mullins and Director Logistics Support Emmanuel Varipatis travelled to Hannover in Germany where they attended Interschutz, the largest fire equipment expo in the world. The TAF20 was one innovation that caught their attention, and after further investigation, arrangements were made for FRNSW to procure a unit at a heavily discounted 'show price'.

FRNSW is the first Australian emergency service, and one of only a few in the world, to acquire TAF20 capability. It is a unique and powerful tool that will keep FRNSW at the forefront of innovation in firefighting.

In September, FRNSW took delivery of the TAF20 firefighting unit. Operational Capability staff and Appliance Training and Firefighting Operational Training staff received initial training and familiarisation. This training was designed to help the firefighters understand TAF20's capability and likely applications, and give them the skills and knowledge needed to use the TAF20 unit and integrate it into fireground operations and strategies.

It was used at a 5th Alarm factory fire in Botany on 30 November and proved very effective in suppressing a stubborn, deep-seated fire. The TAF20 was able to enter a 'no-go' zone for firefighters, due to the danger of wall collapse, and apply foam directly onto the fire.

The supplier lists a range of likely applications for TAF20 including:

- tunnel fires
- fires in enclosed spaces and large infrastructure fires
- terrorist attacks
- aircraft incidents
- refinery and chemical fires
- large rubbish/open cut mine fires
- forest/bushfires.

Other potential uses could include:

- exposure protection at large fires
- ventilation of buildings
- application of foam to bushland and structures in the bushland-urban interface
- mass decontamination of crowds at large gatherings
- a vehicle for attaching detectors/ cameras to, and obtaining samples and images remotely.

Applications, location and details of operational deployment are still being determined, but the TAF20 is a unique and innovative firefighting tool that will provide more options for incident controllers at hazardous incidents and increase firefighter safety. **END**

TECHNICAL SPECIFICATIONS

VEHICLE

Speed:

1st gear 0-3.6 km/h,
2nd gear 0-9 km/h

Gross vehicle weight:
3.3 tonnes

Engine:
65 horsepower water-cooled

Fuel tank:
75 litres

Autonomy at full load operation:
5-7 hours

Remote control:
Up to 500m with graphical display

TURBINE

Power:

25 kW (shaft power)

Operational pressure water: Maximum 16 bar

Monitor spray pattern adjustable with remote control

Flow rate gradually adjustable

Water supply:
4 x Storz B

Throwing distance with fine water mist (nozzle head):
Up to 60 m

Throwing distance with monitor:
Up to 80 m

Side-on view showing the unit's main components

The TAF20 in action at the Botany factory fire

Deploying the Combi container to the ground

Unloading the submersible pump

HYTRANS HIGH VOLUME MOBILE WATER SUPPLY SYSTEM

In 2013 after investigating high-volume mobile water supply systems and assessing their likely effectiveness, FRNSW decided to add this capability to its firefighting resources.

A competitive tender was conducted based on operational requirements and the Hytrans system was chosen as the preferred product.

Since 1988, hundreds of Hytrans units have been deployed all over the globe, particularly in Europe and Asia. Fourteen of these units were used to assist in bringing the 2005 Buncefield tank farm fire in the UK under control, arguably the biggest post World War 2 fire in Europe.

FRNSW's Hytrans appliance consists of a hook lift truck to convey the unit to the required location. The unit comprises two containers, the first with the Hydrosub 150 (a 150 kW hydraulically-driven submersible pump), and the second the HRU 200 (large-iameter hose layer and recovery unit).

The Hytrans appliance can be used to supply large volumes of water (potentially around 8000 litres/minute) for firefighting at large-scale fires, across distances of up to 1.5 kilometres. It can operate from both a static and reticulated supply, and pumps water vertically up to a height of 60m. It lays its inventory of 150mm hose at a maximum speed of 40 km/h.

The appliance can also be used to pump water from flood-affected areas and move it up to 1.5 kilometres. This could include car parks and basements or low-lying streetscapes.

Furthermore, the appliance can be used to assist in moving town water if the existing reticulated supply is compromised.

Assistant Director Capability Paul McGuiggan said he believes that use of Hytrans units should be extended beyond large storage tank/refinery fires or flood events to other emergencies such as bushfires and major structure fires.

"During major bushfires, water supplies to some communities can become compromised," he said. "The Hytrans unit can move large volumes of water from static sources such as dams and rivers to a strategic location where pumpers and tankers can fill up and return to their role of firefighting or structure protection.

"Like many large cities, Sydney's reticulated water supply infrastructure is ageing and in some areas flow rates are decreasing ... the Hytrans unit will assist FRNSW in providing large volumes of water when we are confronted with major structure fires.

In July 2015, FRNSW took delivery of a Hytrans appliance. This is initially based at the Training College at Alexandria, but in the longer term, will be situated at a strategically located fire station. Staff selected to operate the appliance (a minimum of four are required) were recently trained in deployment of the system, plus also in recovery, clean-up and maintenance. **END**

Side view of the Hydrosub150

Using a standpipe to flush and test hydrants

CFU members undergoing skills maintenance training

THE CFU 'BLUE ARMY' WELL PREPARED TO MEET THE THREAT OF BUSHFIRE

Story by Karolina Marks, CFU Communications Officer

CFUs are very well prepared to face the challenges of the high fire risk months thanks to various initiatives implemented in preparation for the bushfire season. These include training, skills review, and the rollout of new technology and equipment.

During September the CFU Team ran its annual **'Operational Readiness Month' program**. All CFU Team Coordinators and Secondary Contacts received a four-page 'Operational Readiness Month' document which included suggested preparedness activities and handy checklists. Further tips were posted on the CFU Facebook and Twitter pages about how to ensure CFU teams were operationally ready to face the increased fire risks this summer. This readiness program encouraged CFU units to undertake practice drills, equipment checks and preventative actions to increase their fire resilience.

As safety of the CFU members is always the highest priority, a thorough pre-bushfire season **skills maintenance training update program** was conducted. All CFU members with expired skills were asked to complete their drills and record them in the CFU portal. The status of those who failed to complete the mandatory training by 1 October was changed from Operational Member to Associate Member until they are able to complete their drills.

During recent months, two apps were developed for smart devices – **CFU Admin app and CFU Activate app**. These apps will benefit CFU volunteers, reduce the workload of FRNSW's Communications Centres and assist the CFU Management team with improved reporting and support for the volunteers (see full story on the CFU apps in the What's New section).

The rollout of **new hand-held radios** was another major initiative aimed at improving communications and facilitating better contact during activations. Each operational CFU unit received a set of six TX675 radios, a laminated double-sided information card and an instruction manual.

A **CFU Consultative Group** (CFUCG) has also been established to recommend improvements to the CFU program and provide consultation between volunteers and FRNSW's CFU Management. The CFUCG was formed from seven CFU members who graduated from an intensive five-day **Volunteer Leadership Training** (VLT) program held in July at the Australian Institute of Police Management in Manly. The program aims to develop leadership potential within emergency services so that leaders and organisations are better prepared for future challenges and changes. Participation of the CFU members in the VLT was funded from a Police and Emergency Services grant.

Another ongoing project funded from this grant is development of **CFU e-learning induction training**. This web-based, blended learning platform introduces CFU volunteers to the theory component of the induction program prior to attending practical training and assessment. The project is is expected to be launched in early 2016. **END**

VIEW VIDEO AT
fire.nsw.gov.au/frnews
OR
SCAN CODE TO WATCH NOW

THOR AND SOUTHERN BELLE THUNDER INTO NSW FOR THE BUSHFIRE SEASON

Thor large air tanker takes off on a water bombing flight

The latest additions to our national bushfire fighting capability are Thor, a C-130 Hercules large air tanker, and Southern Belle, a DC10 very large air tanker, providing a huge much-needed boost to Australia's firefighting arsenal.

Both aircraft were in action early in the season, deployed to Victoria in October to help combat bushfires that had flared during unseasonally hot, dry, windy conditions.

The C.130 can carry up to 17,000 litres of water, retardant or firefighting gel, and the DC10 jet can carry a whopping 45,000 litres. This dwarfs the 9,000 litre Erickson Air Cranes, and the 3,000 litre fixed wing "crop duster" type water bombers that until last year were the largest aerial attack appliances available in Australia.

Commissioner Greg Mullins praised the acquisition of this capability.
"I swelcome this development. My Churchill Fellowship study in 1995 focussed on the use of large air tankers in France, Spain, Canada and the USA, and I have been a strong advocate for bringing this capability to Australia for the last 20 years."

"Both Southern Belle and Thor are in NSW as part of the State Government's $9.8 million trial," said Minister for Emergency Services David Elliott. "They will be used to assist firefighters on the ground by directly attacking bush and grass fires ... the potential impact of these impressive firefighting planes is incredible."

Southern Belle, Gypsy Lady and Thor are supplementary to the 100-plus aircraft, mainly helicopters, already contracted to support firefighting operations across NSW this bushfire season. **END**

AERIAL BUSHFIRE FIGHTING FLEET FOR THE NSW 2015/16 BUSHFIRE SEASON

DC-10 tanker 'Southern Belle'
- 55 metres long with 50-metre wing span
- Weighs 190.5 tonnes
- Carries 44,000 litres of water, retardant or suppressant
- Travels at 650km/h once loaded
- Based at Richmond

Hercules C-130 tanker 'Thor'
- 30 metres long with 40-metre wing span
- Weighs 68 tonnes
- Carries 15,450 litres of water, retardant or suppressant
- Travels at 545km/h once loaded
- Based at Richmond

Erickson Air Crane 'Gypsy Lady'
- 27 metres long with 22-metre long main rotor
- Carries 9,000 litre of water
- Travels at 200km/h
- Based at Bankstown

Other aircraft
Up to 100 contracted aircraft used including small and medium helicopters and single engine fixed wing air tankers.

2015 AUSTRALASIAN FIREFIGHTER CHAMPIONSHIPS AT ECHUCA, VICTORIA

FRNSW's best firefighters took on top firefighting teams from across Australia and the Pacific on 23-25 August at the 2015 Australasian Firefighter Championships at Echuca, Victoria.

In all 27 teams competed, with FRNSW teams pitting their efforts and skills against teams from the NSW Rural Fire Service, Victoria, Tasmania, the Northern Territory, the ACT, South Australia, New Zealand and Fiji over the three-day championship.

FRNSW teams performed very creditably, with Tamworth taking out third place on 94.5 points

Hosting brigade Echuca took out line honours with a total of 161.5 points. FRNSW teams performed very creditably, with Tamworth taking out third place on 94.5 points and Kelso at fourth on 84.0 points. Other FRNSW results were Wyong in 9th place, Nowra in equal 10th, Tenterfield 12th, Bega equal 13th, Dorrigo 16th, Mudgee 21st and Port Macquarie 22nd. Congratulations to all the FRNSW teams who competed and the results they achieved.

The full placings are listed on the Firefighter Championships website www.firefighterchampionships.com
END

VERTICAL RESCUE REACHES NEW HEIGHTS

FRNSW is updating all its vertical rescue stations to comply with new requirements.

Practising vertical rescue training skills

Using a spanline to move patient in a Stokes litter

Under recent changes to the State Rescue Board's Rescue Policy, units with vertical rescue responsibility must have the General Land Primary Rescue Operator competency as well as a revised *Undertake Vertical Rescue course.*

FRNSW currently has 15 stations with vertical rescue responsibility. Of these, five are permanent stations and 10 are retained.

If you've been at one of these rescue stations over the last 18-24 months, a lot has been happening:

- training records were updated
- all rescue operators were trained and assessed to ensure FRNSW is up-to-date and all operators are current in the disciplines for general land rescue
- an online training manual was developed and made available on the intranet (under Training → Operational Training → Rescue)
- logistics, training development and planning, equipment purchase and the trial and evaluation of new equipment were all completed before training could start.

From March 2015 onwards the Rescue Training Team worked tirelessly with other Education & Training sections to develop resources, schedule and finally deliver this important training.

The training rollout equated to 30 four-day training courses to cover the 10 retained brigades and all four shifts at the five permanent stations. As a result of the commitment by the training team all stations had completed this training by October 2015. To date more than 200 operators now have the full vertical rescue competency.

The four-day course is intensive, combining theory and practical training. Rescue operators are assessed as team members as well as individuals against the knowledge and skills required to pass the course.

The training includes the two rope system and two tensioned rope system. Operators are also trained in new pieces of equipment such as the Petzel ASAP lock fall arrest device, the Grillion work positioning device and the AZTEK (a modern mechanical advantage system).

Instructor Senior Firefighter Dean Scifleet commended the training update. "FRNSW's vertical capability has been greatly increased ... this will allow more streamlined inter-agency operations, and a much safer system for firefighters."

A by-product of this upgrade and compliance training has been the opportunity to invest in another versatile piece of equipment for combined space and cliff rescues. The Arizona Vortex is a new artificial high directional device, with the Educational & Training Rescue Training Team delivering training for firefighters who will use it. **END**

NARRABEEN PUT TRAINING INTO PRACTICE

Soon after completing their Vertical Rescue training, Narrabeen 68 D Platoon responded to a rescue incident at 0130 hours on 25 July at Edgecliff Boulevarde, Collaroy Plateau.

On arrival the crew found out that three friends had gone too close to the cliff edge, resulting in one slipping over and falling part way down. The other two had linked arms to retrieve their friend by supporting themselves with some small bushes growing over the edge. Unfortunately these failed to hold and all three tumbled down to a ledge around 10–12 metres below.

One of the three then called 000 for help. They advised that their injuries were relatively minor (scratches and bruises), however they were unable to climb back up the cliff by themselves.

FRNSW crews got to work setting up a belay and haul system. Two firefighters were sent down to assist and calm the fallen men. A 5:1 progressive rope capture was set up on each line to retrieve the man.

From start to finish, the rescue took 2 hours and 15 minutes concluding at 0348 hrs, a testament to how well the operation went. Crews commented, "Easy set-up ... we felt very confident with the safety and redundancy in the system."

Crews later revisited the site and conducted a drill session to continue improving their skills in case these are needed again in the future.

The crews from 59 and 102 stations train in a 4-person raft tether

Shallow water crossing in wedge formation (a wade technique to get people and equipment safely across)

A FLOOD OF KNOWLEDGE

Following an increase in the frequency and severity of flood incidents around the State, FRNSW has implemented new flood rescue training, developed in partnership with the NSWSES.

The training, which conforms to the latest AFAC guidelines, educates firefighters on the risks associated with working in flood and swiftwater environments. It also ensures a flood rescue capability for FRNSW, enabling it when required to support the NSWSES which is the combat agency for floods.

All firefighters will be trained in flood rescue awareness, which is delivered online. In addition, 50 stations have been identified to receive land-based flood rescue training and three stations (20 Hurstville, 59 Eastwood and 102 Regentville) have completed water-based swiftwater rescue training. Once training is completed, firefighters will be registered with the State Rescue Board.

FRNSW rescuers are not permitted to enter moving water unless they have been flood rescue trained. This type of rescue can be both difficult and dangerous, and the comprehensive and specific testing has been designed to ensure the physical ability and safety of the trainees.

Aviation Officer Senior Firefighter Anthony Wallgate said firefighters have embraced the new training.

"We are providing firefighters with a 'toolbox' of techniques, all designed to keep them out of the water but still enable an effective rescue," SF Wallgate said.

Senior Firefighter Shannon Crofton said FRNSW's flood rescue capability has already been tested with deployments to the NSW north and south coasts and also Sydney with "many rescues undertaken and many lives saved".

"FRNSW is lucky to have such a wealth of experience in this field," said Chief Superintendent Gary McKinnon. "SF Crofton is a renowned expert in this field and SF Wallgate has trained many services in aviation and flood rescue."

Fit-for-task training and specialised PPE

In conjunction with the NSWSES and University of Wollongong, a comprehensive program of fit-for-task training methods is being rolled out to rescue stations in identified at-risk locations – predominately in northern areas of the State.

During the developmental stages, the University of Wollongong conducted extensive research and analysis of in-water training courses. An occupational therapist designed specific evolutions (i.e. functional movements) to ensure that trainees are capable of undertaking flood rescue training and participating in actual operational incidents. This requires having a full range of motion and physical movements, and an ability to accommodate loads encountered in flood and swiftwater situations. The evolutions also help to identify any pre-existing conditions which could impact on a trainee's physicality.

Flood rescue qualified firefighters will be trained to use specialised equipment, including flood rescue helmets and personal flotation devices (PFDs). Swiftwater rescue stations will also be issued with PPE including wetsuits, in-water boots and helmets, PFDs, and gloves and will receive a rescue raft. Both land and water-based stations receive throwbags and fire hose inflation kits to throw and reach out to victims. **END**

Examples of flood rescues carried out by FRNSW in support of the NSWSES during recent severe weather events.

Week commencing 20 April: Severe east coast low over the Central Coast and Hunter region with very strong winds and driving rain (described as a 'once in a decade storm)'. A Swiftwater Strike Team was deployed and carried out four flood rescues on the Central Coast. 282 Dungog rescued people in Stroud marooned by floodwaters on the roofs of their homes and in a football grandstand. 377 Minmi and 254 Cessnock backfilled at Dungog, and carried out rescues there together with retained firefighters from 282 who had stayed in town. In Maitland, firefighters rescued four people from floodwaters.

25 April: Heavy rain and hail over Sydney and surrounding suburbs. Five flood rescues were carried out.

1-2 May: Another severe East Coast low over northern NSW. Two Swiftwater Rescue Strike Teams were deployed at Tweed Heads and Nimbin, each carrying out five flood rescues, 10 in total. Some incidents involved cars swept into creeks. Swiftwater rescue personnel also assisted Ambulance paramedics at calls, including an invalid trapped in a house with rising floodwater (the house was sandbagged, allowing the resident to remain at home).

Late August: Strong winds, heavy rain and hailstorms over the southern half of the NSW coastal seaboard. A Swiftwater Rescue Strike Team was established at Albion Park and deployed to the St Georges Basin area where they carried out 13 flood rescues.

Commissioner Mullins presents QF Peter Kirwan with the Perpetual Commissioner's Safety Award

2015 COMMISSIONER'S SAFETY AWARD WINNERS ANNOUNCED

Qualified Firefighter Peter Kirwan was the winner of the Perpetual Commissioner's Safety Award at the second annual Commissioner's Safety Awards on Friday 30 October.

QF Kirwan took out the overall prize because of his personal commitment to promoting mental health within FRNSW.

He provided his personal story for the 'The Firefighter Who Fought Depression' video which was produced by the University of NSW and the Black Dog Institute.

Commissioner Greg Mullins said QF Kirwan had shown incredible strength and courage by sharing his own story of depression.

"QF Kirwan's initiative has had an enormous benefit across our organisation but also externally," said Commissioner Mullins. "The video and story was the inspiration for similar videos made for the Ambulance Service of NSW, NSW Police and the National Rugby League to normalise mental health issues in their organisations."

"A key challenge for FRNSW is to de-stigmatise mental health and encourage firefighters to seek help. It's also important to provide managers with the skills to have conversations with empathy and understanding. Peter's story has had many positive outcomes on all levels, and I was personally touched by his journey."

The winner was selected by a judging panel, which consisted of the Commissioner, Acting Assistant Director of Health & Safety Wayne Phillips and a representative from WorkCover NSW, from a shortlist of 18 finalists after a total of 37 nominations were received.

The finalists came under four categories: best solution to an identified workplace health and safety issue, best individual contribution to workplace health and safety, best group contribution to workplace health and safety, and best management of a workplace injury.

The winners of each category and the winner of the overall award were announced at a special ceremony at Crows Nest Fire Station on 30 October.

Category winners included 412 Stn A Platoon, who successfully worked together to improve the physical work environment at Orange Fire Station, and Cobar Captain Brad Lennon who showed dedication in looking after his crew following the fatal fire at the new Occidental Hotel that claimed the life of RetF Daniel Howard.

Commissioner Mullins said the variety of nominations in the four categories this year demonstrated the drive to improve safety across all levels of the organisation.

"Regardless of your position or rank, we all have not just a legal obligation but a huge moral obligation to keep ourselves and our mates safe at work," Commissioner Mullins said.

"All of us know the importance of safety underpinning everything we do within FRNSW, and these awards honour, encourage and promote the actions of those who make an effort every day to make our jobs safer.

"Maintaining a safe and healthy workforce begins with each and every one of us, so I encourage you to make decisions, lead by example and work together to keep yourself and your workmates safe."

Congratulations to all the 2015 finalists and award winners. END

Place	Name	Reason
CATEGORY 1: BEST SOLUTION TO AN IDENTIFIED WORKPLACE HEALTH AND SAFETY ISSUE		
Finalist	Qualified Firefighter Peter Kirwan, Rescue Training	Contributed his personal story to help raise awareness of mental health issues within FRNSW via a video.
Finalist	Deputy Captain Craig Koschel, Mortdale	Identified safety improvements at the station and across the broader community, especially around the provision of community BBQs.
Finalist	Superintendent Greg Lewis, Zone Commander Region North 2	Outstanding contribution to the prevention and management of on-duty injuries and the overall improvement of firefighter fitness.
Finalist	Superintendent Kel McNamara, Inspector Tim Fox, Inspector Ron James, Station Officer James Ballantyne and Qualified Firefighter John Petterson	Review and design of rescue procedures for the safe removal of people from the Sky Safari gondola at Taronga Zoo.
Winner	**Qualified Firefighter Peter Kirwan**	
CATEGORY 2: BEST INDIVIDUAL CONTRIBUTION TO WORKPLACE HEALTH AND SAFETY		
Finalist	Deputy Captain Robert Hutchison, Narrandera	Designed and implemented a 12-week fitness challenge for the station.
Finalist	Station Officer Matthew Goldman, Glen Innes	Demonstrated exceptional leadership and initiative as a member of the Critical Incident Support Program Peer team and as an elected Health & Safety Representative.
Finalist	Qualified Firefighter Alex Kranenburg, Lidcombe	Identified and rectified unsafe work practices at the station and at incidents around the cleaning of hoses.
Finalist	Senior Firefighter Michael Nguyen, Cabramatta	Identified and developed a system to reduce the likelihood of pressure line damage on SCBA cylinders on Class 3 appliances.
Finalist	Station Officer Craig Osborne, City of Sydney	Fostered a positive and healthy work environment for his crew.
Winner	**Senior Firefighter Michael Nguyen**	
CATEGORY 3: BEST GROUP CONTRIBUTION TO WORKPLACE HEALTH AND SAFETY		
Finalist	Station Officer Tim Brown, Senior Firefighter Luke Russell, Senior Firefighter Joel Latta and Qualified Firefighter Paul Innis	Designed and built a model asset protection zone (fire retardant) garden at Toronto Fire Station to help educate the local community about how gardens can help protect property from bushfires.
Finalist	Station Officer Matthew Jeffery, Senior Firefighter Timothy Collins, Senior Firefighter Phillip Pedley, Qualified Firefighter David Beattie and Qualified Firefighter Rob Buesnel	Identified and developed risk minimisation strategies to improve the work environment and practices at Orange Fire Station.
Finalist	Senior Firefighter Marc Saunders, Senior Firefighter Heath Aland, Senior Firefighter Damien Armstrong, Captain Peter Laver, Deputy Captain James Reddish and Retained Firefighter Darren Maxwell	Proactively identified and addressed health and safety issues within Metro North 1, including putting safety fencing around vehicles to be used for rescue training.
Finalist	Senior Firefighter Peter Watson and Qualified Firefighter Peter Kirwan	Developed and implemented an initiative to raise awareness of hydraulic injection injuries within FRNSW.
Winner	**Station Officer Matthew Jeffery, Senior Firefighter Timothy Collins, Senior Firefighter Phillip Pedley, Qualified Firefighter David Beattie and Qualified Firefighter Rob Buesnel**	
CATEGORY 4: BEST MANAGEMENT OF A WORKPLACE INJURY		
Finalist	Superintendent Paul Bailey	Developed suitable duties to assist an injured worker return to pre-injury duties following surgery.
Finalist	Debra Boswell, Metro North	Proactive and regular communication with injured firefighters, their supervisors and Health & Safety Branch to allow them to return to duty.
Finalist	Captain Brad Lennon, Cobar	Dedicated efforts to ensure the Cobar crew was supported following the fatal fire at the Occidental Hotel at Cobar.
Finalist	Superintendent Peter Levett, Operational Communications	Proactive and continued professional support to injured firefighters as they gradually return to work and health.
Finalist	Inspector Phil Sheedy, Region North 2	Provided continued support to injured workers in a complex regional environment, specifically as an advocate for mental health issues.
Winner	**Captain Brad Lennon**	
PERPETUAL COMMISSIONER'S SAFETY AWARD		
Winner	**Qualified Firefighter Peter Kirwan, Rescue Training**	**Contributed his personal story to help raise awareness of mental health issues within FRNSW via a video.**

"NORMAL PEOPLE HAVING NORMAL REACTIONS TO ABNORMAL SITUATIONS"

The road to understanding and recovering from post-traumatic stress disorder was candidly explored at a FRNSW seminar in Sydney on Friday 6 November.

The 'Pro-active Approach to PTSD' seminar was held to launch the new FRNSW book: *Recovery after Trauma – a Guide for Firefighters with Post-traumatic Stress Disorder*, while raising awareness of PTSD as a workplace injury and promoting the ideal that recovery is achievable. The book was developed by Return to Work Advisor Nathan Jones, in consultation with Phoenix Australia, to improve understanding of the condition and assist firefighters and their families.

The seminar, the first of its kind run by FRNSW with sponsors Employers Mutual, was attended by Commissioner Greg Mullins, the Minister for Emergency Services Hon. David Elliot, around 250 permanent and retained firefighters, senior officers, and trades and admin staff and representation from the RFS, SES and Ambulance Service of NSW.

In his address, Commissioner Mullins said the event highlighted how far FRNSW has come since he joined the brigade in 1978, when firefighters dared not admit they were traumatised by an incident or suffering from any form of mental health condition.

"Over time the 'stiff upper lip' culture began to change as it became more acceptable to talk about the sometimes serious effects of our work on our own wellbeing," said Commissioner Mullins. "We still have a way to go but I'm proud to say FRNSW has taken huge steps to de-stigmatise mental health injuries and provide pathways and programs for understanding and treatment."

The day included a profound personal account of PTSD by retired Major-General John Cantwell. Major-General Cantwell received a standing ovation after taking the audience on a moving journey through his military career spanning two Gulf Wars and the conflict in Afghanistan. Despite suffering flashbacks and severe anxiety after the first Gulf War, Major-General Cantwell hid his injury and continued to function at an extremely high level to coordinate defence operations for two decades.

A highlight for many attendees was a courageous and open panel discussion including three current and former FRNSW firefighters and a retired NSW Police Force Inspector. At varying stages of PTSD injury and recovery, former SF Geoff Evans, SO Mark Black, QF Jess Grimwood and former NSW Police Inspector Belinda Neil spoke honestly about their personal experience of the causes and effects of the disorder.

Retired Major-General Cantwell shares his battle with PTSD

In the afternoon, the theory behind the diagnosis of PTSD, evidence based prevention programs and treatment methods were explored by two guest speakers: psychiatrists Professor Zachary Steel and Dr Sam Harvey from the University of NSW.

"We received some excellent feedback at the end of the event," said SF Mark Dobson, Wellbeing Coordinator. "Many praised Major-General Cantwell and the panel for sharing their stories. The overwhelming response was for more stories and more firies to attend and be exposed to these types of personal experiences."

Looking forward to 2016, Assistant Director Health & Safety Alison Donohoe said the Health and Safety Branch will continue to promote mental health issues and align mental health programs with risks to ensure FRNSW is providing the best possible preventation and rehabilitation programs to support for our firefighters.

Reassuring everyone it's ok to talk about mental health, Commissioner Mullins said PTSD needs to be reframed as normal people having normal reactions to abnormal situations.

"The important thing is to reach out to your mates and loved ones and make it ok for them to open up and seek help when needed."

If you're concerned about yourself or someone on your crew, visit the mental health toolkit (Toolkits → Organisation Wide → Health, Fitness and Wellbeing → Mental Health) on the intranet for information and resources or see your GP. The toolkit also includes audio recordings, presentations and information about the seminar. **END**

SEMINAR SOUND BITES

"We can circumvent so much suffering if we can just de-stigmatise PTSD."

"PTSD is an injury, you don't have a choice."

"Put your hand up early. You can get help and then go back to work."

"We must make sure we check on each other. It can be hard to recognise in yourself but easy to see in others."

"The biggest challenge was recognising I needed help. I had no idea."

"I was tough. I thought I could handle it."

"PTSD doesn't have to be a life sentence."

"If we are silent, are we being honest with ourselves?"

"No shame, no stigma. We should treat this the same as slips, trips and falls."

STANDING ON MY BROTHER'S SHOULDERS

SF Tara Lal is using her experiences to help others

Senior Firefighter Tara Lal is making peace with her personal experiences of grief and suicide through a new book, Standing on my Brother's Shoulders, published by Watkins.

Growing up in England, SF Lal's childhood was coloured by her father's mental illness and shattered by her mother's death from cancer when she was 13. Just four years later she was rocked to the core when her brother Adam took his own life.

After emigrating to Australia, SF Lal became a firefighter with FRNSW and a surf lifesaver at North Bondi. In addition, she holds two university degrees, is a practising physiotherapist, and is trained in suicide prevention and crisis intervention.

Within FRNSW she has helped manage the Critical Incident Support Program, and is working with the Black Dog Institute to promote mental health in firefighters, including trialling a new online resource to tackle potential issues.

When her book was launched at the start of the annual national Mental Health Month in October, SF Lal told *The Sun-Herald* it was her brother's writing – which shows he was obviously severely depressed – that inspired her to help others.

"I thought that could really help somebody because it says so powerfully how it feels to be deeply depressed. The apathy, hopelessness and worthlessness.

I can use what I learnt to help others

"Where I use my training most is as a peer support member. It's talking to people like my fellow firefighters who are struggling and having thoughts of suicide. I can use what I learnt to help others."

WHERE TO GET HELP

(All calls and appointments with the following services are completely confidential).

FRNSW Peer Support Team / Critical Incident Support Program (CISP)

This team offers help to employees who are affected by individual traumatic incidents or a cumulative effect over their career. It also provides support for general mental health issues. The Wellbeing Coordinator can be contacted on (02) 9265 3910 or 0448 295 725. A list of peers can be found on the intranet under Toolkits → Organisation Wide → Health, Fitness & Wellbeing → Mental Health → Peer Team Contacts.

Employee Assistance Program

This service, funded by FRNSW, will connect you to a counsellor. Available to all FRNSW employees and their immediate family members, it is confidential and solution-focused. Call 1300 360 364.

Manager Assist Program

This service is available through our EAP provider. It advises managers on how to deal with someone who has a mental health problem. It assists when having a difficult conversation with an employee. Don't put off having a conversation with someone who may need help. Call 1300 360 364.

FRNSW Chaplains

Chaplaincy provides emotional support and care to employees and their families during times of stress and major life events. Whether the issues relate to work, home, relationships or health, the Chaplains offer confidential and non-judgemental care and support. Contact Lyndsay Smith on 0418 869 280 or Dawn Smith on 0418 268 754, or email chaplain@fire.nsw.gov.au.

Your GP

Ask your GP for a referral to a psychologist. Following a mental health assessment, Medicare will pay for up to 10 sessions a year and FRNSW will cover the gap between the counsellor's rate and the Medicare rebate.

Lifeline

Ring 131 114 for 24/7 crisis support and suicide prevention services.

Black Dog Institute

The Black Dog Institute website (www.blackdoginstitute.org.au) contains a wealth of information and resources, including a comprehensive range of factsheets. **END**

EXTRACT FROM STANDING ON MY BROTHER'S SHOULDERS

"So here I am, peeling potatoes at the sink, when the Spy with his silver hair and rugged war-torn face comes up to me.

'It'd better not be another salmon patty night, Bear.'

I'll never live that one down. On my first ever cook-up at the station I created some masterful salmon fishcakes, designed to impress, only I made the rookie error of not cooking nearly enough of them so that one of the guys had to go to the takeaway for a chicken burger afterwards.

'I'm still having therapy for that, three years later', I laugh.

Then the bells at the fire station start to ring, ascending in volume as they always do. Expecting it to be another false alarm, I turn everything off on the stove and put down my peeler. The automated voice that follows the bells breaks in: 'Pump 4, assist police.'

I walk into the watch-room of the station to get the printout.

'We've got a jumper', the boss says to me.

It doesn't register at first. Then I realise it's a suicide. The police often call the fire brigade to help clean up the blood.

I take a breath. 'Where is it?'

'The back of the Cross, Springfield Avenue.'

I walk to the turn-out bay, put on my yellow pants, jacket and helmet; and then on the truck, pull out of the station, lights and sirens on. I've done it a million times before, but this time feels different. There is a tension across my chest. Swallowing is difficult.

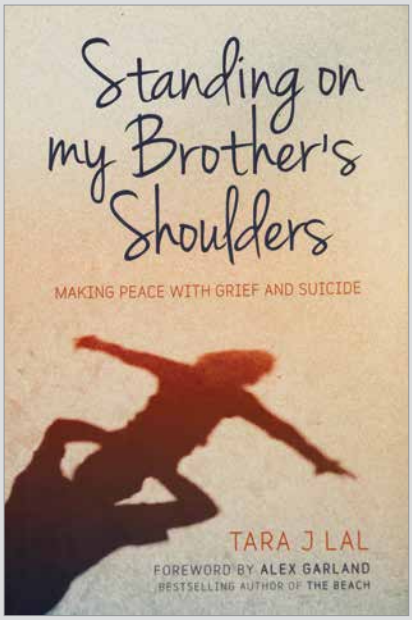
We pull up behind the police vehicle. I see the blood.

'Grab the hose, T. Wash it down,' the boss calls.

I walk to the back of the truck, pulling out the hose reel. As I turn, I see a pair of broken glasses on the ground. Then I look up at the window. In my head I see the figure climbing out of it; the body plummeting to the ground; I feel it all, even the instant of regret. Then the impact as it hits the pavement washes through my body.

I stand there frozen, holding the hose. I am taken back to another time, another country, another body...

Adam."



STRUCTURAL FIREFIGHTING PPC PASSES TESTING WITH FLYING COLOURS

The current personal protective ensemble of structural firefighting coat and trousers was rolled out in early 2013.


Seam strength tested sample – lining

When worn together, the structural firefighting coat and trousers provide the level of protection required to comply with *AS/NZS 4967:2009, Protective clothing for structural firefighting.*

To ensure the ongoing safety of firefighters, FRNSW and the supplier arranged mid-life testing to evaluate the PPC's performance. Sets of PPC from a cross-section of stations were laundered and then forwarded to the CSIRO for comprehensive testing on a range of conditions including ignition, heat transfer, strength and resistance to heat, water and abrasion.

Considering the extent of in-service wear and tear and prior laundering, the results were outstanding, with the PPC passing the standard on most tests. The only areas where a full pass wasn't achieved were residual seam strength (97% was achieved which is excellent for a garment 2+ years old) and surface resistance to water penetration (as expected, the outer layer's water repellent finish showed some deterioration, however the moisture membrane subassembly still prevented water ingress).

These results were better than expected given garment age, abrasion exposure, and through-life laundering. The testing concluded that overall, the PPC continues to protect firefighters to required levels when they are in the field. **END**

ISSUE 3:

FIRE & RESCUE OPERATIONS JOURNAL

EDITOR'S NOTE

Welcome to Edition 3 of F*ire and Rescue Operations Journal.* In this edition, we report on a number of very technically challenging fires and rescue incidents. In reporting on the operations at these incidents, some very distinctive themes have emerged. Firstly, the determination, commitment and skill level of the firefighters doing the hard work is nothing less than outstanding. Secondly, the incident commanders are dealing with some very challenging, complex and at times dangerous scenarios, and in so doing, are undertaking what can only be described as textbook decision-making ... accept that many of the scenarios found on these firegrounds will not be found in any fire command textbook. Experience, knowledge, excellent training, good size-up, strong command presence and excellent decision-making processes are resulting in very sound fireground tactical command decisions, resulting in operations that are safe and effective (meeting all incident objectives). It is hard to ask for more.

In this edition, none of the incidents could be described as "routine": a fully involved 48,000m2 motor vehicle spare parts warehouse fire with all installed fire suppressions destroyed due to a previous event, a wind-impacted fire in a furniture warehouse on an enormous scale that threatened to create an urban conflagration, a "pot on a stove" fire that resulted in a highly destructive wind-impacted fire event, and a marina fire involving boats containing thousands of litres of volatile substances and flammable liquids impacting a three-level residential wharf formed of 100-year-old lanolin oil soaked timbers. In many respects, the crews that responded to these incidents have "re-written the textbook", with respect to operations at these very complex types of fires. Similarly, the firefighters who responded to the rescue incidents described in this edition displayed significant commitment, initiative and professionalism, resulting in many lives being saved. FRNSW firefighters were the first emergency responders to arrive at several of these incidents and were confronted with chaotic, traumatic and confusing scenes. The highly professional actions of the initial responding crews enabled these incidents to be rapidly stabilised, and in so doing, laid a solid foundation for the major emergency operations involving all emergency services that would then follow; Consequently, the best possible chance of survival was provided to the persons involved in these emergencies.

Once again, modern fuel loads (in particular hydrocarbon and thermoplastic-based materials) have contributed to extreme fire behaviour at "routine" fire events. We have also seen the result of the combined influences of fuel-enriched environments created by hydrocarbon-based materials and the impact of wind on fire behaviour.

The fire at Eastern Creek is representative of a type of fire that so often passes under the radar of the firefighting community ... structures that are vacant, disused, abandoned, derelict or are subject to demolition, renovation, deconstruction or closure. The experience within the United States is that these are the most dangerous structure fires at which firefighters conduct operations. As large as the Eastern Creek fire was, and despite all installed fire suppressions being out of service (and numerous other hazardous conditions present), firefighters were able to operate safely because they were familiar with the site and were aware of the hazards and difficulties present. The value of pre-incident planning at these types of structures cannot be overstated enough.

Lastly, despite all of the challenges, difficulties and hazardous conditions present at the incidents reported in this edition, as always, our crews performed with distinction.

Inspector Kernin Lambert
Editor, *Fire & Rescue Operations Journal*

Photograph taken by a neighbour shows fierce flames through the vent outlet opening, on the downwind side of the fire. This is indicative of the extreme fire conditions created due to the presence of a wind impacted fire. Picture supplied courtesy Mrs Amy Johnson

FIREFIGHTERS ENCOUNTER WIND-IMPACTED FIRE AT GUILDFORD UNIT BLOCK 2ND ALARM

Incident summary: What started as a routine "pot left unattended on the stove" kitchen fire at a unit block at Guildford in Sydney's west, rapidly evolved into a destructive and extreme fire event, due to a series of circumstances that set the scene for a wind-impacted fire. This report details the circumstances that led to the very rapid formation of this very dangerous fire phenomenon, the extreme fire behaviour that followed and the firefighting operations that enabled FRNSW firefighters to safely mitigate this hazard. As usual, FRNSW crews responded very professionally to this dangerous fire event.

Incident type: Residential unit fire.

Time, date and place of call: 1733 hours on Wednesday 23 September 2015, Excelsior Street, Guildford.

Fire building: Residential unit block, two level, 18.0m x 12.0m, brick and fibrous cement board clad, timber frame and tile roof. The front of the house faced west. The block contained a total of four residential apartments, two on the ground level and two on the second level.

The unit involved was located on the second level of the unit block at the southern end of the building. The unit faced west and was 9.0m x 12.0m in area. A balcony 3.0m x 4.0m was located at the eastern end of the unit. An open plan kitchen/dining room/lounge room 4.0m x 12.0m was located at the southern end of the unit. A floor-to-ceiling glass sliding door and floor-to-ceiling glass window (combined) 3.6m wide x 2.4m high separated the lounge room from the balcony (the door in the open position created a 1.8m x 2.4m opening), on the

A window located on southern side of the building, acts as an inlet opening, located on the upwind side of the fire. Note, flames are not venting outwards. Also, compare fire activity with the vent outlet. Both windows are fitted to the same fire compartment. The defensive attack stream directed through this window reduced fire intensity within seconds. Picture supplied courtesy Mrs Amy Johnson

eastern side. A window 1.5m x 1.5m was located at the western end of the kitchen above the kitchen bench. A window 0.5m wide x 1.75m high was located on the southern wall.

Access to the unit was via an internal stairwell 1.5m wide at the northern end. An atrium formed above the stairwell. The access door to the unit was located at the base of the stairwell. At the top of the stairwell, a hallway 5.0m long and 1.2m wide extended to the lounge room. A bedroom, bathroom and laundry adjoined the eastern side of the hallway and a bedroom adjoined the western side of the hallway.

Interior furnishings within the kitchen consisted of cupboards, benches and pantries of light timber construction. Two polyurethane foam and timber frame two seat lounges were located within the lounge room, at the eastern end of the unit. An entertainment unit, formed of synthetic materials and thermoplastic was located in the lounge room. A lightweight timber table and four chairs formed of synthetic materials were located in the dining room.

Weather at time of fire: South/south-easterly winds at 33km/h, gusting to 63km/h, temperature 16°C, relative humidity 29% and mean sea level pressure 1025.5 hPa recorded at Bureau of Meteorology Bankstown Airport automatic weather station (approximately 7.5km from the fire building) at 1500 hours.

FRNSW response: Pumpers 55 (Guildford), 30 (Lidcombe), 72 (Merrylands) and 73 (Fairfield), Hazmat Pumper 85 (Chester Hill), Ladder Platform 27 (Parramatta) and Duty Commander MW2 (Parramatta).

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

Situation prior to FRNSW response: On the afternoon of the fire shortly prior to the time of call, the 33-year-old female occupant of the fire unit was cooking meat in a pot in the kitchen, on a gas-powered stove. Cooking oil was also in the pot. The occupant left the stove unattended for a short period of time and returned to find the pot alight. The occupant went to her bedroom and obtained a blanket to cover the burning pot, in an attempt to smother the fire. The blanket caught alight and the occupant removed the blanket to the balcony where she then began to shake it, attempting to extinguish the fire. This action resulted in no flames being present, although smoke was still coming from the blanket. The occupant then returned to the stove and switched the gas cooker off, however the original fire within the pot continued to burn. Air blowing into the unit caused the pot fire to intensify, producing increased levels of heat and smoke. The unit began to fill with smoke, forcing the occupant to evacuate and raise the alarm. The occupant did not close the balcony door prior to evacuating from the unit.

When the occupant left the unit, the balcony door was fully open, creating a 1.8m x 2.4m opening into the unit. A strong south/south-easterly wind was blowing at a 45° angle through the opening into the unit.

Formation of wind-impacted fire: The smouldering blanket was located on the balcony at the eastern end of the unit and directly in the path of the wind, providing increased quantities of oxygen to the smouldering fire. The blanket quickly reignited and a short time later became fully involved in fire. Radiant heat from the flaming blanket caused the release of volatile hydrocarbon gases (via pyrolysis) from the polyurethane foam lounge located within the lounge room a short distance away. These gases ignited and the fire quickly spread to the interior of the unit. Within the lounge room, further items of furniture formed of polyurethane foam and other thermoplastic materials ignited, causing large releases of heat and conditions approaching flashover within the lounge room. A bi-directional flow path formed at the eastern end of the unit; superheated gases were venting out of the unit in an easterly direction at ceiling level at the same time as air was being drawn into the unit near floor level. The under-ceiling superheated gases were seeking an area of low pressure and were travelling in all directions as the lounge room fire expanded. These superheated gases were rolling down the western and southern walls of the kitchen and dining room, impacting closed glass windows at these locations,

resulting in these windows failing, creating openings.

The window breach on the southern wall allowed additional air supplies to enter the dining room. The window breach on the western wall created an exit point for wind blowing into the unit. There were now two airflow entry points and an airflow exit point within the unit. The existence of airflow entry and exit points created an airflow path. The airflow path also involved the area of combustion. Large quantities of oxygen were now being drawn into the combustion area, creating a wind-impacted fire. Almost immediately, fire conditions rapidly and dramatically changed. Heat release rates intensified significantly, fire growth expanded, resulting in full involvement of the kitchen/dining/lounge room compartment and horizontal flames at least five metres long began to vent from the kitchen window at the western end of the kitchen. Fire bypassed the hallway to the north, because the kitchen window opening provided an area of low pressure. Fire intensity increased by almost 300% within seconds of the wind-impacted fire forming. At this time, internal temperatures were approaching 1,000°C. The polyurethane foam and thermo plastic furniture created a fuel-enriched environment, rapidly breaking down and decomposing, producing highly volatile and flammable hydrocarbon gases that continued to feed the fire. The bi-directional flow path that had previously formed to the east near the balcony door had now reversed and all fire gases were now venting through the open kitchen window on the western side of the unit. No flames or fire gases were venting through openings on the east and south sides of the unit. The wind-impacted fire was rapidly consuming all combustible materials located within the kitchen/dining/lounge room compartment of the unit. Fire intensity became so severe that a powerful area of low pressure began to form within the combustion zone, drawing venting smoke back into the fire.

Intense heat from the fire caused the aluminium window frame at the southern end of the unit to melt and form drops of molten aluminium (aluminium begins to melt at 660°C). The powerful thermal forces located just below ceiling level associated with the venting superheated fire gases caused the upper levels of the metal window and door frames located at the eastern and southern ends of the unit to soften and the wind entering the unit caused these frames to bend towards the direction of vent opening, causing at least a 40cm inward displacement of the frames. The wind-impacted fire event in operation at the Excelsior Street fireground was consistent with the highly destructive nature and very dangerous conditions associated with this extreme fire phenomenon.

Initial call and response: FRNSW FireCom received the first of numerous '000' calls reporting a unit fire at Excelsior Street, Guildford and initially responded Pumper 55 and Hazmat Pumper 85. As additional calls were taken, a third pumper was added to the response.

A passing police patrol who were in the area at the time saw the fire and travelled to the fire building, approximately three minutes after the time of first call and observed the unit heavily involved in fire and large flames issuing from the front window.

First FRNSW appliances arrive on scene: Pumper 55 under the command of SO Darren Gould turned into Excelsior Street and observed heavy fire venting three to five metres out of the front window of the second level kitchen window facing Excelsior Street. Some flame was also observed coming from the window on the southern side of the house. Pumper 55 sent a RED message requesting the response of a 2nd Alarm. SO Gould became the Incident Commander and a command point was established known as "Excelsior Street Command".

Initial firefighting operations: Senior Firefighter Peter Grose and Qualified Firefighter Craig Paulett donned SCBA

Fire building, showing inlet openings (balcony, top right of building and window centre of right side) and vent opening on the front right side of photograph

Kitchen and vent win

and prepared to advance a 38mm attack line into the structure to conduct interior offensive operations. As firefighters approached the building, they saw the fire was producing heavy black smoke. The fire attack crew then entered the ground level door and advanced to the top of the internal stairs at the northern end of the hallway. Firefighters observed the kitchen/dining room/lounge room area to be totally involved in fire from floor to ceiling. Fire conditions were extreme. Thick black smoke with partial flames were beneath the hallway ceiling. The smoke layer had lowered to a height of approximately 1.5m in the hall way. Firefighters observed large volumes of very hot, dark brown and black smoke coming from the stairwell behind them and being drawn past their backs and into the fire at significant speed. This smoke was entering the stairwell via the open doorway at ground level.

From the top of the stairs, Senior Firefighter Grose directed a straight stream jet into the area of total fire involvement. Firefighters reported that immediately following this action, the area they were in became extremely hot, due to steam produced. Senior Firefighter Grose then began to aggressively gas cool, in an attempt to lower the temperature in which the firefighters were working. The internal attack crew radioed the Incident Commander that they were located at the top of the stairwell, however forward progress had been stopped due to fire intensity.

Firefighters conduct defensive operations: The internal fire attack crew withdrew to a position of refuge at the top of the stairwell, at the northern end of the hallway, away from the area of heavy fire involvement. Hazmat Pumper 85 arrived on scene and was directed by the Incident Commander to commence a defensive external attack on the fire, in attempt to reduce fire intensity. Senior Firefighter Sarah Tobin and Qualified Firefighter Joshua Maslen deployed a 38mm hose line and directed a straight stream jet through the front window of the unit onto the kitchen ceiling, almost vertically and on a slight angle. Senior Firefighter Tobin advised this attack was conducted for several minutes before signs were observed of fire activity beginning to diminish. From within the fire building, the internal attack crew reported temperatures had begun to drop. The defensive line was shut down and firefighters repositioned to the southern side of the building, where Senior Firefighter Tobin observed flames and smoke pulsing in and out of the second level dining room window (located on the southern side of the unit). The defensive straight stream jet was again operated almost vertically, on a slight angle, through the window and onto the interior ceiling of the unit. Senior Firefighter Tobin reported the effect of this attack was immediate, resulting in significant diminishing of fire activity within seconds. Similarly, Firefighters Grose and Paulett reported a significant lowering of internal temperatures. The external line was shut down, enabling the internal attack crew to advance on the fire.

Command transferred: Duty Commander Parramatta Inspector Bob McGowan arrived on scene and following a handover briefing, command was transferred to Inspector McGowan, with SO Gould appointed Operations Officer.

Firefighters continue offensive operations: As soon as defensive operations ceased, Firefighters Grose and Paulett again began to advance the 38mm attack line along the hallway and towards the fire area. Firefighters reported conditions had improved significantly, reporting that the further they advanced along the hallway, the lower the temperature became. Third arriving Pumper 30 firefighters placed a third 38mm attack line into operation, which was deployed to the fire floor to assist Pumper 55 firefighters conducting fire attack. Internal temperatures were much lower by then and fire activity had significantly diminished. Firefighters advanced to the kitchen/dining room/ lounge room area and conducted direct

dow. Fire severity was extreme and not survivable

Displacement of metal door frames, caused by superheated gases and inlet pressure

fire attack, extinguishing fire that remained within these rooms.

Aerial appliance placed into operation: Ladder Platform 27 arrived on scene and was positioned in Alpha Sector at the front of the fire building. The aerial appliance was placed into operation, enabling firefighters to conduct an aerial inspection of the fire building. A roof report was provided to the Incident Commander, confirming the roof structure appeared to be in sound condition and no further fire spread was visible. The positioning of the Ladder Platform enabled it be used as a secondary point of firefighter egress, if required in an emergency. Information from the aerial appliance contributed to the situational awareness of the Incident Commander and the safety of all firefighters on the fireground.

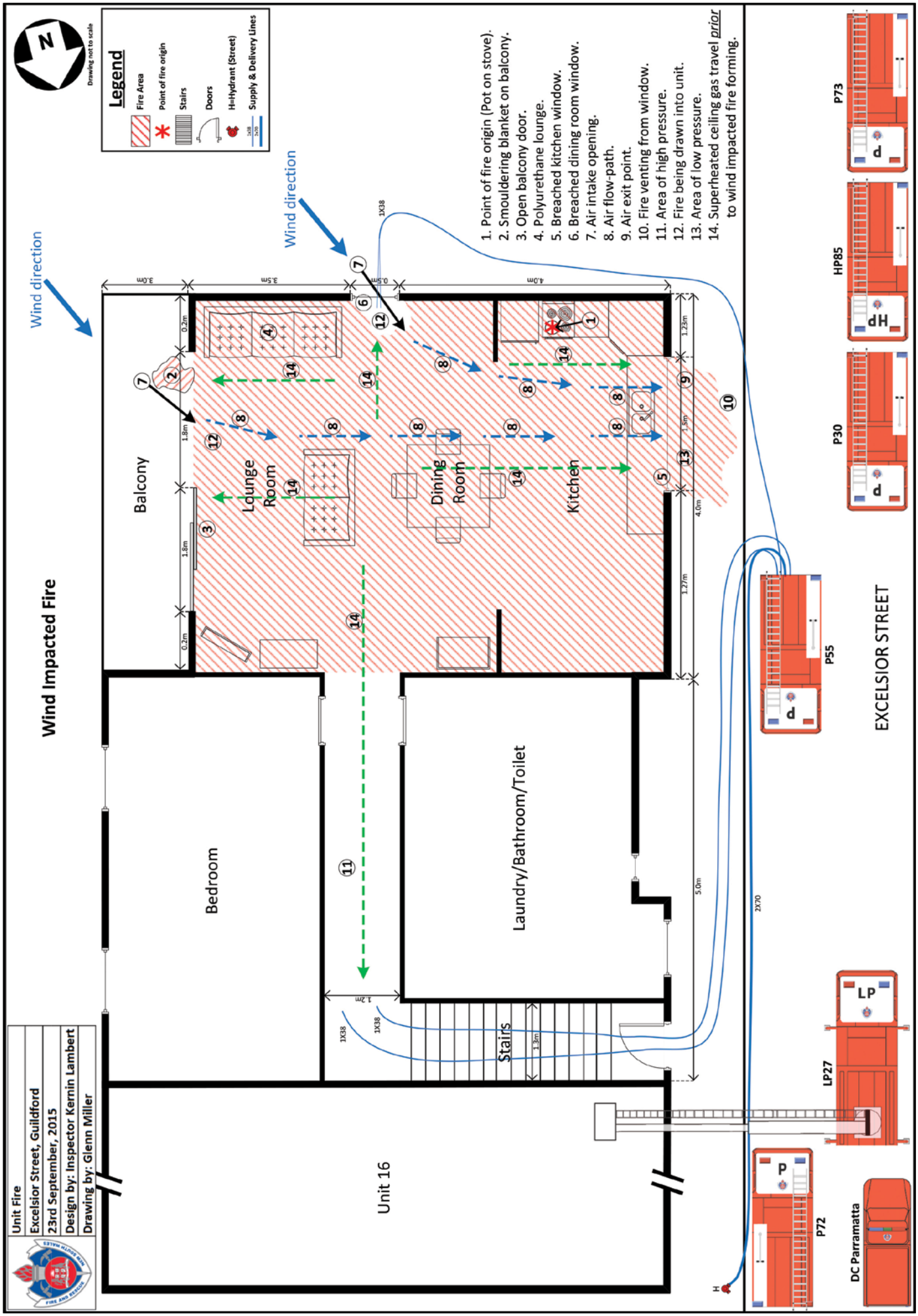
Fire under control: Following the operation of the external defensive stream, the internal attack crew quickly brought the fire under control. The Pumper 30 SCBA crew conducted a primary search, and declared an all clear. Pumper 72 firefighters entered the adjoining second level unit at the northern end of building to check for fire spread. A fire separation wall located in the roof space prevented fire spread through the common roof to the void space above the adjoining unit. Firefighters completed salvage and overhaul operations. The occupant of the unit was conveyed to hospital by ambulance. All combustible materials within the lounge and dining rooms were completely consumed by fire. Timber cupboards and benches within the kitchen had also been severely damaged by fire.

Notes

1. The fire event at the Excelsior Street fireground was a textbook example of a wind-impacted fire, due to the existence of an air inlet opening (open balcony door) and an airflow exit/fire vent point (breached window), facilitating air flow created by the prevailing wind, through the area of combustion within the structure.
2. The fuel load, consisting of interior contents formed of polyurethane foam, thermoplastics and other synthetic materials released flammable hydrocarbon gases when heated, creating a fuel-enriched combustion zone, resulting in intense fire conditions.
3. The failure of the glass kitchen window at the western end of the unit was the trigger event that caused the wind-impacted fire to form, allowing air to be funnelled through the unit and delivering large quantities of oxygen to the area of existing fire, resulting in rapid and significant escalation of fire conditions.
4. The combination of the wind-impacted fire scenario in conjunction with the hydrocarbon-based fuel load resulting in very intense fire conditions within the fire unit.
5. Consistent with a wind-driven fire event, large flames vented horizontally from the fire vent point, however fire appeared to be drawn in at the entry openings. Firefighters also reported seeing smoke and flames "pulsing" in and out of the air inlet opening (the breached window on the southern side of the building), another indicator of a wind-driven fire.
6. The defensive straight stream jet directed through the entry opening on the southern side of the structure by Hazmat Pumper 85 firefighters had an almost immediate effect on the fire, significantly reducing fire intensity within seconds of the application of this stream. This technique was highly effective. Firefighters within the structure reported an immediate and significant reduction in temperature at the time the defensive attack was conducted. To achieve the most effective results, an exterior stream should be directed through an air entry opening, allowing water to contact the source of the fuel and flame, achieving effective extinguishment. The stream will be most effective if firefighters applying the stream have the wind at their backs. The aim of the defensive stream is not to direct a jet onto the flames, but to direct the straight jet stream through the window at about a 60° angle onto the interior ceiling, allowing water to then drop onto the fire combustion zone.
7. At the Excelsior Street fire, the transition from an interior offensive attack to a defensive attack was conducted in a coordinated manner, under the direction of the Incident Commander, who was in radio contact with defensive and offensive crews. The defensive attack only commenced when it was confirmed the interior offensive crews had withdrawn to a location of safe refuge. Effective communication and a coordinated attack is the key to safely carrying out this operation.
8. The 360 size-up, contained within the recently introduced Incident Management SOGs, is a key component to identifying a wind-impacted fire or the possibility that a wind-impacted fire could form. During the 360 size-up, it is advantageous for the Incident Commander to identify any air inlet openings into the fire compartment or any fire vent openings, where it appears flames/internal fire could be getting "pushed" back into the structure from a prevailing wind.
9. During size-up, it is advantageous to note wind direction, relative to the fire's location within the fire building. Similarly, it is important to identify windows and sections of glazing being impacted by fire, that could be subject to thermal failure and create an opening in a structure that could create a flow-path. The presence of such windows should be considered relative to wind direction. It is much harder to predict a scenario that could become a wind-impacted fire if a trigger event occurs, than it is to identify a wind-impacted fire that is already happening; tragically, the experience from the United States is that wind-impacted fires that form due to the occurrence of trigger events after firefighters are operating within buildings are the fires that claim firefighters' lives.
10. Firefighters should consider wind direction when conducting size-up of a structure. In particular, firefighters should be alert to wind conditions that may push a fire back into the structure, instead of flames venting normally. At the Excelsior Street fire, the defensive fire attack crew observed smoke and flames pulsing back into the building through a window on the upwind side, due to the effects of the wind.
11. Research from the City of New York Fire Department (FDNY) wind-impacted fire research team emphasises that both the combustion zone of a wind-impacted fire and the area downwind of a wind-impacted fire within a structure are not survivable for firefighters, even wearing the highest levels of structural firefighting protection. The key to survival is to be aware of the signs that a wind-impacted fire has the potential to form and take appropriate precautionary actions. This is the responsibility of everyone on the fireground.
12. Firefighters at Excelsior Street performed professionally, identifying the hazard and applying appropriate control measures to mitigate the situation. Everyone went home safely.

Special thanks to FDNY Battalion Chiefs Gerald Tracy and George Healy and Captain John Ceriello (FDNY Wind-Impacted Fire Research Team) and Professor Steve Kerber PhD (Director, Underwriting Laboratories, Firefighter Safety Research Institute) for their assistance in preparing this report.

END


Legend
Fire Area
Point of fire origin
Stairs
Doors
H-Hydrant (Street)
Supply & Delivery Lines
Drawing not to scale
Wind direction
Wind direction
Wind Impacted Fire
1. Point of fire origin (Pot on stove).
2. Smouldering blanket on balcony.
3. Open balcony door.
4. Polyurethane lounge.
5. Breached kitchen window.
6. Breached dining room window.
7. Air intake opening.
8. Air flow-path.
9. Air exit point.
10. Fire venting from window.
11. Area of high pressure.
12. Fire being drawn into unit.
13. Area of low pressure.
14. Superheated ceiling gas travel prior to wind impacted fire forming.
Balcony
Lounge Room
Dining Room
Kitchen
Bedroom
Laundry/Bathroom/Toilet
Stairs
Unit 16
EXCELSIOR STREET
P73
HP85
P30
P55
LP27
P72
DC Parramatta
Unit Fire
Excelsior Street, Guildford
23rd September, 2015
Design by: Inspector Kernin Lambert
Drawing by: Glenn Miller

From Charlie Sector, firefighters advance 70mm attack lines to protect Delta exposures being impacted by fierce fire conditions

Commissioner Mullins and Area Commander CSupt Alex Scott discuss firefighting operations in Charlie Sector

8TH ALARM REQUIRED TO CONTROL LARGE YENNORA WIND-IMPACTED FURNITURE WAREHOUSE FIRE

Incident summary: Workers discovered a small smouldering fire burning within a sofa located on storage racking in a furniture warehouse. No flames were visible and only light smoke was seen by workers. At the time, large loading bay doors were open at the front and rear of the warehouse, enabling wind to blow into the warehouse through the open doors, creating an air flow through the area of combustion. During attempts by workers to extinguish the smouldering phase fire, the polyurethane foam sofa "exploded" and fire quickly spread into stock located on storage racking. A wind-impacted fire rapidly developed, causing fire to rapidly spread through the warehouse, creating inferno-like conditions. When the first FRNSW appliance arrived on scene minutes after the fire ignited, the warehouse was totally involved in fire and fuelled by a very large fire load, largely consisting of polyurethane foam based furniture goods; 25-30m high flames were venting from the building; and numerous surrounding structures (most of which contained flammable and highly volatile fuel loads) were in immediate danger of fire spread. A combination of good tactical decision making, key placement of hose lines and aerial appliances, strong command presence and courage and determination of firefighters, prevented this fierce and highly destructive fire from spreading to numerous surrounding exposures. Once again, FRNSW crews performed with distinction.

Incident type: Furniture warehouse fire.

Time, date and place of call: 1232 hours on Monday 27 July 2015.

FRNSW response: Pumpers 55 (Guildford), 73 (Fairfield), 72 (Merrylands), 49 (Cabramatta), 27 (Parramatta), 30 (Lidcombe), 41 (Smithfield), 19 (Silverwater), 65 (Rydalmere), 43 (Seven Hills), 32 (Mount Druitt) and 96 (Schofields), CAFS Pumper 31 (Busby), Rescue Pumpers 57 (Wentworthville), 15 (Burwood) and 62 (Bankstown), Aerial Pumpers 47 (Revesby) and 45 (Miranda), Ladder Platforms 18 (Glebe), 27 (Parramatta), 36 (Crows Nest) and 92 (St Andrews), Heavy Rescues 59 (Eastwood) and 20 (Hurstville), Hazmat Pumpers 77 (St Marys) and 85 (Chester Hill), Heavy Hazmat 85, Tanker 93 (Narellan), CAFS Tanker 78 (Dunheved), Incident Control Vehicle Bravo, Logistics Support Vehicles 21 (Kogarah) and 1 (City of Sydney) and Rehabilitation Pod 1.

Duty Commanders MW2 (Parramatta), MW1 (Huntingwood) and ME3 (Ashfield), Zone Commander MW2 (Parramatta) Superintendent Selwyn Mathias, Area Commander Metropolitan West (Acting Chief Superintendent Alex Scott), Director Metropolitan Operations (Acting Assistant Commissioner Rick Griffiths), Commissioner of FRNSW (Commissioner Greg Mullins), Operational Media Coordinator (Superintendent Ian Krimmer), Fleet Operations Officer, Fire Investigation and Research Unit, Assistant Director Public Affairs Andrew Parsons and Team Leader Hazmat.

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

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

Fireground description: The fire building was a single level open plan warehouse, 70m x 70m x 10m high, steel frame, concrete block clad with a fitted metal sheet roof. 1.0m wide polycarbonate sheet roof skylights were fitted every 10.0m to the roof.

Located on the 'downwind vent' side of the structure, large flames erupt from the rear of the factory, producing fierce radiant heat. Picture supplied courtesy of Nick Tomhe

A mezzanine level office, 20m x 10m, was located at the front of the structure, within the warehouse. The building was utilised as a furniture storage and distribution warehouse, storing palletised stock on metal vertical racking. The warehouse contained eight rows of racking. Furniture stock at the time of the fire consisted of a large quantity of sofas and lounges formed of light timber and polyurethane foam materials, stored within light cardboard and plastic packaging. Management reported the warehouse was filled to capacity at the time of the fire.

A loading dock facing south was located at the front of the building. The loading dock consisted of five separate bays, 10.0m wide, which were all open at the time of the fire. Two delivery trucks and one shipping container were in the process of being loaded and unloaded at these bays at the time of the fire. Four 6.0m wide warehouse roller doors were located at the rear of the warehouse on the northern side of the building. All of these doors were open at the time of the fire. A truck parking yard 25.0m wide was located at the front of the warehouse. A storage yard 18.0m wide was located at the rear of the warehouse. A stack of polyurethane foam sofas, 15m x 20m, was located at the western end of this yard. The warehouse contained six large battery-powered forklifts.

The warehouse was fitted with smoke alarms attached to the roof interior connected to an automatic fire alarm system. The building also contained installed hose reels and portable CO2 extinguishers located every 25m.

A large area of open parkland (Knight Park) was located on the opposite side of the road to the fire building to the south (this would later have a significant bearing on fire behaviour). Exposure Bravo consisted of a large factory, 140m x 80m, located 20m to the west of the fire building. Eight industrial premises were located on the northern side of Whitaker Street, opposite the rear of the fire building (Many of these occupancies were associated with the automobile repair industry and contained volatile and flammable fuel loads, including a factory that contained a 10,000 litre liquid nitrogen tank). A large factory complex, 70m x 60m, consisting of six industrial units adjoined the eastern wall of the fire building (Exposure Delta North/South). A pad mounted electricity substation was located 5.0m to the north-east of the fire building. An above-ground town main gas service valve was located 3.0m to the north east of the fire building. 415V and high voltage 11kV powerlines were mounted on timber poles running along Whitaker Street at the rear of the fire building.

Weather at time of fire: West/South-westerly winds at 20km/h, gusting to 54km/h (recorded at 1113 hours), temperature 10.5°C, relative humidity 40% and mean sea level pressure 1025.8 hPa, recorded at the Bureau of Meteorology Bankstown Airport automatic weather station (approximately 10.5km from the fire building) at 1500 hours.

Situation prior to FRNSW arriving on scene: On the day of the fire, 17 staff were present at the warehouse. A 12.0m long shipping container was being unloaded at the receiving bay (located at the eastern end of the dock) and a large quantity of polyurethane foam sofas was located on the loading dock awaiting storage on racking, Similarly, a large quantity of sofas was also located on the loading dock, awaiting loading into delivery trucks at the western end of the loading dock.

A forklift operator smelled smoke coming from within the warehouse and upon making investigations, observed light smoke coming from stock located on racking near the roof. The forklift operator used the forklift to lower the smouldering item of stock to floor level, to enable the fire to be extinguished. The forklift operator observed a small quantity of light smoke coming from a two seat sofa, formed of polyurethane foam, cloth fabric and wicker cane materials. The sofa had a thin layer of cardboard packaging around it. Upon bringing the sofa to the ground, the worker attempted to extinguish the fire by kicking it out. Almost immediately, the sofa "exploded", becoming fully involved in fire. The worker raised the alarm, all staff began to evacuate from the warehouse and staff rang '000' to report the fire. The fire rapidly spread to numerous other stored sofas on the loading dock, producing large quantities

of flame, thick black smoke and intense heat, preventing any further attempts at fire extinguishment by staff. In less than half a minute, fire had spread to stock located on racking; and in a short space of time, the entire warehouse was completely involved in fire.

Formation of wind-impacted fire: Wind blowing at 20km/h and gusting above 50km/h was entering the front of the warehouse via the open loading dock doors (the entry space was approximately 500m2 facilitating ingestion of a large volume of air). The area of open parkland directly in front of the warehouse facilitated relatively laminar airflow, increasing the volume of air entering the warehouse (structures in front of the fire building would have created turbulent air flow, reducing air flow efficiency). The open rear doors, providing an outlet of approximately 240m2, facilitated efficient release of air travelling through the warehouse, creating an air flow-path. Following ignition, this fire was particularly fierce and destructive for a number of reasons; the fuel load consisted of large quantities of polyurethane foam products, releasing large volumes of volatile hydrocarbon gases when heated, resulting in particularly fierce fire behaviour. Stock was stored on elevated racking, creating highly efficient aeration of fuel loads, leading to more efficient combustion and worsening the effect of the increased oxygen supplies created by the wind. Lastly, the very high fuel load within the warehouse resulted in much greater fire activity.

A textbook result of a wind-impacted fire is the production of the "jet exhaust" on the downwind side of the fire. The volume of fire and size of openings at this fire resulted in flame height almost 20m above the roof of the warehouse, that produced large quantities of radiant heat resulting in ignition of exposures 40m away.

Initial call and response: Following ignition of the fire, an automatic fire alarm activation was received by FireComms at 1233 hours, resulting in the assignment of Pumpers 55 and 73. Pumper 55, under the command of SO Darren Gould was returning from a drill (facing away from the direction of the fire) when called by radio to the AFA activation. At this time, no '000' calls had been taken reporting the fire. As Pumper 55 turned in the direction of the fire, although still some distance away, firefighters observed a large column of thick black smoke. SO Gould immediately sent a RED message at 1235 hours, requesting the response be increased to a 3rd Alarm. Shortly after transmission of the 3rd Alarm the first of numerous '000' calls began to be received reporting the fire, which was by now visible from many parts of Sydney.

Firefighters arrive on scene: Pumper 55 was the first appliance to arrive on scene, finding a large number of people in the street at the front of the fire building. Firefighters found the furniture warehouse totally involved in fire. Large flames were venting from the rear of the building and a large thick column of black smoke was rolling upwards to a height of at least 1,000 m from the fully involved building. Numerous exposures were in immediate danger of fire spread. SO Gould observed high winds gusting and rapidly spreading the fire. At 1239 hours, SO Gould sent the following RED message;

"FIRECOMS PUMPER 55 RED! RED! RED! CODE 3, FURNITURE FACTORY TOTALLY INVOLVED IN FIRE. MULTIPLE EXPOSURES AT RISK. REQUIRE A 6TH ALARM AND POLICE FOR TRAFFIC CONTROL. SETTING UP FOR DEFENSIVE FIREFIGHTING. SO 55 IS IC AND THE INCIDENT WILL BE KNOWN AS YENNORA COMMAND."

SO Gould established command and set up an Incident Command Point, known as "Yennora Command." Immediately following transmission of the above message, SO Gould observed large flames venting from the eastern side of the warehouse and rolling across the top of the Exposure Delta (south) structure, placing that building under imminent threat. The Incident Commander's first objective was to stop fire spreading into the Delta Exposures (south), which were now in serious danger and directed Pumper 55 firefighters to deploy a 70mm attack line and direct an external defensive stream

Firefighters direct pulses of broken streams onto burning timber poles supporting high voltage power lines in Charlie Sector

Firefighters desperately advance 70mm lines to protect Delta exposures

onto the venting flames, in an attempt to control fire spread into the exposures. The Incident Commander sent a message by radio to next arriving Pumper 73 to go to the Bravo side of the warehouse to stop fire spread into exposures on the Bravo side.

Protection of Bravo exposures: Pumper 73, under the command of SO Drew Graham, positioned on Orchardleigh Street to the west of the fire building. SO Graham reported very high winds and large flames venting through the roof of the warehouse towards the Charlie side. SO Graham observed flame heights above the high voltage powerlines on the Charlie side. Pumper 73 firefighters deployed a 70mm attack line and commenced exposure protection along the Bravo side of the involved warehouse. SO Graham was appointed Bravo Sector Commander by the Incident Commander. Fire began to spread to a delivery truck located at the front of the warehouse. This fire was extinguished by Pumper 73 firefighters with a 38mm attack line.

Firefighters continue to protect Delta exposures: A short time after the defensive attack was commenced by Pumper 55 firefighters, the Incident Commander ordered this line be shut down and replaced with a 38mm attack and deployed into Delta One Exposure (south), to conduct offensive interior operations, to extinguish any fire burning within the exposure. This building had been converted to a community hall and at the time of the fire, there were 30 people within the hall, who managed to safely self-evacuate. Pumper 55 firefighters wearing SCBA advanced a 38mm line into Exposure Delta One (south) and commenced exposure protection from within the structure. During this time, firefighters observed large flames travelling over their heads above the roof skylights, venting from the warehouse and across the roof of Delta One exposure (south). Despite intense fire conditions, Pumper 55 firefighters held their position and continued to protect Delta exposure (south), extinguishing a number of interior spot fires. Firefighters continued to monitor the interior of Delta exposures for the duration of the incident, ensuring there were no further fire ignitions.

Firefighting operations commence on Charlie side: Pumper 49, under the command of SO Tony Sibary, was the third appliance to arrive on scene. At that time, the Incident Commander had been unable to complete a 360 size-up of the building, due to the physical size of the building and the urgent need to supervise firefighting operations in Alpha Sector. The Incident Commander directed the third incoming appliance (Pumper 49) to go to the Charlie side to conduct a size-up, which was completely unsighted to the Incident Commander. Pumper 49 went to the Charlie side of the fire building which was in Whitaker Street, and observed extreme fire conditions. Large flames at least 25-30m high were venting from the rear of the warehouse producing intense radiant heat that could be felt through the fire appliance, causing SO Sibary to direct the appliance driver to re-position Pumper 49 out of danger further along Whitaker Street to the west of the fire building. Upon exiting the appliance, all members of Pumper 49 crew wore SCBA due to the intense heat. SO Sibary reported the wind was "howling" on the Charlie side and that very little smoke was being produced by the fiercely burning fire. A large number of onlookers had also gathered to watch the fire on the Charlie side. Pumper 49 firefighters commenced a defensive fire attack with a 70mm attack line from the Bravo/Charlie corner. At that time, SO Sibary was too heavily committed to firefighting operations to take command of the sector and deferred command to the next arriving SO. Hazmat Pumper 85, under the command of SO Scott Donohoe arrived at the Charlie side and SO Donohoe was appointed Charlie Sector Commander. Hazmat Pumper 85 firefighters deployed a second 70mm attack line off Pumper 49 and attempted to conduct a defensive attack, however water supply was poor, causing firefighters to over-run supply. The handlines were shut down and switched to a ground monitor stream, however crews continued to experience water supply problems. The intensity of the fire caused rapid and early collapse of the concrete block wall on the Bravo side of the warehouse. SO Sibary reported that

From Charlie Sector, firefighters advance 70mm attack lines to protect Delta exposures being impacted by fierce fire conditions

Sector Commander Insp Tom Clarkstone tasks crews in heavily impacted Charlie Sector. Radiant heat was intense, numerous exposures were coming under threat and the facial expressions say it all


Firefighters operate defensive streams to protect Delta exposures

once this wall collapsed, firefighters were then able to direct attack streams directly onto the fire.

Staging area established: The Incident Commander established a Staging Area in Junction Street, approximately 200m east of the fire building and directed all further incoming appliances to report to the Staging Area. Pumper 72 was the first appliance to arrive at the Staging Area and was tasked with staging duties, under the command of Captain Phil Gardner.

Transfer of command: At 1246 hours Duty Commander Parramatta Inspector Bob McGowan arrived on scene and following a handover briefing with SO Gould, command was transferred to Inspector McGowan. SO Gould was appointed Alpha Sector Commander.

Aerial operations in Alpha sector: From Alpha Sector, Exposure Delta (south) continued to be impacted by fire from the fully-involved warehouse and remained severely under threat. Upon the arrival of Ladder Platform 27, the Incident Commander directed the aerial to position in Alpha Sector at the boundary between the fire building and Exposure Delta (south) and set up to protect the exposure with an aerial master stream. Firefighters Dan Fish and Jayson Sharman fitted stack tips to the aerial monitor, increasing the projection of the aerial stream. Pumper 27 began to supply water to the aerial appliance.

To increase the efficiency of aerial operations and to ensure the aerial could be used to greatest capacity, a decision was made by the Incident Commander to establish a water relay from the Railway Street mains, approximately 600m to the west of the fire building. Officer-in-Charge Pumper 30, SO Richard Schembri, was tasked with establishing the water relay. SO Schembri was designated as the "Railway Street Relay Group Commander". The water relay consisted of base pumping appliance Pumper 30, relay pumping to Hazmat Pumper 77, Aerial Pumper 47 and Pumper 27 and was known as the "Railway Street Relay Group". Once the relay was operating, aerial operations were able to be conducted with great effectiveness. The Ladder Platform provided a protective stream along the full length of the Exposure Delta (south) wall and a limited part of the Exposure Delta (north) wall, which was now being heavily impacted by fire. This stream was highly effective, preventing fire extension to Delta exposures on the southern side of the fireground.

Pumper 27 firefighters wearing SCBA and equipped with a thermal imaging camera deployed a 38mm attack line and made entry to exposures at Delta One and Two (south), where limited fire ignitions had occurred. Firefighters were able to quickly extinguish these fires and fire spread was contained to a small area.

Transfer of command: Zone Commander MW2 Superintendent Selwyn Mathias attended the fireground and following a handover briefing, command was transferred to Superintendent Mathias and Inspector McGowan appointed Operations Officer.

Operations continue to protect severely threatened exposures in Charlie sector: In Charlie Sector, firefighters were now experiencing the full brunt of the fully-involved warehouse, located downwind of the venting fire. High winds were gusting and swirling and firefighting conditions were horrendous. The fire was being pushed diagonally by the strong south-easterly wind, with large flames at least 15 to 25 metres high spreading from the western end to the eastern side of the warehouse in the Charlie Sector, producing enormous radiant heat. Firefighters located in Charlie Sector were confronted with fierce fire conditions now impacting Exposure Delta (north), a two-level smash repair premises containing numerous flammable materials including oxyacetylene and LPG gas cylinders. A stack of timber pallets and a pad-mounted electrical substation located within the front yard of the smash repairers were fully involved in fire. A large above-ground town's main gas service adjacent to the fully involved substation was being impacted by heavy fire. A delivery truck at this location was beginning to ignite. All materials within the 18m x 70m open yard at the rear of the fire building were completely involved in fire, including a large stack of externally stored lounges and sofas. 20m high trees and bushes at the rear of the warehouse were totally involved in

Within Charlie Sector, all combustible materials ignited from fierce radiant heat produced from the venting fire

fire. A motor vehicle parked on the street was also totally involved in fire, the fuel tank had ruptured and a running fuel fire was travelling down the street. Radiant heat from fires burning on the southern side of Whitaker Street were beginning to cause pyrolisation of motor vehicles and buildings on the northern side of street, placing them in danger of ignition. Firefighters in Whitaker Street reported that as the fire conditions intensified, the wind conditions worsened and became stronger.

As conditions worsened in Charlie Sector, Charlie Sector Commander SO Donohoe sent an urgent message to the Incident Commander for further resources to be responded to Charlie Sector to assist in protecting Delta exposures. Upon receiving this request, the Incident Commander directed the Staging Officer to send all available appliances within the staging area to Charlie Sector. The Staging Officer deployed Rescue Pumper 57 and Pumpers 19, 65 and 72 from the staging area to Charlie Sector. At the same time, the Incident Commander sent a further RED message increasing the response to an 8th Alarm at 1318 hours, ensuring adequate resources were present at the fireground to maintain three-deep deployment.

By now the main priority of the Charlie Sector Commander was protecting Delta (north) exposures. As the fire moved in an easterly direction, conditions eased enough that Bravo exposures were no longer in danger. Charlie Sector Commander directed that all 70mm attack lines being operated near the Bravo/Charlie corner be shut down to provide firefighters at the Charlie/Delta corner with as much water as possible to save the Delta (north) exposures that were being heavily impacted.

Fierce radiant heat had caused the tops and cross arms of timber power poles carrying 415 volt and 11kV high voltage powerlines to ignite, presenting the threat that live powerlines could fall onto Whitaker Street, near where firefighters were working. Charlie Sector Commander broadcast a warning to all firefighters to remain out of the fall zone of the powerlines and an urgent request was sent for the attendance of the electrical authority to isolate power. Firefighters from Pumper 49 and Hazmat Pumper 85 began directing short pulses of broken streams from a high pressure hose reel and 38mm hose onto the burning poles, in an attempt to extinguish fires, prevent the timber cross arms and poles burning through and to stop the live powerlines dropping. All SOs in Charlie Sector were particularly vigilant to the powerline hazard and ensured no crews accidentally entered the potential fall zone. Electricity authority specialist high voltage crews attended the scene and were able to isolate power via disconnection to the affected powerlines, making the area safe from this hazard.

Rescue Pumper 57 under the command of SO Adam Turner-Browne was the first appliance to arrive at the northern end of Charlie Sector, at the Charlie/Delta corner, where conditions were rapidly deteriorating. Numerous exposures were being heavily impacted by fire and in imminent danger. SO Turner-Browne conducted a rapid survey of the exposures and determined Exposure Delta One (north) was most seriously at risk. The second level of the smash repairers was now starting to become involved in fire. Flames from the warehouse were spreading into the second level of the smash repairers through breached roof skylights and impacting oxyacetylene gas cylinders and numerous other volatile and flammable materials used in the smash repairing business. Rescue Pumper 57 firefighters wearing SCBA deployed a 70mm attack line and began to conduct direct fire attack onto the involved smash repairers. Conditions were so severe where firefighters were operating that a 38mm line was deployed to provide protection for the Rescue Pumper 57 fire attack crew, who were operating in an offensive interior attack mode. All the efforts of firefighters were now directed at trying to save the smash repairers, to stop fire from spreading to further exposures along Whitaker Street. The mezzanine level of the smash repairers was alight and fire had dropped down into the repair workshop. The aggressive interior attack by Rescue Pumper 57 firefighters was successful and the fire within the smash repairers was brought under control and extinguished. The gas cylinders within the smash repairers were left in place (due to

the dangers of attempting to move them), cooled and monitored.

Duty Commander West Inspector Tom Clarkstone arrived on scene and was assigned the role of Charlie Sector Commander. A second 70mm attack line was placed into operation by Pumper 19 firefighters, directing an attack stream onto fire burning around the smash repairers. Heavy fire continued to impact Delta (north) exposures and a third 70mm attack line was placed in operation by Pumper 65 firefighters, who directed a defensive steam between the fire building and Exposure Delta (north) 1, to establish a cut-off and protect Delta exposures. Firefighters continued to experience severe conditions of intense radiant heat, gusting wind, thick smoke and fierce flames.

Water shortage again became an issue in Charlie Sector, as firefighters continued to experience severe fluctuations in water supply. The Incident Commander directed that a water relay be established from a main located on Junction Street, to the east of the fire building. This relay became known as the "Junction Street Relay", under the command of Junction Street Relay Group Commander SO Vince Pelligra, officer-in-charge of Pumper 65, the base pump in the relay. The Junction Street Relay Group consisted of Pumpers 65 and 19. Ladder Platform 92 was deployed to Charlie Sector, to assist protection of Delta exposures. Once the water relay was established, lines from the relay were connected directly to the aerial appliance, enabling an effective aerial attack to be conducted. In conjunction with Ladder Platform 27, this aerial stream successfully secured the eastern edge of the warehouse fire, stopping fire spread and protecting all Delta exposures.

Hazmat operations: Hazmat 85 firefighters set up Area Rae monitors at strategic points around the fireground to conduct atmospheric monitoring. Hazmat crews were also using four-headed gas detectors to monitor the atmosphere. On several occasions, hazmat crews detected excessive carbon monoxide levels and advice was provided to Sector Commanders, who ensured firefighters were wearing SCBA at these locations. Hazmat 85 crews also assisted air cylinder rotation, changing and replenishing air cylinders, due to the large amount of SCBA wearing taking place at this incident. Hazmat crews monitored the smoke plume being produced by the fire.

Members of HART (Hazmat Advisory Response Team) monitored water run-off and conducted pH testing. HART members conducted a hazard assessment and provided relevant advice to the Incident Commander, further increasing the safety of firefighters.

Fireground command structure expanded: As additional senior officers arrived at the fireground, the incident command structure was expanded, providing the Incident Commander with a greater span of control, increased levels of fireground accountability and greater situational awareness, ultimately resulting in greater safety for all firefighters operating at the fireground. The expanded command structure was as follows;

- Incident Commander: Zone Commander MW2 Superintendent Selwyn Mathias.
- Operations Officer: Duty Commander MW2 Inspector Bob McGowan.
- Alpha Sector Commander: Duty Commander ME3 Inspector Scott Rainnie.
- Bravo Sector Commander: OIC Pumper 73 SO Drew Graham.
- Charlie Sector Commander: Duty Commander MW2 Inspector Bob McGowan.
- Staging Officer: OIC Pumper 72 Captain Phil Gardner.
- Senior Adviser to the IC: Area Commander Metropolitan West (Acting Chief Superintendent Alex Scott).
- Senior Adviser to the IC: Director Metropolitan Operations (Acting Assistant Commissioner Rick Griffiths).
- Media Officer: Superintendent Ian Krimmer.
- Junction Street Relay Group Commander: OIC Pumper 65 SO Vince Pelligra.
- Railway Street Relay Group Commander: OIC Pumper 30 SO Richard Schembri.

Commissioner attends the fireground: At the height of firefighting operations, Commissioner Mullins attended the incident and was given a full briefing on firefighting operations by the Incident Commander. Commissioner Mullins conducted a tour of the fireground and witnessed firsthand 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 the Incident Management Team and provided advice in a command/expert senior advisory capacity.

Firefighting operations in Charlie sector continue: Firefighters on handlines continued to attack the warehouse fire. Crews forced locked gates and gained entry to the open yard located at the rear of the warehouse. Significant collapse of the warehouse walls had occurred, enabling crews to direct external defensive streams onto the fire. The fully involved car and running fuel fire were extinguished by Rescue Pumper 57 and Pumper 49 crews.

CAFS Class A foam aerial attack placed into operation: Ladder Platform 18 was directed by the Incident Commander to set up at the Bravo Charlie corner, to conduct direct attack on the fire. Pumper 41 initially supplied water to the aerial appliance, which was able to attack the warehouse fire through breached roofing irons. CAFS Pumper 31 was positioned in Charlie Sector. The aerial attack was switched from water to Class

Firefighters drag more 70mm lines into position

A foam, as CAFS Pumper 31 supplied Ladder Platform 18 Class A CAFS. The CAFS attack achieved significant fire knockdown. Again, wind was a factor in the placement of the appliance and direction of the stream, with some break-up of the stream occurring due to the impact of the strong wind. Overall however, firefighters reported CAFS fire suppression was quite effective. A major advantage of the CAFS attack was the minimal volume of water required to undertake CAFS operations, at a fireground where water supplies remained limited.

Fire brought under control: Three ladder platforms were now in operation and the fire perimeter was secured on all sides, via effective aerial stream cut-offs. All exposures were now protected. Two water relays were in operation, ensuring adequate water supplies were provided for aerial operations. With the fire edges secure, master stream operations were able to be directed onto the involved warehouse, bringing the fire under control. After several hours of intense firefighting, fire activity within the furniture warehouse began to significantly diminish, enabling the Incident Commander to send an Incident Contained message at 1645 hours. Throughout the duration of firefighting operations, firefighters continually monitored all exposures, to ensure there had been no ignitions within the structures, and all were successfully protected.

Following the transmission of the Incident Contained message, the Incident Commander began to scale down operations. A fire duty remained on scene for a further 24 hours.

Media briefings: Superintendant Mathias conducted a media conference with the large media contingent in attendance at the fire, praising the efforts of firefighters whose efforts had undoubtedly stopped the fire spreading to numerous other buildings directly in the fire's path. The fire was the lead news story on all radio and television networks that day and later that evening.

Assistant Director Public Affairs Andrew Parsons, working in conjunction with Operational Media Coordinator Superintendent Ian Krimmer, worked extremely hard behind the scenes, providing media crews with safe access to the incident, organising media briefings and providing timely and detailed briefings to the media. The large scale of the fire, which could be viewed from many parts of Sydney, generated very large media interest. Mr Parsons provided constant updates to the media via FRNSW social media, ensuring the largest possible audience was reached and the most timely and accurate information concerning FRNSW operations was reported.

Incident conclusion: The warehouse and contents were completely destroyed by the fire. Although some fire had spread into Delta one (north and south) exposures, these ignitions were able to be rapidly extinguished by firefighters, with minimal fire damage occurring. Most occupancies were operating again as usual the next day. By the following week, occupancies that had been impacted by fire had resumed regular business.

Notes

1. Firefighting conditions were horrendous at this fire, particularly on the downwind side of the involved warehouse, where firefighters battled 30m flames, intense radiant heat, gusting and swirling winds, large volumes of smoke, poor water supply and numerous fire ignitions. It is only due to the determination, skill and courage of firefighters that this particularly aggressive fire was stopped from spreading to numerous other exposures directly in the fire's path.
2. Again, the wind was a key factor at this fire. A wind-impacted fire event quickly developed on a very large scale, with large openings at the front and rear of the warehouse creating airflow path entry/exit points, and consequent airflow path within the fire building, resulting in ferocious and extreme fire conditions. The transition of this fire from light smoke involving a smouldering fire to rapid fire growth and heavy fire involvement in less than a minute is consistent with typical wind-impacted fire behaviour. The situation was worsened due to the geography of the fire location (facilitating the entry of laminar air flow and therefore higher concentrations of oxygen),

Sector Commander Insp Tom Clarkstone tasks Charlie Sector crews, assisted by Area Commander CSupt Alex Scott

Firefighters position lines to protect Delta exposures

Ladder Platform 18 conducts an aerial attack on the fire with Class A CAFS foam pumped by CAFS Pumper 31

a large quantity of a highly volatile fuel load and fuel load arrangement on racking, facilitating highly efficient aeration. According to fire engineers from the National Institute of Standards and Technology and Underwriting Laboratory, this type of scenario can increase fire rate of combustion, fire intensity and rate of spread by up to 300%. Most significant was the fire exhaust venting on the down-wind side of the structure, producing 25–30 metre flame lengths, and the release of very large quantities of radiant heat.

3 The first arriving firefighters were confronted with a rapidly expanding fire situation, involving extreme fire behaviour, numerous surrounding exposures at high risk, and very limited resources. The initial Incident Commander conducted a rapid size-up, identifying the incident critical factors, including the exposures most at risk and immediately placing the first hoseline in position to reduce fire spread to that exposure. This decision was critical and had an immediate impact on firefighting objectives, securing the fire edge and preventing fire spread at a critical boundary.

4 The Incident Commander made a series of key decisions that were critical to safely and effectively controlling this fire. The decision to direct incoming appliances to the Charlie side of the building, which was unsighted to the Incident Commander, provided critical firefighting resources to a location that was at extreme risk. The timely response of resources to this sector enabled fire control to be established at a time when exposures were being heavily impacted by fire. Fire spread to these exposures would have been difficult to contain, given the highly volatile fuel loads within the exposures and the poor water supplies being experienced by firefighters.

5 Firefighters operating in Charlie Sector must be congratulated on their courage, determination and skill, battling fierce fire conditions under very adverse and difficult circumstances.

6 High voltage powerlines presented major safety issues to firefighters; nevertheless, very effective control measures were put in place that enabled the hazard to be controlled and firefighting to continue safely.

7 This fire was detected by AFA shortly after ignition. The crew of Pumper 55, who were out of station at the time, observed a large column of thick black smoke within two minutes of being assigned to the call, indicating the speed and ferocity of fire spread. This type of fire behaviour is typical of a wind-impacted fire event.

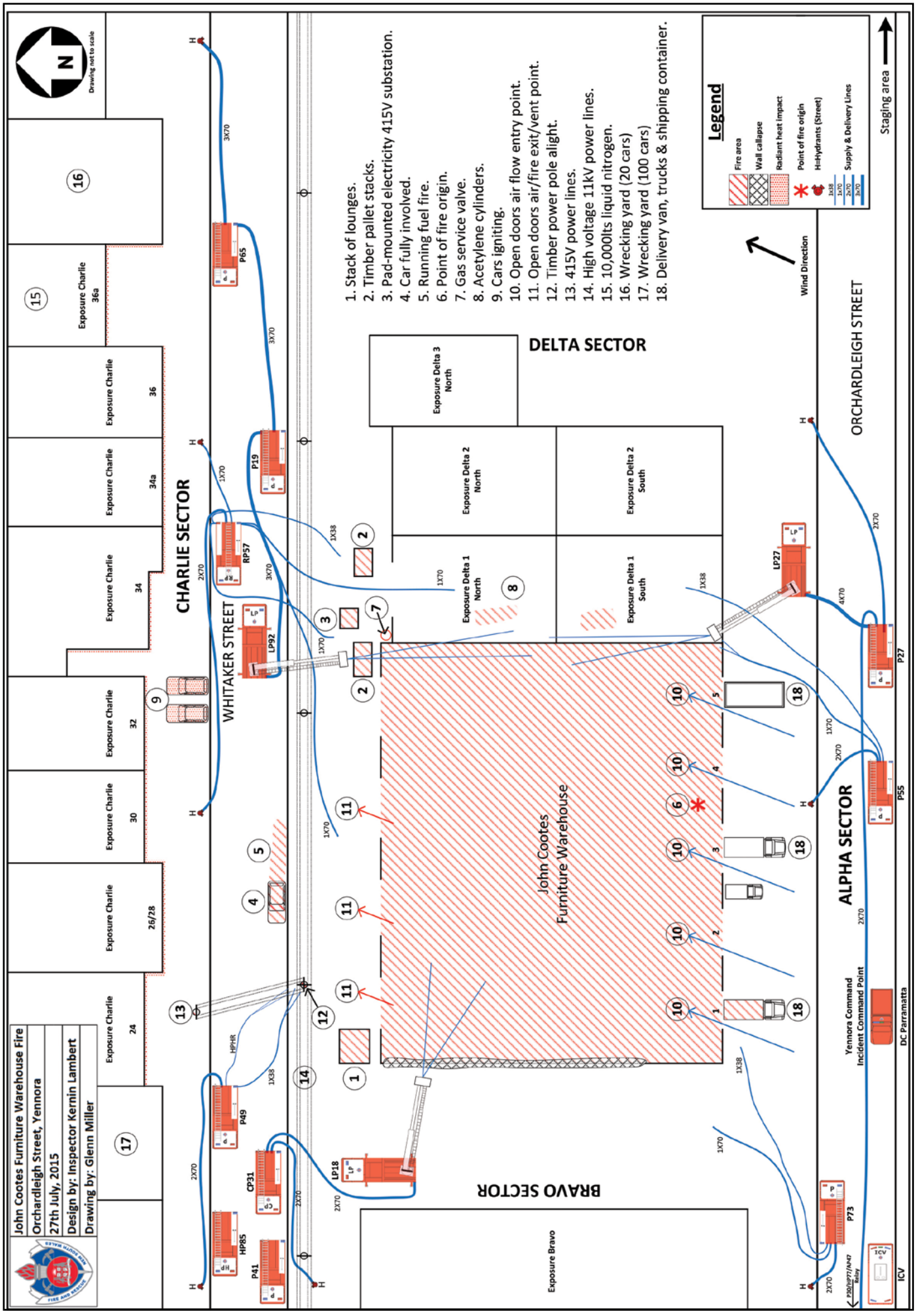
8 Numerous hazards were present at this fire. These hazards were identified by FRNSW crews and appropriate control measures established, ensuring operations were undertaken safely and that no firefighters were injured.

9 The benefit of establishing a staging area and ensuring a tactical reserve of resources is maintained within the staging area was demonstrated when Charlie Sector Commander called for additional appliances to respond to the rapidly deteriorating situation in Charlie Sector. Additional crews were immediately available and able to be deployed without delay.

10 Sectoring ensured span of control was maintained, accountability was maintained and the Incident Commander maintained situational awareness of the entire incident. This also helped to ensure all incident objectives were achieved and all operations were conducted safely.

11 The volatile nature of polyurethane foam products was demonstrated. When heated, these materials release hydrocarbon gases, resulting in intense fire behaviour, high heat release rates and rapid fire growth. Firefighters should always be aware of the intense fire behaviour often associated with these materials.

12 All FRNSW crews who responded to Yennora should be congratulated on their efforts at this extremely difficult and dangerous fire. **END**


John Cootes Furniture Warehouse Fire
Orchardleigh Street, Yennora
27th July, 2015
Design by: Inspector Kernin Lambert
Drawing by: Glenn Miller
Drawing not to scale
1. Stack of lounges.
2. Timber pallet stacks.
3. Pad-mounted electricity 415V substation.
4. Car fully involved.
5. Running fuel fire.
6. Point of fire origin.
7. Gas service valve.
8. Acetylene cylinders.
9. Cars igniting.
10. Open doors air flow entry point.
11. Open doors air/fire exit/vent point.
12. Timber power pole alight.
13. 415V power lines.
14. High voltage 11kV power lines.
15. 10,000lts liquid nitrogen.
16. Wrecking yard (20 cars)
17. Wrecking yard (100 cars)
18. Delivery van, trucks & shipping container.
Legend
Fire area
Wall collapse
Radiant heat impact
Point of fire origin
H=Hydrants (Street)
Supply & Delivery Lines
Wind Direction
Staging area
CHARLIE SECTOR
DELTA SECTOR
ALPHA SECTOR
BRAVO SECTOR
WHITAKER STREET
ORCHARDLEIGH STREET
John Cootes Furniture Warehouse
Exposure Charlie 24
Exposure Charlie 26/28
Exposure Charlie 30
Exposure Charlie 32
Exposure Charlie 34
Exposure Charlie 34a
Exposure Charlie 36
Exposure Charlie 36a
Exposure Delta 1 North
Exposure Delta 1 South
Exposure Delta 2 North
Exposure Delta 2 South
Exposure Delta 3 North
Exposure Bravo
Yennora Command
Incident Command Point
DC Parramatta
ICV
P65
P19
RP57
LP92
P49
HP85
P41
CP31
LP18
LP27
P27
P55
P73

View of warehouse fully involved from Alpha Sector

FRNSW FIREFIGHTERS CONTROL ENORMOUS 10TH ALARM EASTERN CREEK MOTOR VEHICLE PARTS WAREHOUSE FIRE

Incident summary: A motor vehicle parts national storage and distribution warehouse located at Eastern Creek was severely damaged during the severe hailstorm of 25 April 2015, sustaining major structural failure, including partial collapse of the pre-cast concrete walls, internal steel support frame and metal sheet roof. The structure remained fully stocked with products used in the motor vehicle parts industry (many formed of thermoplastic construction) located on vertical storage racking, including at least 60,000 litres of automobile fluids and oils. The damage caused by the hailstorm had destroyed the installed fire protections and detection systems used to protect this very large 48,000m^2 open plan warehouse, including the early suppression fast response automatic sprinkler system, hydrant ring mains and stored water tank. The numerous openings and breaches within the structure created large ventilation openings, facilitating a plentiful airflow into the warehouse (therefore promoting rapid fire spread). When the fire started, wind was blowing directly into the side of the warehouse where almost the entire side wall had collapsed. The fire took hold with such speed, the first responding FRNSW appliance transmitted a Red message for response of a 5th Alarm before leaving the engine bay. This was one of the largest structure fires responded to by FRNSW in many years and presented responding firefighters with numerous hazards, challenges and difficulties; Nevertheless, our firefighters responded professionally, employing considered tactics and strategies with diligence and determination, successfully bringing this enormous fire under control without further loss to numerous surrounding exposures and importantly, without injury to firefighters.

Incident type: Storage and distribution warehouse fire.

Time, date and place of call: 1540 hours on Thursday 30 July 2015, Peter Brock Drive, Eastern Creek.

FRNSW response: Pumpers 43 (Seven Hills), 32 (Mount Druitt), 72 (Merrylands), 27 (Parramatta), 55 (Guildford), 73 (Fairfield), 65 (Rydalmere), 30 (Lidcombe), 49 (Cabramatta) and 83 (Riverstone), CAFS Pumper 31 (Busby), Rescue Pumpers 57 (Wentworthville), 63 (Blacktown), 78 (Dunheved), 101 (Bonnyrigg Heights) and 102 (Regentville), Aerial Pumpers 86 (Penrith), 97 (Huntingwood) and 7 (Horningsea Park), Ladder Platforms 4 (Darlinghurst) and 27 Parramatta), Hazmat Pumpers 77 (St Marys) and 85 (Chester Hill), Heavy Hazmats 77 and 85, Heavy Rescues 63 and 102, Tanker 78, CAFS Tanker 78, Logistics Support Vehicles 1 (City of Sydney) and 21 (Kogarah), Incident Control Vehicle Bravo, USAR 1 and Rehabilitation Pod 1.

Duty Commanders MW1 (Huntingwood), MW2 (Parramatta), and ME3 (Ashfield), Zone Commander MW1 (Acting Superintendent Michael Morris), Area Commander Metropolitan West (Acting Chief Superintendent Alex Scott), Director Community Safety (Assistant Commissioner Mark Whybro), Deputy Commissioner Jim Smith, Assistant Director Public Affairs Andrew Parsons, Fleet Operations Officer, Operational Media Coordinator and Team Leader Hazmat Advisory Response Team.

In addition to above, a further 30 FRNSW appliances and numerous other senior officers and specialist support staff responded to the incident for relief and fire duty purposes.

Additional agencies/services in attendance: NSW Rural Fire Service, NSW Police, Ambulance Service of NSW, NSW Roads and Maritime Services, gas and electricity authorities, Regional Emergency Management Officer and heavy machinery contractors.

Fireground description: The fire building was a national storage and distribution warehouse for the motor vehicle industry. The building was 320m x 150m x 12m high, of steel frame, precast concrete panel and Klip-lok metal sheet roof construction. Two office buildings were located on the northern side of the fire building; the first office was 20m x 50m, two levels of concrete, glass and steel construction. The second office building was 20m x 75m, two levels of concrete, glass and steel construction.

The fire building had been severely damaged during a severe hailstorm that occurred on 25 April 2015, causing major structural collapse to occur to sections of the roof, walls and internal steel frame. Due to severe damage to the building, it was now unoccupied. At the time of the fire, contractors were in the process of demolishing the building, commencing at the eastern end. They had removed the first 55m of the building, leaving a further 265m x 150m remaining standing. The standing section of structure contained large quantities of stock, located within polyurethane plastic wrapping, cardboard packaging and light timber crates, stored on vertical racking 9.0m high. A large quantity of the stock was made of plastic. The warehouse contained 60,000 litres of oil based automotive fluids, stored in 500ml and one litre plastic containers, located on racking. As the demolition contractors progressed, salvage contractors were removing stock, resulting in a large pile of disused packaging material, approximately 100m x 30m, located at the eastern end of the fire building. Material within this pile consisted of cardboard boxes, polyurethane plastic and foam wrapping and light timber crates. Due to the effects of the hailstorm, the site was highly unstable, much of the internal steel support frame had been destroyed and many of the pre-cast concrete panels were unsupported. The structural failure due to the hailstorm resulted in large sections of the northern wall and roof separating from the office buildings, causing most of the northern side of the structure to be open and exposed to the prevailing weather (in particular any wind blowing from the north).

As a result of the major structural damage caused by the hailstorm, the ESFR (early suppression fast response) automatic sprinkler system had been irreparably damaged, was completely inoperable and had been disconnected. The hydrant ring main and installed hose reels had similarly been destroyed and were therefore disconnected. A large million-litre stored water tank used

Pumper 27 supplying water to Charlie Sector. Aerial Pumper 7 attacking the fire in the background


View of fireground from Polair 1. Aerial Pumper 97 is visible to the left of the office building on the left side of the photograph, indicating the size and scope of this very large building fire. Photo supplied courtesy of NSW Police Air Wing

Hazmat Pumper 77 was the base pump in the relay to Bravo Sector

Aerial Pumper 97 placed the first attack stream into operation at the fire

78 Station firefighters direct a CAFS stream onto the fiercely burning fire in Charlie Sector

Aerial Pumper 97 directs an aerial master stream onto the fully involved building

to supply the ESFR system had been drained and was empty. The fire detection system and automatic fire alarm had been severely damaged during the hailstorm and disconnected. The site had no operable fire detection or installed fire suppression systems.

Exposure A consisted of a group of five factories 50m x 200m, located 40m to the west of the fire building, on the western side of Peter Brock Drive. A pad-mounted 415V electricity substation was located at the front of the fire building, near the Alpha/Bravo corner, within the collapse zone of the building walls.

Exposure B consisted of the M4 Motorway, located 60m to the north of the fire building. The fire broke out at the start of the afternoon peak commute.

Exposure D consisted of a major national database centre for a national food retail chain, 100m x 80m, located 40m to the south of the fire building, on the southern side of Peter Brock Drive. This centre operated 24 hours a day and contained approximately 100 staff.

FRNSW activities at site prior to fire: Following the hailstorm and resulting severe structural damage to the building, FRNSW had visited the site on several occasions to conduct familiarisation exercises. Firefighters were aware the site still contained a large quantity of stock and contents, although no installed fire protection systems were in service. Firefighters were also familiar with the hazards on site, in particular the unstable structure. Alternate water supplies were identified from nearby hydrants. Firefighters were aware that lack of working fire detection systems would probably mean that any fire would be at an advanced stage upon discovery and notification to FRNSW, and therefore most likely all firefighting would be completely defensive (particularly given the highly unstable nature of the structure). Similarly, due to the large stock load that remained within the building, a greater alarm would be required to be responded on the initial alarm assignment. This preplanning and familiarisation would later prove to be critical.

Weather at time of fire: Northerly winds at 24km/h, gusting to 39km/h (recorded at 1331 hours), temperature 19°C, relative humidity 36% and mean sea level pressure 1019 hPa, recorded at the Bureau of Meteorology Richmond RAAF Base automatic weather station.

Situation prior to FRNSW arriving on scene: Contractors were operating oxyacetylene flame cutting equipment to cut through steel sections of structure at the eastern end of the building when sparks ignited discarded packaging material located nearby. Workers attempted to extinguish the fire with portable fire extinguishers and an operable hose reel located near the location of the cutting, however the fire rapidly spread internally into stock

Numerous handlines in operation attempting to control the stack fire

Firefighters battled fierce conditions in Charlie Sector

located on racking and quickly took hold. The building was completely open on the northern side, due to structural collapse, allowing entry of the northerly wind, causing the fire to intensify significantly. Numerous other openings and structural breaches provided significant ventilation within the warehouse, allowing for a large airflow through the structure, resulting in rapid fire spread and intense fire activity. Within minutes, fire had spread through the entire warehouse and the structure was totally involved in fire, producing a large column of thick black and dark grey smoke. At the same time, fire spread into the large pile of discarded materials located to the east of the building. Numerous passers-by and motorists began to ring '000' to report the fire. Several motorists travelling along Huntingwood Drive drove directly to nearby 97 Station to report the fire.

Initial call and response: Shortly after the ignition of the discarded packaging material, workers on site called '000' to report the fire, indicating the fire involved rubbish. At this time, there was no additional information indicating the building was alight or in danger. The NSW Rural Fire Service was initially assigned to the call (as the call was initially reported as a non-structure fire within a NSWRFS area).

The crew at 97 Station were conducting drill when a passer-by ran into the station to report the fire. They were met by Senior Firefighter Shane McDonell,
who observed a column of black smoke from the direction of the reported fire. At the same time, a local business opposite the fire building telephoned 97 Station directly to report the fire, stating the motor vehicle parts warehouse that had collapsed during the hailstorm was on fire. Numerous '000' calls were now being taken, with motorists driving on the M4 Motorway reporting the fire. When it became apparent the fire involved a large structure, NSWRFS Control requested the response of FRNSW. SF McDonnell called out to Station Commander SO Rick Cousins (who was on the telephone taking details from the caller reporting the fire) that a large column of black smoke was visible. Seconds later the 97 Station turnout system activated, responding Aerial Pumper 97 to the fire. SO Cousins directed SF McDonnell to send a Code 1 via radio to FireComs and request a 2nd Alarm. SFF McDonnell, who was at the appliance then sent a RED message, reporting large volumes of black smoke visible and requesting a 2nd Alarm.

Approximately 30 seconds later, Aerial Pumper 97 began to leave the station engine bay, when SO Cousins saw a very large column of thick black smoke, indicative of a major building fire in progress. SO Cousins immediately sent the following RED message;

Fuelled by polyurethane foam bags, firefighters battled fierce conditions in Charlie Sector

Incident Controller Supt Michael Morris and Area Commander Alex Scott discuss firefighting tactics

Firefighters place standpipes in operation to supply Delta Sector master stream operations

"FIRE COMS AERIAL PUMPER 97 RED! RED! RED! COLLAPSED BUILDING FROM THE PREVIOUS HAILSTORM IS WELL ALIGHT, REQUIRE A 5TH ALARM. BUILDING IS IN RFS AREA."

SO Cousins stated that as Aerial Pumper 97 responded to the fire, the smoke column became darker and increased in size. En route, SO Cousins was aware the structure was in a highly unstable collapsed state.

FireComs informed Duty Commander MW1 Inspector Glenn Launt of the fire. From the Huntingwood Zone Office at Huntingwood, Inspector Launt and Zone Commander MW1 Acting Superintendent Michael Morris could clearly see the very large smoke plume being produced by the fire and it was obvious that it was a major structure fire. The smoke plume was getting darker, flames were now visible within the smoke plume and the size of the fire was continually expanding. Immediately, Inspector Launt and A/Superintendent Morris responded to the fire. En route to the fire, A/Superintendent Morris observed the fire was rapidly growing in size.

First FRNSW appliance arrives on scene: Upon arrival of Aerial Pumper 97 minutes later, SO Cousins found the entire warehouse totally involved in fire and burning from end to end. An enormous plume of black smoke was rolling upwards from the building. SO Cousins sent an arrival message reporting the structure was totally involved in fire, confirmed the response of a 5th Alarm and established command (known as "Eastern Creek Command"). At this time, police were evacuating people from the area. SO Cousins (now the Incident Commander) advised his objectives were to get the Aerial Pumper into the best possible position where it could be most effective and to organise water supplies. A rapid size-up enabled the Incident Commander to direct Aerial Pumper 97 to position and set up on the northern side of the building (Bravo Side), towards the eastern end of the site. From this location, the aerial had safe access to the fire and was also able to attempt to establish a cut-off to fire spreading towards the discarded materials pile. Aerial Pumper 97 was placed into operation as a water tower and commenced a direct attack on the fire, with the limited water supplies available from the appliance water tank. The appliance was in a safe location and not in danger of being impacted by fire, however the closest serviceable hydrants were approximately 300m away. Aware there were no water supplies on site, however booster hydrants were located at the front of industrial premises to the west of the fire building, the Incident Commander sent a further message directing incoming appliances to go to

the booster system and establish a water relay to Aerial Pumper 97.

Response increased to an 8th Alarm: Large volumes of black smoke were rolling across Peter Brock Drive to the south of the fire building (Delta Side), making this section of road impassable. Smoke and large volumes of burning debris were being pushed by wind to the south of the fire building and impacting Exposure Delta. Inspector Launt and A/ Superintendent Morris arrived at the fireground. Due to the size of the fire, A/Superintendent Morris immediately increased the response to an 8th Alarm.

Transfer of command: Superintendent Morris conducted a handover briefing with SO Cousins and incident command was then transferred to Superintendent Morris. SO Cousins was appointed Bravo Sector Commander. An incident command post was established within a concourse area, at the front of Exposure Alpha. The Incident Commander nominated the western side of the building the Alpha Side, the side facing north was now the Bravo Sector, the eastern end of the fireground was the Charlie Side and the western side of the building along Peter Brock Drive became Delta Sector, under the Command of Delta Sector Commander Inspector Launt.

Water relay established: Second arriving FRNSW appliance Hazmat Pumper 77 commenced to establish a water relay from the 375mm main located on Peter Brock Drive to the west of the fire building, to supply water to Aerial Pumper 97. Hazmat Pumper 77, under the command of SO Jeff Sheather, located supply hydrants attached to the brigade booster fitting (connected to a 375mm main) located on the western side of Peter Brock Drive. In establishing the relay, Pumper 32 under the command of SO Rod Kinder, conducted a forward hose lay. Relay base pumping appliance Hazmat Pumper 77 obtained water supplies from the supply hydrants and then relay pumped to Pumper 32, who then supplied water to Aerial Pumper 97. Once water supply was secured via relay, Aerial Pumper 97 was able to conduct a sustained attack on the fire. The water relay was established under the command of Relay Group Commander SO Sheather. SO Kinder was appointed Bravo Sector Commander. Pumper 55 firefighters commenced to attack the disused material stack fire with a 70mm attack line, deployed from Aerial Pumper 97. Although firefighters slowed the advance of the fire, a significant amount of fire was deep seated, burning within the stack and beyond the reach of hose streams.

Command considerations: Due to the dangers of collapsing concrete wall panels on the western side of the building, the IC declared the Alpha Side of the building was an exclusion zone. A staging area was established on Peter Brock Drive, 300 metres to the west of

Pumper 27 SF Ben Forner supplies water to firefighters operating in Charlie Sector

Firefighters battled fierce conditions in Charlie Sector

The fully involved warehouse, containing large quantities of combustible products, including thousands of litres of automotive fluids, produced a significant smoke plume

the fire building. Rescue Pumper 78 was the first appliance to arrive at the staging area and OIC Rescue Pumper 78 SO Dave Watson was appointed Staging Officer. The Incident Commander conducted a size-up of the incident, identifying the incident critical factors and developed an incident action plan, consisting of incident objectives, strategies, tactics, identification of hazards and appropriate control measures and identification of the necessary resources to achieve objectives. Objectives of the Incident Commander included the placement of aerial appliances to enable master stream operations and establishment of water relays to provide the aerials with the necessary water supplies to mount an effective attack. The NSWRFS Zone Commander for the Cumberland Zone attended the incident command post and conferred with the Incident Commander. Due to the large quantity of hazardous materials stored on the site and involved in fire, the incident was declared a hazardous materials incident and remained under the command of FRNSW.

Police attended the incident command post and liaised with the Incident Commander concerning evacuations and local road closures around the fireground. The Incident Commander worked closely with police to ensure the safety of the public was maintained throughout the fire and at the same time the impact to the public was minimised. Heavy Rescue 63 was tasked with Rapid Intervention Team duty and established the RIT staging area on Peter Brock Drive near the incident command post.

Hazmat operations: Heavy Hazmat 77 firefighters conducted atmospheric monitoring, setting up Area Rae monitors in all sectors. Firefighters carried out a reconnaissance of the area to determine water run-off pathways and established booms within run-off paths. Crews monitored the smoke plume and conducted testing of water run-off. Heavy Hazmat 85 firefighters assisted air cylinder replacement. Inspector Duncan White established a Hazmat Sector and took command of hazmat operations within that sector.

Operations to protect Delta exposure: A key objective of the IC was to ensure there was no fire extension into Delta Exposures. Operations in Delta Sector were conducted under the command of Duty Commander MW1 Inspector Launt. Exposure Delta One was located immediately downwind of the fire building and was being impacted by large volumes of smoke, airborne burning materials and embers. Numerous spot fires began to ignite within bushes, shrubs and mulch located in close proximity to the Exposure One building. Rescue Pumper 57 entered the grounds of Exposure One and commenced to extinguish small spot fires, assisted by firefighters from Rescue Pumpers 101 and 102.

A number of larger areas of grass and vegetation were alight within these grounds, which was extinguished by NSWRFS volunteers with tankers. The Exposure One building was a national data centre, containing large banks of computers. Staff advised that if the centre was shut down, short and long term damage would occur to the national retail business. Rescue Pumper 63 firefighters under the command of SO Michael Harrison entered the building and remained with staff, monitoring atmospheric concentrations, ensuring all people remained safe and enabling the centre to continue operating. The centre was being impacted by heavy concentrations of smoke for approximately 90 minutes.

A heavy plume of smoke, containing large quantities of burning materials, continued to be pushed by the wind in a southerly direction towards areas of open grass and bushland further to the south of the fireground. Pumper 43 was tasked by the Incident Commander to investigate this area and found an area of grass and bush alight, located in an inaccessible location. NSWRFS tankers were deployed to control this fire, under the command of an NSWRFS Group Officer. These operations were included within the ICS structure and designated the Bushfire Operations Sector. Bushfire operations were complicated due to the 33kV high voltage transmission lines located above the fire area.

Rescue Pumper 101 was located on Peter Brock Drive to the east of the fire building, providing one 70mm and two 38mm fire attack lines to Delta Sector. Firefighters were attacking fire burning on the southern side of the warehouse at the eastern end of Delta Sector. Major structural collapse had occurred along the entire southern wall of the building, exposing the fire burning within the warehouse. A significant amount of fire was burning among combustible materials located beneath collapsed concrete wall slabs. All crews working in this area were wearing SCBA, due to the heavy smoke condition present, and a high degree of crew rotation was necessary. Firefighters from 27, 49, 72, 83, 101 and 102 stations were conducting fire attack in this sector.

Charlie sector firefighting operations: Duty Commander Parramatta Inspector Martin Hofstadler was appointed Charlie Sector Commander. The fire had entered the large pile of disused packaging material and was beginning to take hold. Burning cardboard, plastic and paper materials within the loosely stacked pile were igniting, becoming airborne and travelling towards Exposure Delta One. Aerial Pumper 7 was positioned on Peter Brock Drive to the east of the fire building and placed into operations, directing an aerial stream onto the involved stack, reducing fire intensity. Initially the aerial stream, which was directed into the wind, experienced difficulty reaching the fire. Water supply to the aerial appliance was increased via four supply lines, directly feeding from a 375 main, enabling a harder hitting solid jet to be produced, greatly improving the aerial stream. The aerial attack reduced fire intensity and was successful in stopping burning airborne materials from spreading to Delta Exposure.

Third aerial appliance placed into operation: Aerial Pumper 86 was directed to position at the eastern end of the fire building in Bravo Sector and commence operations as a water tower. A second water relay was established from the Peter Brock Drive 375mm main located to west of the fire building, consisting of base pumping appliance Pumper 73, relaying to Hazmat Pumper 85, supplying water to Aerial Pumper 86. Aerial Pumper 97 was relocated to a position in proximity to the disused material stack, from where an aerial stream could be directed onto the burning pile. The relay from Hazmat Pumper 77 continued to supply water to Aerial Pumper 97, although it was necessary to temporarily shut down the relay to place an additional pumping appliance (Pumper 55) in the relay, due to the distances water was being pumped. Prior to commencing aerial operations, firefighters fitted the stack tip nozzle to the aerial monitor, to provide a harder hitting solid jet, enabling the water stream to penetrate further into the pile to reach the deep-seated fire burning beneath the surface.

Charlie sector Class A foam attack: CAFS Pumper 31 under the command of SO Jamie Towle and Tanker 78 under the command of Retained Firefighter Duane Phillips were deployed to Charlie Sector, in an attempt to control the spread of fire through the disused material stack. Two 38mm attack lines were placed in operation connected to CAFS Pumper 31, enabling firefighters to commence a Class A CAFS foam attack on the fire, from the eastern side of the pile (proportioned at 1% then 0.5% at 700kPa). Two 38mm attack lines were placed in operation connected to Tanker 78, enabling firefighters to conduct a Class A foam (proportioned at 3%) attack on the fire. SO Towle reported fire was slowly burning underneath the surface of the pile, in a northerly direction. Foam attack streams were experiencing limited success, due to the polyurethane packaging, effectively acting as an "umbrella", preventing extinguishing media from penetrating through the pile to reach the fire. Pumper 27 obtained water from street hydrants located at Auto Place and relay pumped to CAFS Pumper 31.

Fire contained: The fire was now secured on all sides, with aerial master streams establishing effective fire cut-off, supported by defensive handline streams.

Firefighters battled fierce conditions in Charlie Sector

Aerial Pumper 97 directs an aerial master stream onto the fire from Charlie Sector

Aerial Pumper 97 directs an aerial master stream onto the fire from Charlie Sector

At 1705 hours, the Incident Commander declared the fire was contained and operations moved to commence extinguishment. The fire was still burning fiercely at this time but the Incident Commander was satisfied that all flanks were secured.

Excavator used to extinguish stack fire: An excavator was brought into operation on the disused material stack fire to remove unburnt material from the path of the fire, creating a five metre wide fire break. Once the fire break had been constructed, the excavator then began to open up the involved pile, exposing burning materials which firefighters were then able to extinguish. USAR-1 deployed shadowless balloon lights in proximity to the stack, illuminating the area the excavator was working in, increasing scene safety.

Response increased to 10th Alarm: At 1812 hours, the IC increased the response to a 10th Alarm to ensure there were adequate crews on the fireground to maintain three-deep deployment. This was critical to ensure firefighters who had been working hard were able to be properly rotated through the Rehabilitation Sector.

Fourth aerial appliance placed into operation: Ladder Platform 4 was deployed to Delta Sector to conduct aerial operations. Pumper 43, then Pumper 83 (under the command of Captain Bob Ewers) supplied water to Ladder Platform 4, enabling a further aerial master stream to be directed onto the fire.

Fireground command structure expanded: As additional senior officers arrived at the fireground, the incident command structure was expanded to meet incident operation needs.
The expanded command structure was as follows;

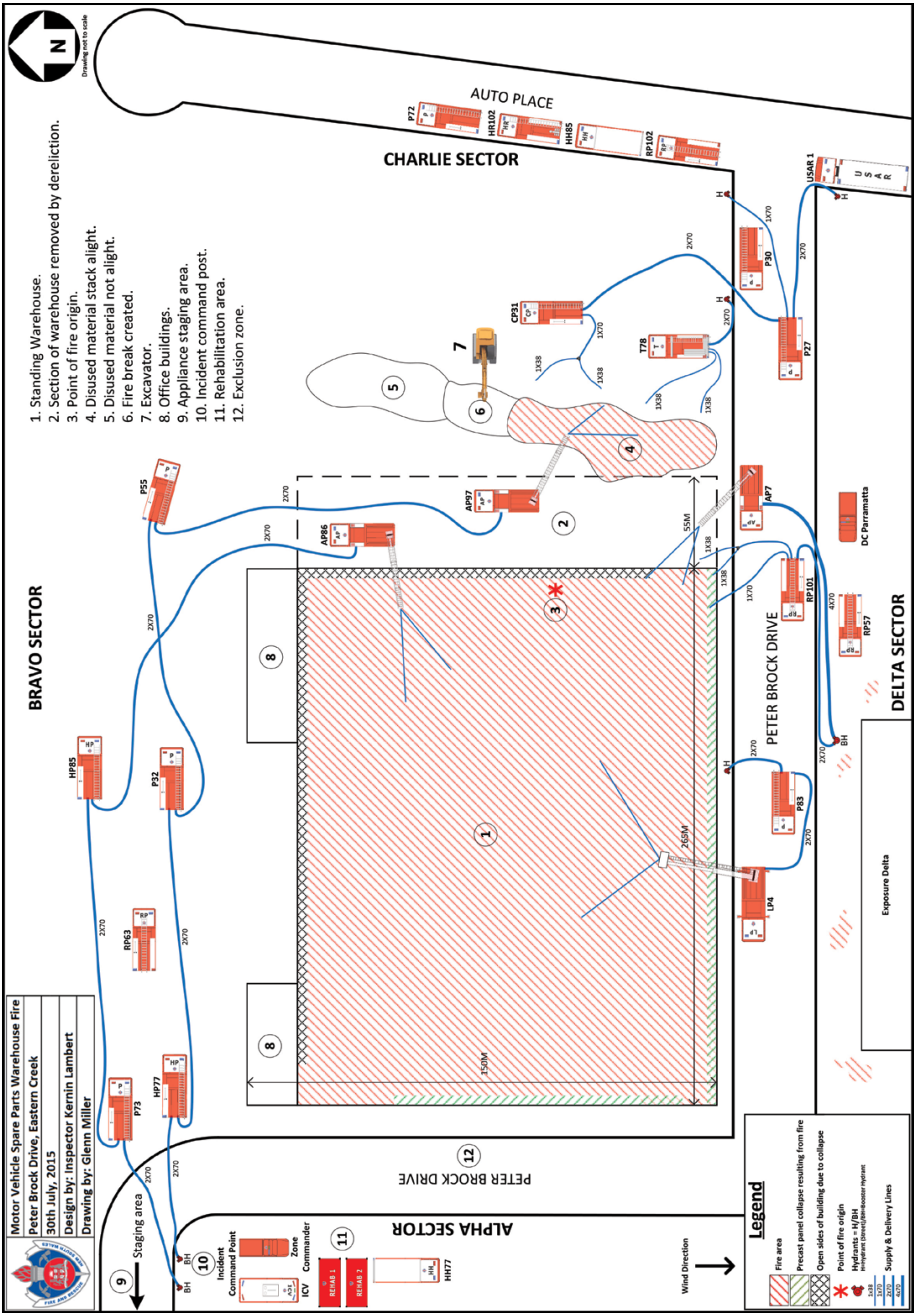
- Incident Commander: Zone Commander MW1 A/Superintendent Michael Morris.
- Bravo Sector Commander: Duty Commander ME3 Inspector Craig Davies.
- Charlie Sector Commander: Duty Commander MW2 Inspector Martin Hofstadler.
- Delta Sector Commander: Duty Commander MW2 Inspector Glenn Launt.
- Staging Officer: OIC Rescue Pumper 78 SO Dave Watson.
- Hazmat Sector Commander, Inspector Duncan White.
- Senior Advisers to the IC: Area Commander Metropolitan West, Acting Chief Superintendent Alex Scott; Deputy Commissioner Jim Smith; Director Community Safety, Assistant Commissioner Mark Whybro.
- Media Officer: Superintendent Ian Krimmer.

Rehabilitation sector: Due to the large scale firefighting operations underway, a Rehabilitation Sector was established near the incident command post. Firefighters were rotated through the Rehabilitation Sector, where two rehabilitation pods were located, ensuring firefighter welfare was maintained. The response of an 8th Alarm ensured there were adequate firefighters present to maintain firefighting operations while crews were rotated through the Rehabilitation Sector.

Fire brought under control: An aerial master stream attack was operating across the fireground from three sectors, assisted by hoseline crews working at the eastern end of the fireground. Fire activity had diminished significantly and at 2048 hours, the Incident Commander declared the fire under control. With the fire now significantly diminished and under control, firefighting operations began to be scaled back and a 2nd Alarm fire duty was put in place. CAFS Bulk Tanker 78 was deployed to assist fire duty operations. Firefighters reported the application of CAFS greatly assisted final extinguishment of the fire. A fire duty remained in place for a further 36 hours. A significant component of the fire duty included hazmat operations, involving continued monitoring of water run-off courses and maintenance of booms.

Notes

1. The fire was as dangerous as it was spectacular, particularly given the numerous hazards on site associated with the highly unstable building structure. Difficulties were compounded for firefighters by the lack of installed fire protection systems and lack of water supply. However, due to the ongoing familiarisation visits undertaken by FRNSW crews, firefighters were aware of the unique hazards, difficulties and issues associated with this site, in particular the need to establish water supplies via relay pumping, the early requirement for a greater alarm response and the need to ensure all firefighting was completely defensive. The first responding SO was aware of the above and laid the foundation for safe and effective operations at this very large fire.
2. Buildings undergoing demolition, renovation or other forms of de-construction are of enormous concern to firefighters; these structures often have many of the fire suppression systems that enable firefighters to operate safely within them disconnected, in particular automatic sprinkler systems and installed hydrant systems. It is advantageous for firefighters to regularly visit these sites, to identify if systems have been disconnected and how this may impact fire growth and ultimately the safety of firefighters. Similarly, firefighters should note alterations to building structure that may promote rapid fire growth. The firefighters responding to the Eastern Creek fire were prepared for the hazardous and difficult conditions that would confront them; As a result, firefighting operations were carried out in a safe, effective and coordinated manner.
3. There is sometimes a misconception that fighting a fire in a building that has had the sprinkler system disconnected is the same as if the building did not have a sprinkler system in the first place; this misconception is a trap. Under the Building Code of Australia, very large structures that contain high fuel loads located on vertical storage racking with no internal separation or compartmentation are required to be fitted with automatic sprinkler systems to control the rapid and extreme fire conditions that will quickly develop without automatic sprinkler fire control. When a sprinkler system has been disconnected or is not operating and a fire occurs in such a structure, the safety of firefighters will be severely compromised, due to the rapid and often uncontrollable fire growth. Firefighters adopted a completely defensive strategy at the Eastern Creek fire, in accordance with pre-determined planning for this structure; as a result, all firefighters returned home safely at the end of this fire.
4. The Incident Commander was confronted with an expanding fire burning out of control within a very large structure, across a large fireground. The Incident Commander applied sound command principles, that included conducting adequate size-up and identifying incident critical factors, objectives, priorities, hazardous conditions and the necessary resources to achieve objectives.
5. Fireground operations were underpinned by the framework of a robust command structure, that provided the IC with a greater span of control, increased levels of fireground accountability and greater situational awareness, ultimately resulting in greater safety for all firefighters operating at the fireground and enabling all incident objectives to be achieved. Assigning experienced Inspectors as Sector Commanders in the early stages improved coordination and overall situational awareness.
6. The most effective means of controlling very large structure fires is with master streams, preferably from aerial appliances. Establishment of an aerial attack as early as possible will give firefighters the greatest possible chance of establishing effective fire cut-offs. Similarly, whenever an aerial attack is being planned, establishment of an adequate water supply should be an early consideration for the Incident Commander. It is advantageous for the level of response to include adequate pumping appliances for the establishment of secure water supplies of sufficient volume.
7. Within stack and pile fires, fire activity is typically deep-seated and covered by the material forming the stack/pile, preventing extinguishing medium reaching the seat of the fire. These types of fires require the covering material to be removed, "opening" the pile to allow access by extinguishing media. Excavators are an effective way to safely open material stacks and piles, enabling extinguishment to be carried out, provided operators can work from safe positions. Firefighters should be aware that whenever a stack or pile is opened, there will be an increase in fire activity due to additional supplies of oxygen being available to the fire. Firefighters should always ensure that when stacks or piles are opened, adequate fire protection is on hand to control any escalating fire conditions.
8. Stack tips are a significant asset to aerial operations, particular in conditions of high wind, providing solid jets with less stream break up than hollow core streams. Solid jets can project further, are less vulnerable to the effects of wind and have a greater fire knockdown ability. They are a significant asset for use in situations where fire may be burning beneath the surface of the fuel, requiring strong water/stream penetration to reach the seat of the fire.
9. As always, firefighter safety and welfare was the highest priority of the Incident Commander. Adequate resources at the fireground, via the application of the three-deep model, ensured firefighters could be regularly rested and rotated. Similarly, the early establishment of a Rehabilitation Sector assisted in maintaining firefighter welfare.
10. Congratulations to all firefighters who responded to the Eastern Creek fire. All crews worked extremely hard at this very large fire, enabling the fire to be successfully brought under control with no loss of exposures. **END**


Motor Vehicle Spare Parts Warehouse Fire
Peter Brock Drive, Eastern Creek
30th July, 2015
Design by: Inspector Kernin Lambert
Drawing by: Glenn Miller
Drawing not to scale
N
1. Standing Warehouse.
2. Section of warehouse removed by dereliction.
3. Point of fire origin.
4. Disused material stack alight.
5. Disused material not alight.
6. Fire break created.
7. Excavator.
8. Office buildings.
9. Appliance staging area.
10. Incident command post.
11. Rehabilitation area.
12. Exclusion zone.
AUTO PLACE
CHARLIE SECTOR
BRAVO SECTOR
DELTA SECTOR
ALPHA SECTOR
PETER BROCK DRIVE
PETER BROCK DRIVE
Staging area
Incident Command Point
Zone Commander
ICV
REHAB 1
REHAB 2
HH77
Wind Direction
Exposure Delta
DC Parramatta
USAR 1
P72
HR102
HH85
RP102
P30
P27
CP31
T78
AP97
AP86
P55
AP7
RP101
RP57
P83
LP4
HP85
P32
RP63
HP77
P73
55M
265M
150M
Legend
Fire area
Precast panel collapse resulting from fire
Open sides of building due to collapse
Point of fire origin
Hydrants = H/BH
Supply & Delivery Lines
1x38
1x70
2x70
4x70

Firefighters working on Vehicle 2 set the chain pull set up.

FRNSW FIREFIGHTERS RESPOND TO KELLYVILLE HIGH SPEED MOTOR VEHICLE HEAD-ON COLLISION AND MULTIPLE ENTRAPMENTS

Incident summary: FRNSW crews responded to a high speed head-on collision, resulting in multiple entrapments in multiple vehicles. FRNSW firefighters were the first emergency responders to arrive at this incident and were confronted by numerous critically injured people; the initial actions of firefighters laid the platform for the major emergency operation that was about to unfold. Firefighters performed with high distinction at this very difficult crash scene, working closely with ambulance paramedics, aeromedical retrieval teams and police, to ensure all people involved in the crash were given the greatest possible chance of survival.

Incident type: Motor vehicle accident persons trapped.

Call details: 1548 hours, Sunday 19 July 2015, Direct line call from Police RCO, MVA persons trapped, Memorial Avenue, Kellyville.

Nature of entrapment/emergency: High speed, head-on collision between two motor vehicles:

Vehicle 1, a sedan, located on the roadway, contained two adult male occupants (driver and rear passenger) and one adult female occupant (rear passenger). The rear seat elderly passengers self-released prior to the arrival of emergency services. The middle aged driver remained severely trapped by confinement and injury.

Vehicle 2, a wagon located partially on the road and partially elevated on a steel Armco safety railing, containing an adult middle-aged male driver, severely trapped by compression. The driver was trapped by compression of the steering wheel to the abdomen, compression of the dash onto his lower limbs and the floor pan had wrapped around his feet. The driver's body was in tight contact with (and being supported by) the driver's door of the vehicle. A child was removed from the rear of the vehicle by passers-by prior to arrival of emergency services. Although the front wheels of the vehicle were on the road surface, the rear wheels were in the air, making the vehicle highly unstable.

FRNSW response: Pumper 94 (Kellyville), Rescue Pumper 63 (Blacktown), Heavy Rescue 63 and Duty Commander MW1 (Huntingwood) Inspector Drew Wilson.

Additional services in attendance: Ambulance Service of NSW, Ambulance Aeromedical Retrieval Unit, Care Flight Aeromedical Retrieval Unit, St John Ambulance and NSW Police.

Incident operations: Pumper 94, under the command of SO Jamie McFarlane, was the first FRNSW appliance to arrive at the collision scene. At this time, no other emergency services were present. Pumper 94 positioned across the road to protect the crash scene and firefighters deployed a protective hoseline. SO McFarlane conducted a rapid scene assessment, observing the collision vehicles, determining they had been involved in a high speed head-on collision, at least two people remained severely trapped, several vehicle occupants were out of their vehicles and all of the crash victims were in critical conditions. After completing size-up, SO McFarlane sent a concise but detailed initial situation report to FireCom, reporting incident conditions and requesting urgent attendance of two rescue units, police and multiple ambulances due to the number of patients. This size-up and immediate situation report laid the foundation for the lifesaving operations that would then follow. Responding Heavy Rescue 63 later reported this initial

Rescue 63 SF Barry Jones operating the chain pull set to release the driver from steering wheeling compression.

From within the cabin of the vehicle, SO Phil Nightingale and SFF Shane Park assisted by SFF Ross Wilton work to release the driver from lower limb entrapment.

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Nature of entrapment/emergency: High speed, head-on collision between two motor vehicles:

Vehicle 1, a sedan, located on the roadway, contained two adult male occupants (driver and rear passenger) and one adult female occupant (rear passenger). The rear seat elderly passengers self-released prior to the arrival of emergency services. The middle aged driver remained severely trapped by confinement and injury.

Vehicle 2, a wagon located partially on the road and partially elevated on a steel Armco safety railing, containing an adult middle-aged male driver, severely trapped by compression. The driver was trapped by compression of the steering wheel to the abdomen, compression of the dash onto his lower limbs and the floor pan had wrapped around his feet. The driver's body was in tight contact with (and being supported by) the driver's door of the vehicle. A child was removed from the rear of the vehicle by passers-by prior to arrival of emergency services. Although the front wheels of the vehicle were on the road surface, the rear wheels were in the air, making the vehicle highly unstable.

FRNSW response: Pumper 94 (Kellyville), Rescue Pumper 63 (Blacktown), Heavy Rescue 63 and Duty Commander MW1 (Huntingwood) Inspector Drew Wilson.

Additional services in attendance: Ambulance Service of NSW, Ambulance Aeromedical Retrieval Unit, Care Flight Aeromedical Retrieval Unit, St John Ambulance and NSW Police.

Incident operations: Pumper 94, under the command of SO Jamie McFarlane, was the first FRNSW appliance to arrive at the collision scene. At this time, no other emergency services were present. Pumper 94 positioned across the road to protect the crash scene and firefighters deployed a protective hoseline. SO McFarlane conducted a rapid scene assessment, observing the collision vehicles, determining they had been involved in a high speed head-on collision, at least two people remained severely trapped, several vehicle occupants were out of their vehicles and all of the crash victims were in critical conditions. After completing size-up, SO McFarlane sent a concise but detailed initial situation report to FireCom, reporting incident conditions and requesting urgent attendance of two rescue units, police and multiple ambulances due to the number of patients. This size-up and immediate situation report laid the foundation for the lifesaving operations that would then follow. Responding Heavy Rescue 63 later reported this initial situation report was invaluable, providing the rescue with important information, assisting firefighters to commence forming an extrication plan while still en route.

While SO McFarlane was sending the first situation report, Pumper 94 firefighters commenced the immediate triage of crash patients. Firefighters found the male driver of Vehicle 1 in a condition of severe medical distress (unconscious, not breathing and suffering what appeared to be a serious chest injury). A volunteer St John Ambulance Service first responder who was passing by treated this person with a bag/mask oxygen resuscitator. Firefighters assisted resuscitation and also commenced assessment and initial patient care of the two injured passengers who had exited from Vehicle 1. At the same time, firefighters were also examining patients associated with Vehicle 2. Firefighter Ross Wilton was directed by members of the public to a child located near the crash scene who had been removed from

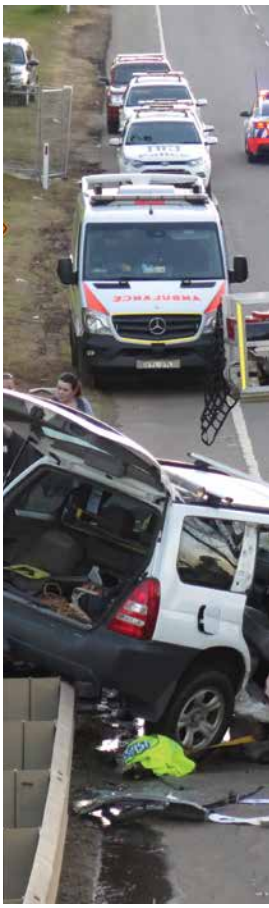
the vehicle by passers-by. Firefighter Wilton assessed the patient and provided initial patient stabilisation. As a result of this assessment, Firefighter Wilton determined the patient had sustained life threatening internal injuries and passed this information to the ambulance service, who subsequently deployed the Child Flight Aeromedical Retrieval Unit. Firefighter Wilton continued to provide patient care for the child until handing over to ambulance paramedics upon their arrival. Firefighters also provided initial patient care to the driver of Vehicle 2, who was severely trapped, until the arrival of paramedics.

Ambulance paramedics arrived on scene and after conducting an assessment, informed firefighters the driver of Vehicle 1 was the first priority for extrication. Heavy Rescue 63 arrived on scene and in accordance with the request from paramedics, commenced extrication of the driver of Vehicle 1. Firefighters stabilised the vehicle with timber step blocks. A short time later Rescue Pumper 63 arrived on scene and the rescue crews split into two teams of three firefighters each, to commence simultaneous extrication of patients trapped within Vehicles 1 and 2.

At Vehicle 1, firefighters determined the driver was trapped by severe confinement. The initial extrication plan involved conducting a side removal of the off-side of the vehicle, using the side rip technique. The rear off-side door had separated from the C Pillar and was opened with spreaders. The door hinges were cut with shears to give firefighters greater access to the B Pillar. Firefighters made cuts into the top of the B pillar, however they experienced difficulties cutting due to the strength of the new car technology materials (boron) located in this area. Firefighters amended the extrication strategy, cutting the top of the driver's door window frame and the top of the B pillar. A cut was then made at the base of the B pillar with the small shears. Firefighters made a pie cut at the base of the B Pillar and then attempted to spread the B Pillar away, using the C Pillar as a base. The severity of the collision had significantly weakened the C pillar (the vehicle shell had separated from the chassis, due to the force of impact), greatly complicating attempts to spread off the C pillar. Firefighters then used the large shears, cutting completely through the base of the B Pillar. At this time, Firefighter John Casey was able to enter the rear of the vehicle and support the head of the trapped driver (Firefighter Casey remained at this location for the remainder of the extrication). Firefighters then cut the seat belt pre-tensioners, before pushing the door and B Pillar around towards the front off-side guard of the vehicle, cutting the door back-strap during this process. Firefighters attempted to recline and move the driver's seat, which was set in a very upright position (making patient release difficult), however the electric seat drive mechanism had disengaged, causing the seat to remain jammed and unable to be moved by hand. Firefighters placed the driver onto a rescue board, enabling removal from the vehicle and placement on an ambulance stretcher, prior to being conveyed to hospital.

While the rescue of the trapped patient in Vehicle 1 was in progress, the extrication of the severely trapped driver in Vehicle 2 was getting underway. This extrication was conducted by Rescue 63 firefighters, greatly assisted by the crew of Pumper 94. The extrication plan involved performing a side removal of the off-side of the vehicle, via a side rip. Prior to commencing extrication, the vehicle was secured with timber step blocks. Firefighters made cuts in the off-side B Pillar and then spread the B Pillar off the vehicle, completely removing the off-side of the vehicle and releasing the driver from compression caused by the driver's door. During the process of removing the driver's door, support for the driver was lost (causing the driver's upper body to lean outwards from the vehicle), necessitating firefighters and ambulance paramedics to hold the upper body of the driver to provide support throughout the remainder of the rescue. The downward angle of the vehicle (due to the rear of the vehicle being located in an elevated position on the crash rail) worsened this situation. Once the door was removed, in addition to partially releasing the

Firefighters prepare for final release of the trapped driver



driver from compression, greater access was provided for the medical team, significantly assisting and enhancing patient care.

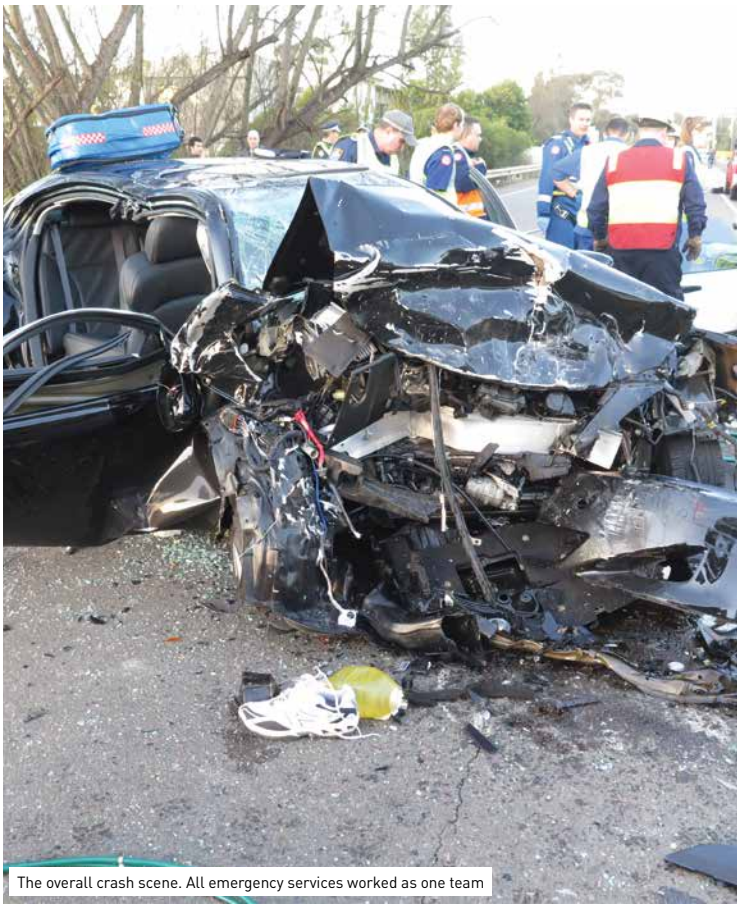
Firefighters then conducted a steering wheel pull, to remove the patient from steering wheel compression. Pumper 94 firefighters cut the windscreen out, enabling the chain pull set to be connected to the steering wheel and anchored to the front lower chassis rail. Operation of the chain puller enabled the steering wheel to be lifted off the driver. Hydraulic spreaders were then used to perform a dash lift. Firefighters made relief cuts at the top and bottom of the A pillar. The spreaders were then placed internally, between the horizontal reinforcing member in the dash and the top of the transmission tunnel. Operation of the spreaders lifted the dash off the patient's lower limbs and also created sufficient space for Senior Firefighter Shane Park to access the driver's feet, which still remained trapped within the folded floor pan. A second set of spreaders were placed between the base of the sill and the A pillar on the off-side, enabling the dash to be lifted further, enabling Senior Firefighter Park to manually remove the driver's feet from the floor pan entrapment. The driver was then placed on a rescue board and removed from the vehicle, prior to being conveyed to hospital.

Notes

1. FRNSW crews were the first emergency service to arrive at this incident and were confronted with a scene of trauma and confusion. Firefighters immediately commenced restoring order, triaging, assessing and treating patients, making the scene safe and preparing for the rescues. The actions of the first responding crews probably resulted in lives being saved.
2. Tragically, not all people involved in this collision would survive; however the efforts of all emergency services at the scene provided these people with the greatest possible chance of survival.
3. Again, this was a case where the interaction between the specialised services at the scene (FRNSW firefighters/rescue crews, ambulance paramedics, medical retrieval teams and police) was seamless; the high levels of communication, interaction and cooperation between the services again was a significant factor in a highly professional operation that would provide the greatest chance of survival for all people involved in the crash.
4. The detailed initial situation report from the first arriving FRNSW pumper enabled key specialist (non-FRNSW) resources to be alerted and activated. Information contained in this report also provided the incoming rescue crews with critical information, enabling a plan to be formulated en route; this was particularly important due to the crash scene conditions.
5. FRNSW crews were the first emergency responders to arrive at this incident, joined by a St. Johns volunteer. The quality of patient care provided by firefighters and the volunteer set in train the first step in the chain of survival that would ultimately give all patients the greatest chance.
6. This incident once again demonstrated the importance of the actions of the first arriving pumper crew. These actions quickly stabilised the incident and laid the foundation for the more substantial emergency operations by all services that would follow.
7. Congratulations to all crews in attendance for an extremely professional emergency operation. This was a difficult emergency scene and all emergency crews from all services performed with distinction, demonstrating the highest levels of skill, professionalism and commitment.

END

This view of vehicle 1 is indicative of the force of impact, severity of entrapment and difficulties overcome by firefighters conducting the rescue


The overall crash scene. All emergency services worked as one team

Firefighters on the southern side of the fire direct an installed hose heel stream onto the exposure vessel; note pyrolysis gases being released, due to the large amount of radiant heat, indicating the exposure vessel is close to ignition. Photo courtesy Damian Hofman.

FRNSW CONTROL FAST-SPREADING WOOLLOOMOOLOO FINGER WHARF MARINA FIRE

Incident summary: When FRNSW was called to a marina fire at the Finger Wharf, Woolloomooloo Bay, two luxury vessels formed of volatile fibreglass and thermoplastic construction and containing almost 4,500 litres of marine diesel fuel were well alight and fire conditions were intense. Vessels either side of the burning boats were close to ignition. A further 60 vessels were located nearby. Most seriously, the 104-year-old, 410-metre long Finger Wharf structure, formed largely of timber construction and home to over 400 people, was at risk of fire spread. Firefighters employed a coordinated series of strategies and tactics involving shore and marine based firefighting to protect exposure vessels, cut off fire spread, control the fire and protect the large Finger Wharf structure. The fire involved a coordinated response of multiple agencies. This was a textbook example of marina firefighting.

Incident type: Boat fire at marina.

Time, date and place of call: 0350 hours on Saturday 4 July 2015, '000' call to report of a boat fire at the Finger Wharf marina, Cowper Wharf Road, Woolloomooloo.

FRNSW response: Pumpers 4 (Darlinghurst), 3 (The Rocks), 35 (Botany), 53 (Neutral Bay), Flyer 1 (City of Sydney) and Runner 1, Rescue Pumper 1, Heavy Rescue 1, Hazmat Pumper 13 (Alexandria), Heavy Hazmat 13, Duty Commander ME1 (City) and Manager Community Engagement Unit.

Additional agencies/services in attendance: NSW Police (including Water Police), Ambulance Service of NSW, gas and electricity authorities, and Port Authority of NSW (formerly Sydney Ports Corporation).

Fireground description: The Finger Wharf complex is located at the southern end of Woolloomooloo Bay, connected to the shore at Cowper Wharf Road, Woolloomooloo.

The involved vessels (described further below) were moored to a floating dock, 265m long, located 4.0m to the west of the side of the Finger Wharf. The floating dock was 2.0m wide, formed of recycled plastic construction and located on pontoons, also of recycled plastic construction. The floating dock constituted the marina and was a separate fixture from the Finger Wharf structure, used solely for the mooring of vessels. The floating dock was connected by 1.0m narrow walkways (fitted with steel railings) to the 10m wide main timber wharf attached to the western side of the Finger Wharf complex (also known as the western promenade). The floating dock contained 62 twin bay berths, facilitating the mooring of 62 vessels. On the morning of the fire, boats were located at all moorings. Most vessels located at the marina were luxury motor yachts and motor cruisers. 240 volt AC power supplies were located at each berth on the floating dock. At the time of the fire, the floating dock was located approximately three metres below the deck of the main wharf.

The Finger Wharf is located 4.0m to the east of the floating dock and marina. The Finger Wharf is 410 metres long and 64m wide and is the longest timber piled wharf in the world. The Finger Wharf structure is composed of two side sheds running almost the length of the

wharf, connected by a covered roadway between. The roofline is three parallel gable roofs and the external elevations are distinguished by a repetitive gridded structure. The ground level of the wharf consists of restaurants. Levels two, three and loft level consist of 300 residential apartments. A hotel accommodation complex is located at the southern end of the wharf. A separate three level, 45m x 40m, concrete and steel apartment building is located at the northern end of the wharf, although not connected to the wharf building.

A 10.0m wide timber and concrete promenade is located on the west side of the wharf, located 4.0m from the floating dock. The promenade is engineered to take a load of eight tonnes per wheel. A 10m wide vehicular access way is located on the eastern side of the wharf. The Finger Wharf was constructed in 1911, of timber construction and used as a wool store. It was extensively modified and commenced residential occupation in 1999.

The Finger Wharf structure is fitted with an automatic sprinkler fire protection system. The western promenade is fitted with twin headed pillar hydrants, located every 50m, connected to a 150mm ring main. An AS2419.1 brigade booster fitting is fitted to the ring main. Installed hose reels are also fitted to the floating dock of the marina, located every 25m. Occupancies within the Finger Wharf are fitted with smoke detectors connected to an automatic fire alarm system.

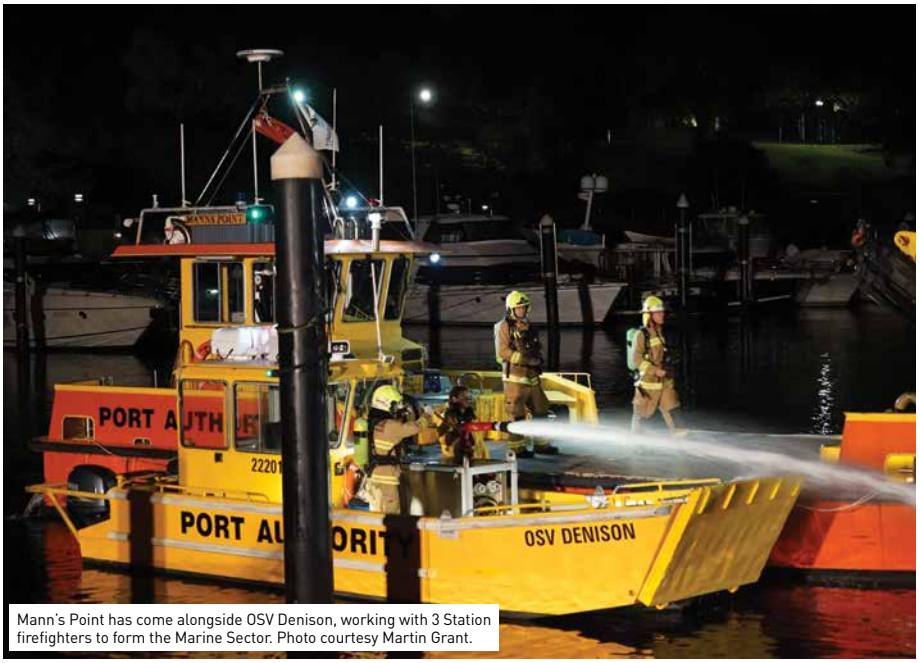
The involved vessels were located in mooring bays 41 and 42, located approximately 250m from the shore line. A floating access deck, 1.2m wide, was located between the vessels. The vessel at bay 41 was a 17m long luxury sport power yacht of fibreglass hull construction, containing approximately 2,400 litres of diesel fuel. The vessel at bay 42 was a 16.3m long luxury motor yacht of fibreglass hull (formed of vinylester resin, corecell foam and polyester resin) construction, containing approximately 1,900 litres of diesel fuel. Luxury motor yachts were located either side of the involved vessels, less than 0.5m away.

Land access to the Finger Wharf structure is via Cowper Wharf Road, located at the southern end of the wharf. Vehicular access is via the western promenade and a vehicular driveway located along the eastern side of the wharf.

On the morning of the fire, there were approximately 400-500 people residing within the apartments and motel.

Initial call and response: At 0350 hours on Saturday 4 July 2015, FRNSW Sydney Communication Centre received the first of numerous '000' calls reporting a boat fire at the Finger Wharf marina, Cowper Wharf Road, Woolloomooloo. Pumper 4,

3 Station firefighters aboard OSV Denison direct a protective stream between the involved vessels and exposure vessels, working in conjunction with shore-based crews to stop fire spread. Photo courtesy Martin Grant.



Mann's Point has come alongside OSV Denison, working with 3 Station firefighters to form the Marine Sector. Photo courtesy Martin Grant.


From the Marine Sector, firefighters direct an attack stream onto the involved vessel at berth 42. The exposure vessel at berth 43 has been safely removed. Photo courtesy Martin Grant.

Flyer 1, Rescue Pumper 1 and Duty Commander City were initially responded to the reported fire. At the same time, FireComs assigned the Port Authority of NSW response vessels and responded Pumper 3 to Moores Wharf at The Rocks to rendezvous with the Port Authority firefighting vessels as part of regularly practised joint response arrangement.

First crews arrive on scene: Flyer 1, under the command of SO Tony Camilleri, was the first FRNSW appliance to arrive on scene. SO Camilleri became the Incident Commander and established a Command Point, known as "Woolloomooloo Command". Firefighters were aware due to knowledge gained through pre-incident planning exercises that the engineered load limit of the western promenade was well within limits for passage of FRNSW fire appliances. Initial access onto the western promenade of the Finger Wharf for fire appliances was blocked by steel security bollards. While police and security guards were unlocking the bollards, SO Camilleri went on foot onto the promenade to investigate the fire and conduct an initial size-up. SO Camilleri observed two boats midway along the wharf completely involved in fire. At this stage, although the boats were heavily involved in fire, fire had not yet spread to their diesel tanks. Vessels (of fibreglass construction) located either side of the involved vessels were being heavily impacted by severe radiant heat and were in immediate danger of igniting. These non-involved vessels were less than 1.0m from the involved vessels. SO Camilleri observed the protective sail cover of the vessel moored at berth 40 beginning to bubble and blister due to the impact of fierce radiant heat. The first objective of SO Camilleri was to stop the fire spreading to further boats, by establishing fire cut-offs either side of the involved vessels. At this time, police were on scene and residents had commenced to self-evacuate from the Finger Wharf building.

Fire attack gets underway: As soon as the security bollards were removed, Flyer 1 proceeded onto the western promenade and travelled to the north of the involved boats. The Incident Commander believed this was the most effective position to conduct fire attack and also wanted to space appliances out evenly on the promenade to spread loading on the wharf. While crews were setting up 38mm fire attack lines, firefighters commenced immediate protection of the vessel most seriously under immediate threat, located at berth 40, with a protective cooling stream from the Flyer 1 high pressure hose reel. Firefighter Katherine Blanchard, wearing SCBA, directed a cooling stream onto the threatened vessel at berth 40 (to the north of the involved vessels), providing immediate protection of this vessel from the intense radiant heat. Firefighter Dean Jones, also wearing SCBA, went onto the floating dock and commenced protection of the vessel at berth 43 (to the south of the involved vessels), also under imminent threat, with an installed hose reel fitted to the floating dock by directing a cooling stream onto this vessel. The cover on this vessel was also bubbling from the impact of fierce radiant heat when firefighters commenced operations.

As the initial protective streams were being placed into operation, Pumper 4 under the command of SO Con Gerasimou, arrived on scene and also drove onto the wharf, positioning to the south of Flyer 1. The IC directed appliances to be parked at evenly spaced intervals along the wharf, to minimise loading of the wharf. SO Gerasimou switched off the 240 V power supply going to the floating dock. At this time, most of the boats moored at the floating dock were connected to live power. The IC directed Pumper 4 to obtain a water supply for Flyer 1, which was now fully committed providing fire protection to the non-involved vessels. Pumper 4 firefighters connected supply lines from pillar hydrants located on the wharf to Flyer 1, securing a firefighting water supply. Pumper 4 pump operator assisted Flyer 1 pump operator for the duration of operations. The hose reel line being operated by Firefighter Jones was replaced by a 38mm attack line, protecting exposure vessels on the southern side of the fire. A second 38mm attack line was placed into operation, protecting exposure vessels on the northern side of the fire. With the fire flanks being secured, Pumper 4 firefighters conducted a direct attack on the fire, directing a third 38mm attack line stream onto the involved vessels, attempting to reduce fire intensity and lower the radiant heat being produced. Despite these efforts, the fire began to grow in intensity, most likely due to involvement of the onboard diesel fuel. Fierce flames were rolling upwards above the vessels. Large plumes of thick black smoke were rising above the fire, containing fibrous materials from the burning fibreglass hulls.

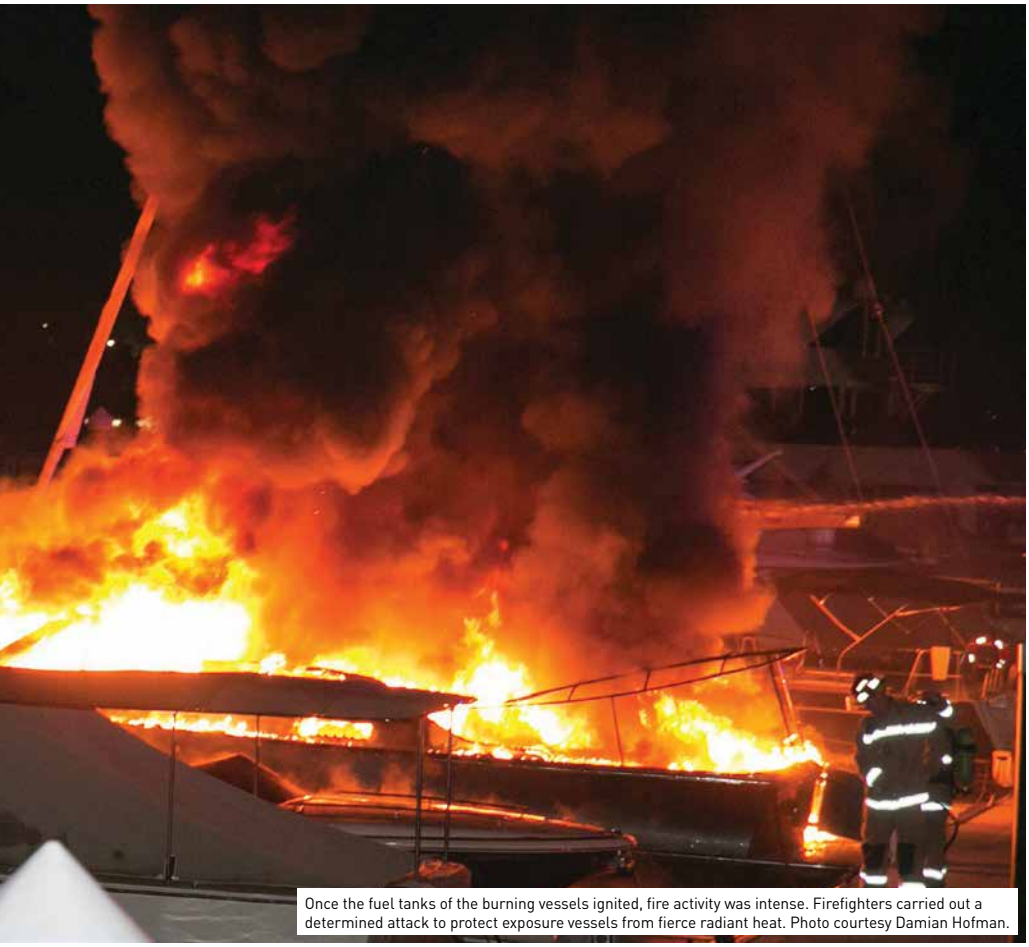
Brigade booster fitting placed into operation: Rescue Pumper 1 under the command of SO Andrew McNamara went to the brigade hydrant booster fitting. The booster fitting was not located in an obvious position and consisted of several installations (two sprinkler boosters and one hydrant booster). However SO McNamara and the crew of Rescue Pumper 1 were very familiar with the system, having recently attended to the site to conduct a booster pumping and operations drill. Rescue Pumper 1 firefighters connected lines between the pumper and the booster fitting. Following communication with the IC, the lines were charged and Rescue Pumper 1 began boosting the Finger Wharf hydrant ring main, increasing pressure from 600 kPa to 1000 kPa. Booster operations also increased the water volume flowing into the ring main, significantly improving firefighting water supply.

Firefighters continue to protect exposures: The crew of Rescue Pumper 1 deployed to the main wharf as the breathing apparatus back up crew, enabling crew rotation to take place for firefighters wearing SCBA conducting firefighting operations. Four 38mm lines were now in operation from Flyer 1 by firefighters wearing SCBA, directing cooling streams onto exposure vessels north and south of the involved vessels. Exposure vessels remained under severe threat as the fire continued to grow in intensity, fuelled by volatile fibreglass, polyurethane foam and diesel fuel, causing severe radiant heat to impact the threatened vessels. SO Gerasimou reported the vessel at berth 40 was very close to ignition.

Marine operations: At the time of call, Pumper 3, under the command of SO Peter Gillard, went to Moores Wharf, The Rocks, where firefighters went aboard the Port Authority emergency response vessel Denison. Firefighters took SCBA sets, the remote access pack and handheld transceivers (HHTs) with them, with HHTs set to Fireground channel 510. The Denison then travelled to Woolloomooloo Bay, in proximity to the involved vessels. SO Gillard became the Sector Commander of the Marine Sector and was in communication with the IC via HHT. The Denison began drafting water out of the harbour and firefighters wearing SCBA operated the fixed monitor aboard the vessel, directing a sea-based protective stream onto the most seriously threatened boat to the north of the burning vessels, working in conjunction with the shore-based operations. The Denison was operating in smoke with reduced visibility. Radio communications from shore-based firefighters to the Marine Sector Commander assisted in the direction and effective placement of the monitor stream. SO Gerasimou stated shore-based firefighters could only reach part of the threatened vessels with defensive streams, however the monitor stream from the Denison, working in conjunction with shore crews, was able to be directed onto sections of the vessels the shore-based streams could not reach, enabling all parts of the exposed vessels to be completely protected.

Incident command transferred: Duty Commander City Inspector Jay Bland arrived on scene and following a handover briefing with SO Camilleri, command was transferred with SO Camilleri appointed Operations Officer. The Incident Commander increased the response for the purpose of enabling crew rotation and establishing adequate SCBA back-up crews (in accordance with the three-deep deployment model)

From the main wharf, two supply lines are connected to installed twin-headed pillar hydrants, supplying water to Flyer 1. Photo courtesy Damian Hofman.



Once the fuel tanks of the burning vessels ignited, fire activity was intense. Firefighters carried out a determined attack to protect exposure vessels from fierce radiant heat. Photo courtesy Damian Hofman.

and directed all incoming appliances to report the staging area, located on Cowper Wharf Road. SO McNamara was appointed Safety Officer. Heavy Rescue 1 was deployed onto the wharf and the rescue lights set up to illuminate the work area, increasing scene safety.

Water Police remove exposure vessels: SO McNamara had the benefit of the previous experience of the 2007 Royal Motor Yacht Club marina fire and was aware that an effective way to control a marina fire was to remove non-involved vessels out of the fire's pathway. SO McNamara communicated this information to the Incident Commander, who agreed this would be an effective strategy. SO McNamara liaised with police on scene and confirmed that the Water Police were responding. Firefighters began to untie the mooring lines of the two exposure vessels located immediately to the north and south of the involved vessels. Each vessel was secured with six mooring lines; five of these lines were untied by firefighters wearing SCBA to enable the vessels to be quickly towed away once the Water Police arrived on scene. A single mooring line remained attached to each vessel, to prevent the vessels drifting uncontrollably. A short time later the Water Police arrived on scene. The vessel at mooring berth 40 was considered to be the boat most seriously under threat and tow lines were attached from this vessel to the Water Police launch. When this boat was secured to the Water Police launch, SO McNamara released the final mooring line, enabling the exposure vessel to then be released and towed to a position of safety into open water within Woolloomooloo Bay and away from the threat of fire spread. After the vessel at berth 40 had been safely moored at a remote location, the Water Police launch returned and attached a tow line to the vessel at berth 43. When the vessel was secured to the police launch, the final mooring line was untied by firefighters, allowing the threatened vessel to be removed to safety. Not only did the actions of removing adjoining vessels protect those boats most at risk, an effective fire break had been created by removing fuel from the fire's path, significantly reducing the likelihood of any further lateral fire spread through the marina and greatly reducing the possibility of a significant escalation in fire conditions occurring. Escalating fire activity in proximity to the 104-year-old Finger Wharf structure could have resulted in fire spread to this iconic sbuilding.

Firefighters secure burning boats: Firefighters observed the mooring lines securing the involved vessels were beginning to burn through, melt and sever, presenting the danger that burning vessels could break away. In the event the burning boats broke free they could easily ignite numerous

The fuel tank erupts on the vessel moored at berth 42. Picture supplied courtesy of Damian Hofman

Firefighters attempt to bring the fully involved boats under control. The enormous Finger Wharf structure, protected by firefighters, is visible on the right side of the photograph. Picture supplied courtesy of Damian Hofman

Once the fuel tanks of the burning vessels ignited, fire activity was intense. Firefighters carried out a determined attack to protect exposure vessels from fierce radiant heat. Photo courtesy Damian Hofman

other fires involving further vessels and land-based structures. A further complicating problem in the event the burning boats broke free was that any additional ignitions would be at remote locations that may present difficult access to firefighters. As the boats began to drift, firefighters used ceiling hooks to retrieve the boats. Firefighters wearing SCBA used steel wire rope slings from the Tirfor kits to secure the vessels and prevent further drifting of the boats. Firefighters also attached additional mooring lines to the vessels. These mooring lines consisted of short lines, to minimise the dangerous effect of "whiplash" rope travel, in the event the boats sank, causing the mooring lines to snap and fly through the air (which could cause serious injury to firefighters).
Due to hazards present, SO McNamara instructed police to secure the entrance to the wharf, establishing a restricted access zone. The smoke condition was heavily obstructing the ability of shore-based firefighters to observe the mooring lines securing the burning vessels.
SO McNamara requested firefighters aboard the Denison to monitor the mooring lines from the marine side of the fire, to ensure the mooring lines remained intact.

Direct fire attack operations: Once the exposure vessels were removed and the threat of fire spread to further boats greatly diminished, firefighters switched firefighting modes from defensive to offensive direct fire attack. Firefighters directed attack streams onto the fully involved vessels. The involved boats continued to produce large volumes of black smoke. The diesel tanks on both vessels were now fully involved in fire, burning fiercely and producing large flames. The wind was now starting to swirl, causing the thick smoke plume to blow across the floating dock where firefighters were located, greatly reducing visibility. Due to the significant increase in fire intensity, a reduction in visibility, exposures no longer at risk and the burning vessels fully secured, the Incident Commander made the decision to withdraw all crews from the floating dock to a position of greater safety on the main wharf. Crews repositioned to the main wharf and firefighting operations continued. During the period of heightened fire intensity, a 15m long section of the pontoon access dock completely burnt through and sank.

The Incident Commander liaised with the Port Authority Commander, via the Marine Sector Commander concerning a requirement to place booms around the fire area, due to the possibility of diesel spilling from the marine tanks. The Port Authority Commander made arrangements to place booms once the fire had been extinguished.

Full evacuation of Finger Wharf: Following the significant increase in fire activity due to the involvement of the

diesel fuel tanks aboard the vessels, smoke began to enter the residential apartments and hotel within the Finger Wharf structure. Runner 1, under the command of SO Craig Mashman, had responded to the Finger Wharf, due to the activation of an automatic fire alarm. Upon making investigations, firefighters found large volumes of smoke were impacting the western side of the building, resulting in heavy smoke logging of residential apartments on level three of the structure. Firefighters detected a strong smell of burning resin within the building and observed particles and fibrous materials in the air. SO Mashman observed numerous residents were still within the building and gave instructions that a full evacuation of the building was to be undertaken. This total evacuation was undertaken with police assistance. The Incident Commander appointed SO Mashman as the Evacuation Sector Commander.

The night was extremely cold and many evacuees were young children. With the assistance of police and hotel management, SO Mashman organised for all evacuees to be re-located into the hotel foyer, to protect them from the hostile external environment at that hour of the morning. The hotel foyer was clear of smoke and remote from the fire area.

Expansion of marine operations: Firefighters continued to conduct fire attack. At this time, firefighters from 13, 35 and 53 stations were also on scene, located in staging and were providing SCBA rotation with crews conducting fire attack operations. From the Marine Sector, Pumper 3 continued to direct the monitor stream onto the involved vessels from the Denison. The effect of the monitor stream caused the fire to reduce in intensity. As a result of diminishing fire intensity, shore-based firefighters were able to safely break open the front hatch cover of the involved vessel at berth 41 with a ceiling hook and commence to apply B Class foam, via the high pressure hose reel, directly into the hull of the burning vessel. Although the foam attack had a significant impact, greatly reducing fire intensity, fire continued to burn within inaccessible parts of the vessel, including the wheel house and below the main deck.

During firefighting operations, a second Port Authority of NSW response vessel Manns Point arrived at Woolloomooloo Bay to assist operations. The vessels Manns Point and Denison were secured together, increasing the efficiency of marine water monitor operations (through greater stability of the larger vessel, reducing water monitor "jet" reaction). In addition to the larger monitor being operated, firefighters were now operating two smaller monitors aboard the Manns Point. Shore-based firefighters remained in radio communications with the Marine Sector Commander, assisting in the effective direction of water streams.

Fire extinguished: As firefighters were slowly bringing the fires under control, the vessel at berth 41 sunk at the mooring. A short time later, the burning vessel at berth 42 also sunk, resulting in extinguishment of both vessels. The Port Authority of NSW vessels then commenced to place booms around the affected area to prevent the escape of any hazardous materials into the harbour.

Re-occupation by residents: Following extinguishment of the fire, firefighters conducted ventilation of the Finger Wharf structure, to enable re-occupation by the residents. Atmospheric monitoring was conducted and found to be clear. The east wing of the structure was initially re-occupied, after which residents returned to the west wing. Residents were advised to keep their doors and windows closed. Evacuation Sector Commander SO Mashman reported Finger Wharf management were extremely helpful assisting the re-occupation of the residents into the building.

FRNSW operations concluded: At the conclusion of FRNSW operations, it was determined that apart from the two vessels initially involved in fire, vessels at marine berths 40 and 43 had sustained superficial heat damage only and no other vessels had been damaged by fire. Similarly, no fire spread occurred to the main wharf or the Finger Wharf structure. The affected section of waterway had been boomed by Port Authority of NSW and contaminants contained. The site was handed over to Police, who then deemed the site a crime scene.

Notes

1. Luxury marine craft are largely formed of volatile combustible materials, including fibreglass, thermoplastics, polyurethane foams and other synthetic materials, due to their buoyant nature, light weight, strength and modern appearance. When involved in fire, these materials produce intense fire conditions, including high heat release rates and large flames. These materials also produce thick, acrid, black smoke containing fibrous materials. Significantly, these materials produce large quantities of radiant heat, placing any exposures in close proximity in extreme danger of fire spread.
2. Luxury marine craft also contain large quantities of marine diesel fuel, which is easily ignited by the intense heat associated with burning fibreglass and polyurethane foams. Other hazardous materials found on luxury vessels include LPG cylinders and flares. In dock, these vessels are normally connected to 240 Volt electricity supplies to power on board equipment.
3. Storage space at marinas is at a premium and separation between vessels is minimal. The potential for vessel-to-vessel fire spread is quite high, due to the impact of radiant heat.
4. As with all incidents responded to by FRNSW, size-up is critical. Effective size-up enables the Incident Commander to determine incident priorities and establish key objectives. This is particularly important at complex incidents and when there are numerous competing urgent priorities and limited resources available. The Incident Commander at this incident conducted an early and effective size-up, resulting in initial strategies and tactics employed that would lay the foundation for a successful incident outcome.
5. The actions of the first arriving FRNSW appliance crew on Flyer 1 were to commence protection of the most at-risk exposures. These operations were conducted with relatively small diameter streams until larger hose lines could be placed into operation, nevertheless they were highly effective at providing critical cooling, sufficient to mitigate the impact of the significant radiant heat attack from the adjacent heavily involved vessels. Undoubtedly, these initial operations prevented further fire spread, the involvement of further vessels and a significant worsening of the situation. Similarly, the decision to strengthen exposure protection with additional hose lines was a key tactical decision that prevented further fire spread.
6. The application of cooling streams onto the surfaces of exposed non-involved vessels is advantageous, to slow down ignition of exposure vessels from radiant heat. This will buy some time, until either the fire is controlled with a more substantial fire attack or the exposure vessels can be removed.
7. Firefighters worked with determination under very difficult circumstances to protect non-involved vessels from intense radiant heat, through the operation of protective hose streams. These efforts stopped the fire from spreading.
8. The decision of the Incident Controller to utilise the Water Police to tow the non-involved exposure vessels away from the burning boats was a key tactical decision that both removed these vessels from danger and removed fuel from the fire's path, greatly reducing the possibility of fire spread to further vessels.

9 Marina and boat fires present numerous hazards for firefighters, many of which can be unseen. This fire was no exception. Significant hazards at this fire included the 240 volt power supply connected to all boats (switched off), hazardous particles contained within the smoke plume produced by the burning fibreglass (all firefighters were wearing SCBA), instability and subsequent destruction of the floating access deck (crews were withdrawn prior to the deck burning through and sinking), intense heat produced by the burning fibreglass and marine diesel fuel (all firefighters wearing full structural PPC and SCBA), fall/drown hazards associated with working on the wharf (work area illuminated by Heavy Rescue 1 light), minimal essential personnel on the wharf working under maximum supervision, and the Port Authority of NSW vessel working in close proximity to the fire scene).

10 Use of the hydrant ring main system and brigade booster fitting provided adequate water supply for critical firefighting operations. The operation of the hydrant ring main negated the need for lengthy hose lays from the road, at a fireground where excessive hose could have led to trip hazards resulting in firefighters potentially falling into the harbour.

11 The value of pre-incident planning and familiarisation drills was clearly demonstrated, with Rescue Pumper 1 having recently conducted drill on the Finger Wharf booster system. Responding firefighters were completely familiar with booster operations and were able to quickly and efficiently place the booster into operation at a critical time during firefighting operations.

12 There was a high level of communication, coordination and cooperation between FRNSW, the NSW Water Police and the Port Authority of NSW, resulting in very effective and safe operations. The ability to operate in a coordinated manner at this fire was critical to the highly successful outcomes achieved.

13 The communications between shore-based crews and firefighters located in the Marine Sector was invaluable, enabling monitor streams to be directed to the most effective locations, resulting in safe, effective and coordinated operations.

14 The Incident Commander established sectors and formed a command structure commensurate with the complexities of the incident at an early point in operations.
As a result, the span of control was never exceeded, the situational awareness of the Incident Commander was increased and operations were conducted in a coordinated, safe and effective manner.

15 The temptation to cast burning vessels adrift must be strongly resisted; While a burning vessel is at a wharf facility, there is the capacity for fire services to extinguish the fire in a safe and controlled manner. A boat adrift will likely float to remote and inaccessible locations, where there is difficult access to fire services. Worse still, a burning vessel has the potential to ignite numerous other non-involved assets, including other vessels and land structures. If the decision is made to tow a burning vessel away, the vessel should be secured with a steel wire rope sling, as a tow rope will most likely burn through.

16 Firefighters should anticipate and prepare for failure of the mooring lines securing burning vessels, which will most likely ignite and burn through from radiant heat. The use of the steel wire rope slings from the Tirfor kits was a highly effective means of securing the burning vessels at this fire.

17 FRNSW is currently in the process of introducing the Challenger Worksafe Pro 300 N automatic Type 1 personal flotation device (life jacket) into service. These devices, which can be worn with full structural PPC and SCBA, will greatly enhance the safety of firefighters when working at marina fires.

18 In previous experiences, boat owners have attempted to remove many non-involved vessels at once; these actions can lead to significant waterway congestion, resulting in the vessels most at risk not being able to be removed in a timely manner and can result in further unnecessary fire spread. Removal of non-involved vessels should be conducted in a coordinated manner, starting with the vessels most at risk first, under the direction of the Incident Commander. If possible, Water Police or marine authorities should assist in the removal of vessels to ensure vessels are removed in accordance with the overall firefigting plan.

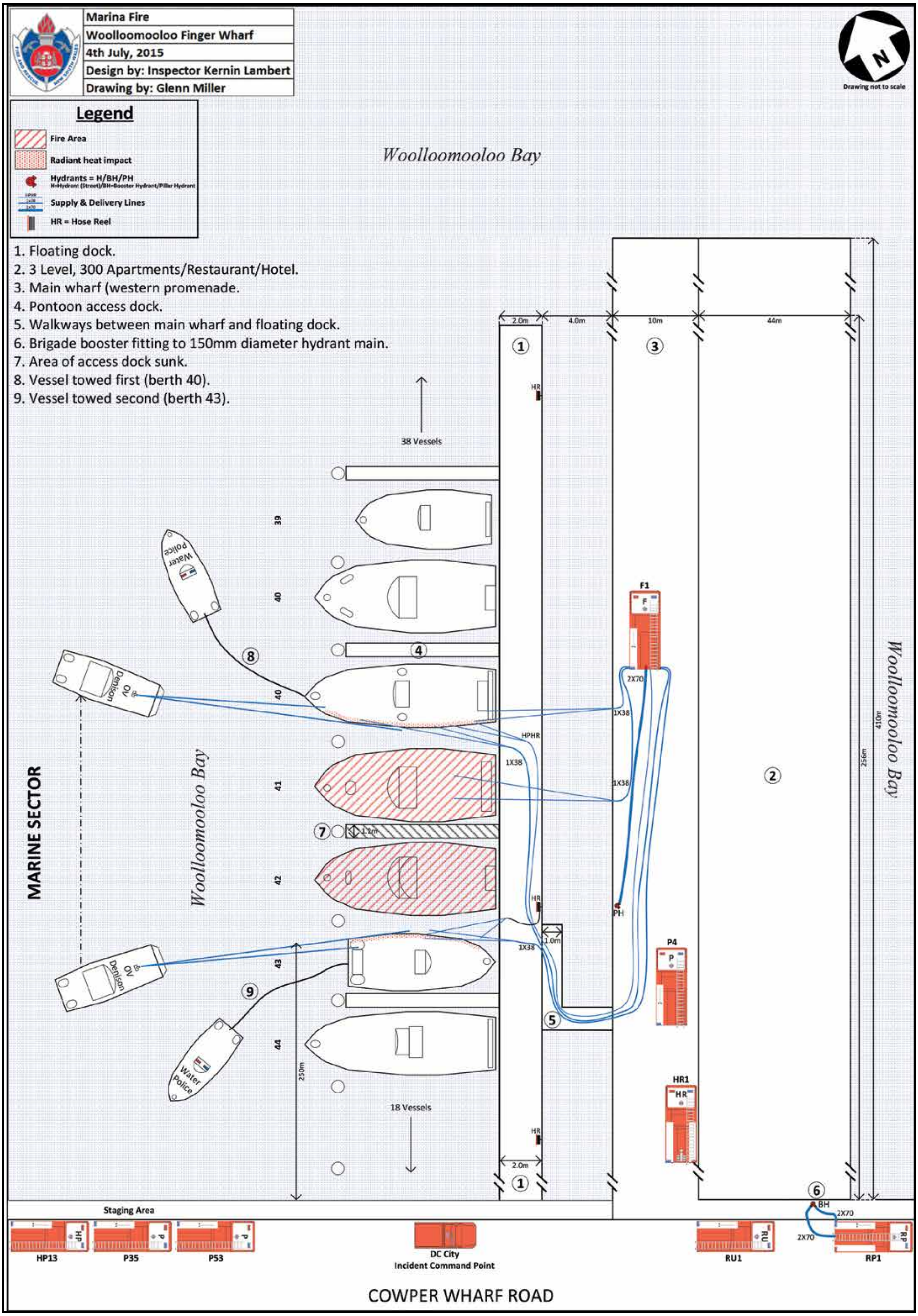
19 Untying the exposure vessels saved valuable time, enabling the vessels to be quickly moved to safety by Water Police vessels. Note, firefighters kept a single mooring attached to the vessels, to prevent uncontrolled drifting, until tow lines were attached.

20 Congratulations to Flyer 1 pump operator, Firefighter Warren Stanley, who performed faultlessly at his first pumping job!

21 Historically, marina fires have often resulted in large losses, particularly due to vessel to vessel fire spread, fuelled by highly volatile fibreglass boat construction and high marina fuel loads. Under these conditions, conflagrations can quickly develop that are difficult to control with conventional firefighting techniques. In addition to the above, the Finger Wharf structure was a large 100-year-old former wool store building, of timber construction located less than 15m from the involved vessels. The FRNSW crews who responded to this fire performed with distinction, conducting firefighting in a determined and highly professional manner, confining the fire to its place of origin and stopping any further fire spread from occurring. This was a textbook example of how to conduct operations at a marina fire.

22 As was the case at this fire, boat and marina fires are seldom straightforward, containing many hazards, difficulties and tactical challenges to firefighters. Congratulations to all crews who responded to the Finger Wharf fire for their considerable efforts.

END


Marina Fire
Woolloomooloo Finger Wharf
4th July, 2015
Design by: Inspector Kernin Lambert
Drawing by: Glenn Miller
Legend
Fire Area
Radiant heat impact
Hydrants = H/BH/PH
H=Hydrant (Street)/BH=Booster Hydrant/Pillar Hydrant
Supply & Delivery Lines
HR = Hose Reel
Drawing not to scale
N
1. Floating dock.
2. 3 Level, 300 Apartments/Restaurant/Hotel.
3. Main wharf (western promenade.
4. Pontoon access dock.
5. Walkways between main wharf and floating dock.
6. Brigade booster fitting to 150mm diameter hydrant main.
7. Area of access dock sunk.
8. Vessel towed first (berth 40).
9. Vessel towed second (berth 43).
Woolloomooloo Bay
38 Vessels
18 Vessels
Water Police
OV Denison
MARINE SECTOR
2.0m
4.0m
10m
44m
410m
256m
250m
1.0m
1X38
2X70
HPHR
HR
PH
BH
F1
P4
HR1
Staging Area
HP13
P35
P53
DC City
Incident Command Point
RU1
RP1
COWPER WHARF ROAD

Rescue crews work closely with Ambulance Paramedics to release the three trapped occupants.

THREE PEOPLE TRAPPED BY COMPRESSION AT LIDCOMBE TRUCK HEAD-ON COLLISION AND ROLL OVER

Incident summary: FRNSW crews were confronted with a multiple vehicle head-on collision, including the involvement of a heavy vehicle and rollover and reports of multiple persons trapped including one person reportedly trapped under the overturned truck. This was a complex rescue, requiring the employment of specialist techniques and resources. As usual, firefighters performed with distinction.

Incident type: Motor vehicle accident persons trapped.

Call details: 0933 hours, Tuesday 30 June 2015, Direct line call from Police RCO, MVA persons trapped, Carter Street, Lidcombe.

Nature of entrapment/emergency: High speed head-on collision between a sedan and a medium rigid two axle pantech aluminium body delivery truck. Following collision, the truck rolled and came to rest on the near side. In addition, the sedan then struck two unoccupied stationary parked cars. As a result of the collision, the truck came to rest on the near side (referred to as the "low" side in this report). The off-side is also referred to as the "high side" in this report.

As a result of the collision, the male driver and one female occupant of the truck were severely trapped by compression to the lower limbs. The occupants of the truck were trapped as follows:

Driver: The driver's feet and lower left leg were caught between the firewall and floor of the truck between the steering column (located on the "high" side of the truck), however the driver's head and upper body were located on the "low" side of the truck near the ground.

Occupant 1: An adult female passenger, who was seated in the center of the cabin, was trapped by compression of the firewall, which had folded around her legs at collision impact, causing compound fractures to both legs. Similar to the driver, the passenger's right leg was caught on the "high" side of the cabin, near the clutch pedal, however her left leg was located mid-way down the front of the cabin and her head and upper body were located on the "low" side of the truck near the ground. This patient was in extreme pain due to her fractured limbs, worsened by any movement of the truck cabin.

Occupant 2: An adult male passenger (seated in the passenger seat against the near side window), was located within the cabin of the truck against the near side cabin door and trapped by severe confinement.

The driver of the sedan self-released prior to arrival of emergency services.

FRNSW response: Pumper 30 (Lidcombe), Rescue Pumpers 15 (Burwood) and 59 (Eastwood) and Heavy Rescue 59 (Eastwood) and Duty Commander ME3 (Ashfield) Inspector Geoff Roach.

The hydraulic ram located between the A and B pillars on the off side of the truck is slowly extended

Services in attendance: Ambulance Service of NSW and NSW Police.

Incident operations: Pumper 30, under the command of SO Michael Newcomb, was the first emergency service appliance to arrive on scene and was met with a scene of confusion and distress, including reports from members of the public that people were trapped under the truck. SO Newcomb found a collision involving three cars and a delivery truck which had rolled following collision, severely trapping three people within the cabin of the truck. At this time, two passers-by had climbed onto the cabin of the truck, precariously positioned, attempting to support the driver. SO Newcomb directed fire protection to be immediately put in place, while he conducted a rapid scene assessment. Following size-up, SO Newcomb sent an initial situation report, accurately describing the entrapment and the situation at the crash scene.

SO Glenn Brown was the officer in charge of Rescue Pumper 15 and responding to the crash scene when he overheard the situation report from Pumper 30. SO Brown accurately assessed the situation and immediately sent a RED message for an additional Heavy Rescue Unit and Rescue Pumper, realising additional specialist rescue equipment and rescue operators would be required at this incident (This decision would later prove to be critical to the success of the rescue). As a result of the message from Rescue Pumper 15, Rescue Pumper 59 and Heavy Rescue 59 were responded to the incident. At the crash scene, Pumper 30 firefighters had commenced stabilisation of the overturned truck. Firefighter Stephan Marshall went to the cabin of the truck and provided reassurance to the trapped occupants. Firefighter Marshall remained with the occupants, who were in highly distressed states. This had a significant impact on the trapped occupants, greatly reassuring and calming the people.

Rescue Pumper 15 arrived on scene and firefighters commenced an assessment of the entrapment and began to form an extrication plan. Despite initial efforts by Pumper 30, the truck (in particular the cabin) remained highly unstable, with any movement of the cabin causing extreme pain to the passenger, due to the compound fractures to both legs. Firefighters placed step blocks, cribbing and wedges in, around and under the truck, making it as stable as possible. Firefighters assisted the passers-by from the cabin of the truck to the ground. At this time, firefighters could see the driver and occupant 1, however only the arm of occupant 2 was visible. SO Brown consulted with ambulance paramedics and an extrication plan was formed, initially involving setting Tirfor winches either side of the overturned truck, to prevent further movement of the truck during extrication.

Duty Commander Inner West Inspector Geoff Roach arrived at the incident and established a FRNSW Command Point. Inspector Roach was FRNSW Commander and liaised closely with emergency services in attendance as well as the FRNSW Rescue Commander, SO Brown.

Rescue Pumper 15 was positioned on the western side of the truck and a Tirfor winch was connected between Rescue Pumper 15 (anchor) and the steering column of the truck (secured with chains), to stop the truck sliding backwards. At about this time, Rescue Pumper 59 and Heavy Rescue 59 arrived on scene; the attendance of these appliances was critical, bringing additional specialised rescue equipment and rescue operators to this complex rescue situation.

A second irfor winch was established from the truck to Heavy Rescue 59 (anchor) located on the eastern side of the truck, further increasing stabilisation. The Tirfor winch cables were tensioned prior to any cutting taking place, to prevent any parts of the cabin collapsing back onto the patients once cutting commenced.
sA ladder was placed at the side of the truck, providing access to the top of cabin. Firefighter Nick Ryan initially gained access to the top of the cabin via the ladder with an ambulance paramedic.
A heavy-duty steel bullbar was fitted to the front of the cabin, which was removed by unbolting (the strength of the steel prevented it from being cut through). Firefighters then used spreaders and shears to cut and remove the door from the driver's side of the cabin, greatly improving patient access.

Hydraulic shears were used to make cuts in the top and bottom of the off-side A pillar, enabling the A pillar to be removed. A relief cut was made on the bottom of the near-side A pillar. Relief cuts were made in the truck gussets on the off-side and near sides, using small and large shears. Firefighters were cutting with extreme caution, due to the close proximity of the female occupant's feet. A Holmatro 2004U hydraulic power ram was placed on the "high" side of the truck, on the off-side of the cabin, between the A and B pillars. The Tirfors continued to be tensioned (providing follow up packing) while the ram was extended. A pocket line was placed around the ram and secured, to prevent the ram dropping. The ram was operated to full extension, however could not extend far enough to provide complete release of the patient. A 2005U hydraulic power ram replaced the 2004 ram. The larger ram was then operated to full extension, releasing the driver's leg from compression. The drivers shoe was cut away from the driver's right foot, enabling its release. Once the driver's lower limbs were released from compression, the driver was placed in a chest harness and lifted vertically using a rescue line and cordage techniques. The haul party consisted of firefighters located on top of the overturned truck body. After lifting the driver a short distance vertically, firefighters were able to place the patient onto a rescue board for final removal from the vehicle. NB: A FRNSW officer was located on top of the overturned truck with the haul party, ensuring the safety of all firefighters at this location.

Firefighters then worked to free the female passenger. A hydraulic power ram was placed on the "low" side of the truck, between the base of the A pillar (on the windscreen at the base of the dash) and the cabin roof. Timber step blocks were placed behind the roof and at the bottom of the windscreen. Packing was placed behind the roof of the cabin, to provide a base to ram from (firefighters were unable to ram off the roof because the A pillar had been cut, removing the structural integrity of the roof). The ram was then extended, pushing the crushed firewall forward and providing enough clearance to release the patient's legs from entrapment (the previously installed timber packing successfully provided a base for the ram operation). A chest harness was then placed on the patient, connected to a rescue line and the patient lifted, utilising the haul party, removing the patient from entrapment. The patient was then placed on a rescue board, removed from the truck and placed on an ambulance stretcher for conveyance to hospital. Once the driver and trapped female occupant had been released, the third trapped person was able to simply stand up and be assisted by firefighters and ambulance paramedics from the truck cabin and placed on an ambulance stretcher for transport to hospital.

Notes

1. The actions of the first arriving pumper laid a firm foundation for the rescue and emergency operations that would follow and ultimately resulted in highly successful outcomes for all patients involved in this collision.
2. The officer-in-charge of the first arriving FRNSW appliance provided a detailed situation report to FireComs,

The crash scene. Rescue appliances were positioned to facilitate tirfor winch operations


Rescue crews pause as an Ambulance paramedic stabilises a trapped occupant.

providing precise details of the entrapment and critical incident conditions. The officer in charge of the incoming rescue appliance heard the CAN (i.e. conditions, actions and needs) report and based on the information provided, requested additional specialist resources that would prove critical at this incident. The pro-active request for resources shortened the time for specialist equipment to arrive at the incident, greatly enhancing the effectiveness of operations. The value of detailed CAN reports cannot be emphasised enough.

3. Entrapment was complex, requiring a detailed assessment by the rescue crews in consultation with ambulance paramedics, taking into consideration each patient's individual medical condition, resulting in the formation of a considered extrication plan. Release was a slow and careful step-by-step operation, with each step reviewed as the extrication proceeded, ultimately resulting in the best possible outcomes for the patients.
4. Stabilisation was critical at the incident. Movement of the overturned truck prior to FRNSW arrival was causing distress, pain and a worsening of the patient's condition. Significant stabilisation via timber packing reduced this movement. Use of the Tirfor winches was critical, ensuring the vehicle did not collapse further onto patients during cutting. Not only did stabilisation protect the trapped patients, it increased the levels of safety to the rescue crews and medical teams.
5. A high level of inter-service communication and cooperation was evident at this incident, resulting in seamless operations, again resulting in the best possible outcomes for the patients.
6. Extrication crews were met with a complex entrapment scenario, however a combination of ingenuity, significant skill levels of the rescue operators, excellent command leadership and the right rescue equipment resulted in rescue operations that were safe and highly effective. Throughout the difficult extrication, Ambulance paramedics provided advanced life support and directions on patient management.
7. Congratulations to crews present, who performed with distinction and with complete professionalism. **END**

Firefighters make a slight adjustment to the ram located between the A and B pillars on the off-side of the truck.

Rescue crews from 78 and 101 stations work to release the trapped driver.

HIGH SPEED MOTOR VEHICLE HEAD-ON COLLISION AND ENTRAPMENT AT MOUNT VERNON

Incident summary: FRNSW crews responded to a high speed head-on collision, resulting in entrapment by compression to the lower limbs of the driver of one of the vehicles (a forward control van). Extrication involved a carefully coordinated operation, utilising the simultaneous operation of hydraulic tools to slowly remove the patient from compression. The success of the extrication reflected the high level of professionalism of all FRNSW crews at the scene.

Incident type: Motor vehicle accident persons trapped.

Call details: 1614 hours, Thursday 3 September 2015, Direct line call from Police RCO, MVA persons trapped, Mamre Road, Mount Vernon.

Nature of entrapment/emergency: High speed, off-set head-on collision between two motor vehicles, a forward control van (vehicle A) and a light truck (vehicle B). Following initial impact, a secondary collision occurred with a third vehicle, a crew cab utility (Vehicle C).

As a result of the collision, the adult male driver of Vehicle A was trapped by compression within the vehicle. The dash had compressed onto the driver's lower limbs and the bracket holding the brake master cylinder was causing compression just above the driver's right ankle. No other people remained within the other two vehicles.

FRNSW response: Rescue Pumpers 101 (Bonnyrigg Heights) and 78 (Dunheved) and Duty Commander MW2 (Parramatta) Inspector Stephen Parkins.

Additional services in attendance: Ambulance Service of NSW, Ambulance Aeromedical Retrieval Unit, NSW Police, NSW Rural Fire Service and NSW Roads and Maritime Services.

Incident operations: Rescue Pumper 101, under the command of SO Dan O'Dea, was the first FRNSW appliance to arrive on scene. Firefighters commenced stabilisation of the forward control van containing the trapped driver, which was located in the middle of the road. NSWRFS units were on scene and had established fire protection. SO 101 liaised with the Ambulance Paramedic Supervisor while the rescue crew assessed the entrapment and commenced to form an extrication plan. Due to the serious nature of the entrapment, SO 101 sent a message requesting the attendance of a second rescue unit, for the provision of additional personnel and equipment.

An initial inspection cut was made in the metal panel at the front of the vehicle, enabling the rescue crew to identify the lower limb entrapment. Firefighters commenced to make access to the trapped patient through the driver's door. The door and front off-side corner of the vehicle were severely crushed and distorted due to collision impact, making operation of the rescue tools difficult. Firefighters used super spreaders to open the door and hydraulic shears to fully remove the door. Firefighters used the Combi tool to cut through a metal reinforcing bar fitted to the door, enabling the door to be completely removed.

The extrication plan involved conducting a dash push, to lift the dash off the patient's lower limbs, using a hydraulic ram. A complication to the dash push was the patient's right foot entrapment, requiring firefighters to lift and push the dash at the same time, to prevent further compression and injury of the patient's foot. This was achieved by placing the spreaders between a

reinforced section of the vehicle floor and the A pillar, enabling the dash to be lifted at the same time as it was pushed forward. Prior to commencing the dash push, firefighters made a relief cut at the top of the A pillar. A small ram was then placed between the base of the B pillar gusset and the A pillar at dash level and tension was taken on the ram. At this time, there was insufficient space to place a larger ram. A relief cut was made in the A pillar gusset. As the ram was extended, pushing the A pillar and dash forward, the spreaders were opened, lifting the dash. This operation was conducted extremely slowly and with great caution. As the dash was lifted, timber packing blocks were positioned to support the dash and also placed around the brake master cylinder bracket, to prevent the bracket returning and crushing the patient's foot. When the small ram had reached full extension, it was replaced by a medium ram, enabling the A pillar and dash to be continued to be pushed forward.

Once the dash had been moved away from the patient's legs, the dash was secured in place with the chain pull set, attached to the A pillar at dash level and the lower vehicle chassis, enabling the ram to be removed, facilitating patient release. A rescue board was utilised to remove the patient from the vehicle.

Notes

1. A comprehensive size-up identified the entrapment (and in particular, complications associated with the entrapment) and in consultation with ambulance paramedics enabled an effective extrication plan to be formed. Significantly, the compression caused by the brake master cylinder bracket on the patient's ankle and foot was identified during the size-up, enabling an appropriate extrication plan to be formed, resulting in the patient being released without suffering further injury or discomfort.
2. Release was slow and cautious, involving the carefully coordinated operation of the spreaders and ram. The success of this operation is a reflection of the high level of skill of the rescue operators.
3. As always, cooperation, coordination and communication between the services was excellent and a key to a successful patient outcome.
4. Size-up by the first arriving FRNSW OIC identified the need for an additional rescue unit for the provision of extra rescue equipment and operators; this decision turned out to be significant, enabling an enhanced extrication capability, again adding to the success of achieving the best possible outcome for the patient.
5. Congratulations to the FRNSW crews and all emergsency services in attendance for an extremely professional rescue operation.

END

From the front and off side, firefighters conduct a coordinated extrication.


In a carefully coordinated operation, as the hydraulic ram is extended, the spreaders lift the dash. Hydraulic shears are also at work. Note timber packing in place.

From the front and off side, firefighters conduct a coordinated extrication.

FRNSW at a simulated road crash at bstreetsmart (2014 file image)

BSTREETSMART DRIVES ROAD SAFETY HOME FOR TEENAGERS

Story by Qualified Firefighter Peter Kirwan, Technical Rescue Instructor, Education and Training Directorate

On 25–27 August, FRNSW participated in bstreetsmart, a road safety event run by the Westmead Hospital Trauma Service. The aim of the event is to reduce the number of young adults involved in car crashes, by showing the aftermath of serious crashes using simulation and guest speakers.

In 2013, 22,015 people were either killed or injured on NSW roads. Of this 2,402 were young adults aged between 17 and 20 years old and 1,909 of them were either the driver or passenger of the motor vehicle. It is this group that bstreetsmart aims to educate about the impacts of road trauma.

FRNSW was represented at bstreetsmart by Technical Rescue Training, Community Engagement, and stations from ME3 and MW2. The attending stations participated in a live demonstration of the aftermath of a motor vehicle crash where one person dies and two others are seriously injured. The demonstration commenced with the cause of the crash and concluded with the responsible driver being arrested and placed in a police car. FRNSW crews provided fire protection and the rescue capability for the show.

Following the live demonstration, guest speakers talked to the audience about their own life-changing injuries such as brain injuries and paraplegia, safety features of vehicles and organ donation. Musician Morgan Evans talked about his fatigue-related crash and then performed a number of his songs.

During the lunch break, students had the opportunity to view a number of static displays centred on road safety. This year FRNSW had their largest display so far which included a crashed vehicle with rescue techniques applied, student interaction with rescue tools and a photo booth where students could dress up in uniforms from three different eras and have their photo taken.

Firefighters talked to the students and teachers, not only about road safety and making smart choices as a driver or passenger, but also about choosing firefighting as a career.

Firefighters at the event used Twitter to promote road safety. Their 'tweets' were retweeted and favourited by bstreetsmart, Ambulance Service of NSW and NSW Police. Pictures were also posted to the FRNSW Facebook page attracting a number of comments from parents and students.

Kim Youngblood – Thank you guys. My daughter went to this on Tuesday. It made her understand the repercussions of wrong or impulsive decisions made while driving and many lives are impacted due to those decisions.

Vanessa Merryweather – My kiddo is there today. Can't thank you guys enough.

Lyn Soussi – Made a major impact on my son, the first thing he mentioned when he got in.

This year, approximately 22,000 Year 11 and 12 students attended the event over the three days, which was held at Allphones Arena, Homebush. For the first time the event was webcast live for schools who were unable to attend. The webcast was viewed by more than 240 schools including overseas schools, either live or on-demand later that day.

The event was attended by John Sidoti, Parliamentary Secretary for Transport, Roads, Industry, Resources and Energy on the Tuesday and Troy Grant, Deputy Premier and Minister for Justice and Police on the Wednesday. Mr Grant visited the FRNSW display and complimented firefighters on its presentation as well as discussing rescue with them.

The bstreetsmart program provides a powerful message to young drivers regarding road safety. The 2015 event was another success with the large attendance and webcast reaching more young people than ever before. Planning for the 2016 bstreetsmart event will commence next year. For more information see *www.bstreetsmart.org*.

END

CAMPAIGN HELPS TO REDUCE WINTER HOUSE FIRES BY 8 PER CENT

Monday 31 August saw the official end of winter and conclusion of the 2015 h Campaign.

This year's campaign focussed on fire safety in the kitchen with the simple message: 'Keep looking when cooking'. Operation Cold Snap, which ran from 17 July to 2 August, also brought winter fire safety to the forefront, with more than 200 fire stations across the State taking part in a host of engagement activities.

Between June and August, FRNSW firefighters responded to more than 1,100 home fires and sadly, during that time, seven people died in fires. In addition, 171 people were injured in house fires – with a noticeable spike in July when a total of 75 people were injured during that month alone.

Despite these fatality and injury statistics for the winter period, campaign results show a decrease of 8% in home fires against the 2006–2014 average and a 24% decrease in kitchen-related fires against the 2006–2014 average.*

"This outcome is an outstanding result," said Manager Community Engagement Unit Superintendent Mick Ollerenshaw. "It's a strong indication that the targeted campaign approach was successful in contributing to this reduction."

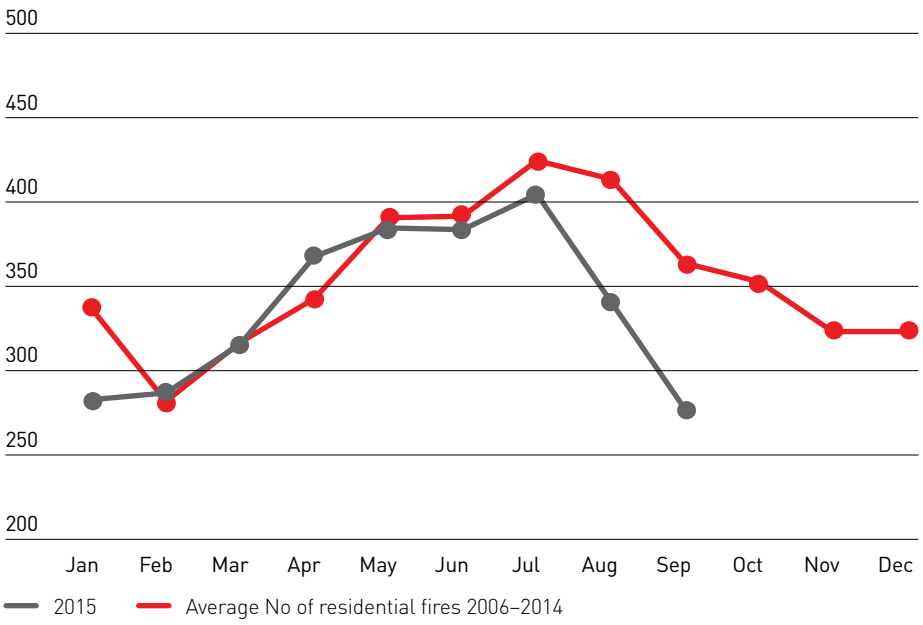
During the campaign, FRNSW promoted the 'keep looking when cooking' message to millions of people in NSW through social media, digital and radio ads, direct mail and in person via Operation Cold Snap.
Both the digital and radio ads were also translated into Arabic, Cantonese, Mandarin and Vietnamese.

Two sample groups (the primary target audience of respondents who belong to the top 10 'at-risk' Mosaic** types, as well as the general NSW population) were surveyed to evaluate the campaign (see results on next page).

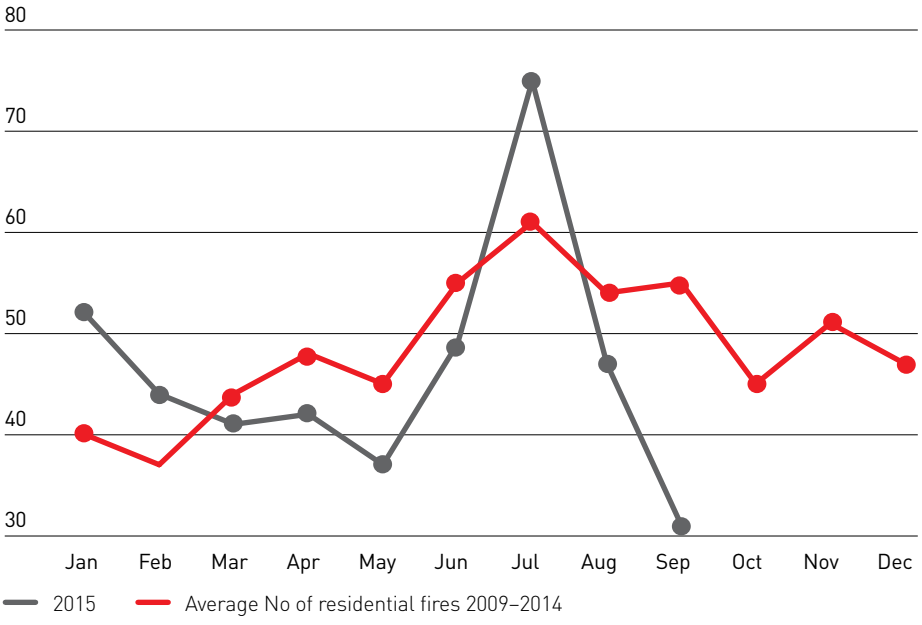
Christopher Fish, Team Leader Partnership, Evaluation and Marketing, said social media was a standout during the 2015 campaign.

"Social media as a channel had the strongest recall, which could be attributed to its interactive nature or the strong and impactful imagery used. A combination of imagery, recipes and videos, used both organically and as part of paid strategy, resulted in a significant increase in campaign reach when compared to 2014." **END**

Average number of residential fires 2006–2014 against 2015



Fire injuries 2006–2014 average against 2015



* Results reported as at 29 October 2015

**Mosaic profiling combines fire injury risk data with lifestyle data to identify, down to the individual household, community members at greater risk of fire. Mosaic classifies all Australian households and neighbourhoods into 49 types and 13 overarching groups.

CAMPAIGN OUTCOMES

Around 77% of NSW residents
said they would take action to become more fire safe as a result of the radio ads.

58% of the targeted audience
were aware that it only takes 0-3 minutes for a fire to become deadly, an improvement on 2014 and previous years.

Social media performed the strongest with ad recall and conveyed a clear fire safety message to its audience.

Non-paid social media posts received 1.5 million impressions,
with 12,646 people actively engaged (via likes, shares, comments) and 129,975 video views.

Paid online media activity received 16.5 million impressions,
with 115,487 people actively engaged (via likes, shares, comments) and 659,475 video views.

A direct mail pack (including a wooden spatula with the 'keep looking when cooking' messaging) was well received, **with 94% of recipients feeling positive towards it.**
Recipients felt it was an informative useful reminder, and a great way to educate their children on fire safety.

Almost all members of the target audience (99%) who visited the FRNSW home fire safety website found it to be useful.

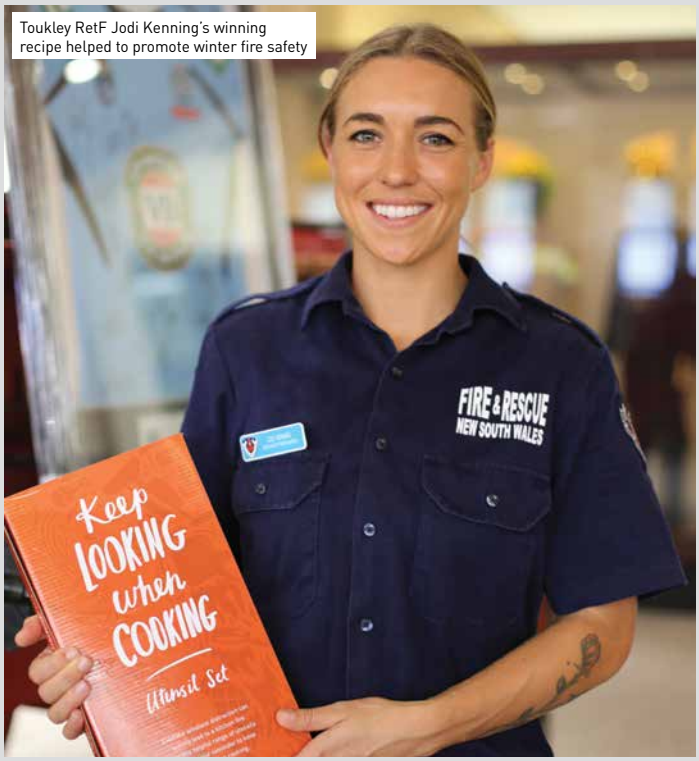
83 additional unpaid media items
were reported, providing a total audience reach of 1.8 million (media type: newspapers 67 items, TV 6 items and radio 10 items).

The campaign website received 67,039 visits,
with most traffic driven by paid advertising and both corporate and fire station Facebook posts.

The 'keep looking when cooking' line was clearly understood across the board.

23% of NSW residents
recalled seeing the campaign

84% of respondents
said they would take positive action towards fire safety after seeing either the digital or social media campaign.



Toukley RetF Jodi Kenning's winning recipe helped to promote winter fire safety

FIREFIGHTER RECIPE COMPETITION WINNER

With a delicious selection of winter warmer recipes to choose from, Hatted chef turned City of Sydney Firefighter Kurt Fegebank was spoilt for choice when judging the Firefighter Recipe Competition. He selected Toukley Retained Firefighter Jodi Kenning's beef and beer stew for being "a genuine winter warmer, and by far the most popular dish".

The recipes were invaluable in keeping the campaign visible on Facebook and reaching more than 300,000 people. All recipes were added to the home fire safety web pages www.fire.nsw.gov.au/home-fire-safety/recipes with the recipes achieving 56,909 page views.

VIEW VIDEO AT
fire.nsw.gov.au/frnews
OR
SCAN CODE TO WATCH NOW

REACHING OUT TO THE VULNERABLE WITH THE RED CROSS

In early 2015, FRNSW and the NSWRFS teamed up with the Australian Red Cross to identify vulnerable older people for referral to the Smoke Alarm and Battery Replacement (SABRE) program.

Called the Home Fire Resilience Project, the program involves FRNSW firefighters and NSWRFS members delivering the existing SABRE program accompanied by Red Cross volunteers.

Acting Community Safety Coordinator, Senior Firefighter Paula Raat said by partnering with Red Cross, FRNSW can add greater effectiveness to the SABRE program.

"For FRNSW, this is essentially business as usual. While firefighters carry out standard SABRE procedures, the Red Cross volunteer will talk to the resident to encourage them to prepare for, respond to, and recover from fire emergencies."

During pilot training in Maitland, Homebush, Ballina, and Grafton in September, firefighters and volunteers were taught how to make conversations more impactful, thus ensuring residents are more likely to actually take steps to prepare for a fire emergency.

After attending the joint training with his crew, Lidcombe Fire Station SO David Inskip said the project will be beneficial to vulnerable members of the community and offers a valuable opportunity to interact with staff from other agencies.

"The training ensures those delivering the project are more effective in their role by being able to call upon all the appropriate resources and capabilities," SO Inskip said.

"I see any opportunity to meet with agencies similarly involved with serving the community as worthwhile. It goes a long way to understanding what resources we all have available and how best FRNSW can assist other agencies."

The project, which is funded by the Office of Emergency Management's Community Resilience Innovation Program, is targeting a group of 500 at-risk seniors identified by the Red Cross through the successful Telecross welfare phone call program.

The home visits, which commenced in November, include a presentation of Red Cross disaster preparedness information and a range of FRNSW materials including a fire safety fridge magnet, a 'keep looking when cooking' spatula, a Fire Safety in the Home brochure, and a 10-year lithium battery photoelectric smoke alarm and taping kit. **END**

UNDERSTANDING THE NEEDS AND EXPECTATIONS OF OUR COMMUNITY

In May, FRNSW commissioned Australia Online Research to conduct a Customer Satisfaction Survey to develop a better understanding of community needs and expectations.

The results will guide development of a Customer Charter, outlining FRNSW's commitment to the community and where it will focus its investments.

Prior to this study, very limited research of this kind had been done for our service. This study therefore provides important insights that can be benchmarked within Australia and at an international level.

The study was designed to ensure that its findings were representative of the community and will provide a solid foundation for future tracking.

Key findings:

1. FRNSW performed well on all 'Whole-of-Government' measures.
   - FRNSW outperformed NSW Public Services overall on goals and values.

	Consumer				Business			
Average rating	Fire & Rescue NSW		NSW Fire Brigades	NSW Public Services	Fire & Rescue NSW		NSW Fire Brigades	NSW Public Services
Transparency	8.2		8.3	6.6	8.0	←	8.3	6.7
Safeguards privacy	8.4	←	8.7	7.6	8.4	←	8.6	7.7
Public participation	7.7		7.7	6.0	7.4	←	7.8	6.0
Making it easier to access information	8.2	←	8.4	7.1	8.0	←	8.2	7.0
Is a body I can trust	8.9	←	9.1	7.1	8.8	=	8.8	7.2
Operates with integrity	8.8	←	9.1	7.2	8.8	=	8.8	7.4
Provides good service	8.9	←	9.1	7.1	8.8	=	8.9	7.1
Is accountable for its services	8.6	←	8.6	6.9	8.5	=	8.5	6.9

2. Satisfaction was high across all services, with a few small exceptions.
   - Around 80% of customers were satisfied with FRNSW services (scoring 8 out of 10).
   - A small number of services showed some level of dissatisfaction (including animal rescue, terrorist threats, response to bushfires, and bushland search & rescue).
   - Most services were seen to have improved over the last five years, with a small percentage perceived to have worsened (including house fire preparedness education, rescue to building collapses / infrastructure damage, response to natural disasters).

3. Drivers of satisfaction differed among consumers and businesses.
   - Among consumers, the most important factors were those related to reliability and meeting the needs of the community.
   - Among business customers, the most important attributes related directly to the employees, and included honesty, reliability, knowledge and understanding the customer perspective.

4. Core response and rescue services remained the most significant, but all services were seen as important.
   - Other services such as education and training were identified as being secondary but still high importance.

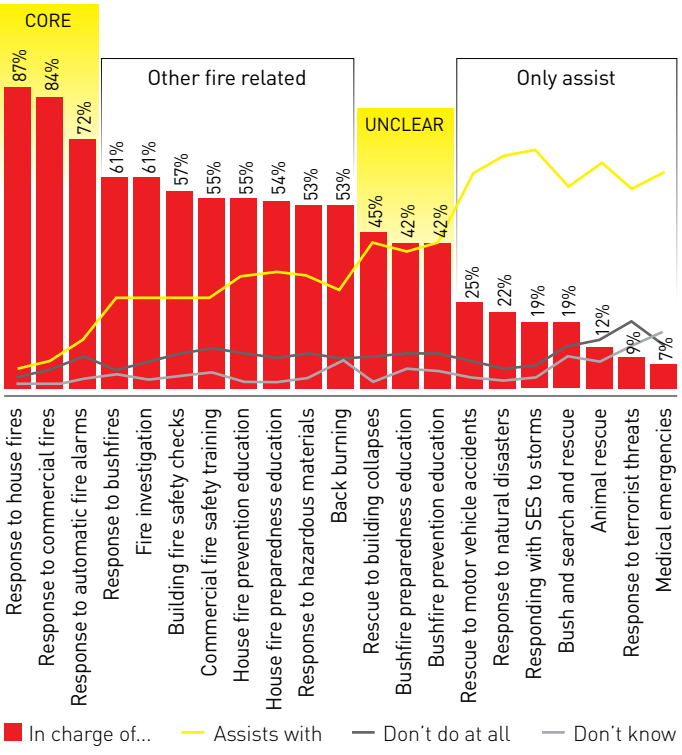
5. Customers were responsive to new service concepts, with emergency life saving first aid showing the highest appeal.
   - Over half of customers found home fire safety checks appealing.

6. Customers saw house fire prevention and education as a shared responsibility between the community and FRNSW.
   - The tag line 'Help us help you' resonated well with customers.
   - Customers also believed that FRNSW should have an equal balance in its focus between emergency response and prevention/education.
   - The community expects FRNSW to do more prevention activities.

7. Brand awareness is low, with low distinction between FRNSW and the NSWRFS.
   - Confusion exists about FRNSW and the NSW Rural Fire Service, with only around half of customers clear they are separate organisations.
   - However, those surveyed did not place great importance on the difference between the two fire services, holding the justified expectation that FRNSW and the NSWRFS will work seamlessly together to protect and serve the community.
   - Exposure to FRNSW through open days, events or media generally improved understanding and perceptions.

8. FRNSW was perceived to be mainly in charge of building fires, with less clarity of its role beyond that.
   - Customers were divided about FRNSW's responsibilities regarding building collapses and bushfire education.
   - Most saw FRNSW as only assisting in other rescue situations (including motor vehicle, animal rescue and natural disasters).

Primary services: perceived core responsibilities



TESTING TIMES FOR SMOKE ALARMS

In March 2015 FIRU conducted burns at FRNSW's testing facility at Londonderry as part of ongoing smoke alarm research.


FIRU monitoring burns to test smoke alarm effectiveness

Superintendent Jeremy Fewtrell, Manager FIRU, described the purpose of the burns. "We conducted this research to ensure our advice to the community on smoke alarms is sound and justifiable," he said. "The research findings will also be used to advise regulators on the suitability of smoke alarm regulations in relation to type of smoke alarms, and the number of alarms required per level in both state legislation and the building code."

The burns assessed the performance of photoelectric and ionisation smoke alarms in a realistic residential setting with both flaming and smouldering fires. The impact of smoke alarm positioning on performance was also considered with three different locations assessed: centre of the ceiling, wall-mounted and dead space.

In an Australian first, the fire gases were also chemically analysed. This analysis assessed tenability of the fire compartment once smoke alarms activated, and also whether smoke alarms gave sufficient warning to enable occupants to still exit a building safely.

Residential sprinklers were incorporated in some of the burn scenarios. The sprinklers proved very effective in containing or extinguishing the fires, and the gas analysis equipment identified that when sprinklers activated, atmospheric conditions in the room improved which would also improve survivability for any occupants.

FIRU staff built a two-bedroom unit as a research prop in which to conduct the burns. This prop enabled different fire scenarios to be created. To ensure realistic and consistent fuel loads for the test, typical furniture was added to the prop.

The 10 smoke alarm research burns conducted in March were the initial burns in what will be a comprehensive series of 90 burns. Each burn scenario is repeated three times to ensure that the test results are statistically valid.

FRNSW is working with the Australian Building Codes Board (ABCB), the body responsible for the Building Code of Australia, to ensure that the research addresses their requirements and will provide sound advice to policy decision makers. The ABCB is partially funding the cost of this research. **END**

VIEW VIDEO AT
fire.nsw.gov.au/frnews
OR
SCAN CODE TO WATCH NOW

CHESTER HILL HOSTS DISNEY FILMING

Recently Chester Hill Fire Station played host to Disney Channel Online who made a segment about FRNSW for their audience of children aged three to 15 years old.

Filming at Chester Hill for Disney children's television

What sometimes takes seconds on-screen and looks like fun to be involved in, can in reality be a tedious, stop-and-start-again process with which firefighters are not familiar. Certainly behind the scenes of a production shoot is nothing like the response to an emergency incident. Shooting often pauses to tweak the lighting or to reset audio after a train passes.

Like other location shoots, this Disney filming had its challenges; however A Platoon at 85 Chester Hill met these head-on and with good humour. Duty Commander Inspector Drew Wilson and Zone Commander Superintendent Adam Dewberry were also very supportive, remaining unfazed by the multiple hazmat incidents and shed fire thrown into the mix on the day of shooting.

Disney host and professional skateboarder, Mikey Mendoza, was put through his paces on the Physical Aptitude Test by FRNSW Health and Safety Advisor Stephen Pascoe. Mikey's efforts should impress the kids with just how much physical fitness might be important to their later choices in life, especially if they are aiming for a career in firefighting.

Mikey also outlined what kids can do at home to make themselves and their families more fire safe, reminding them to have working smoke alarms and to practise a home escape plan. Disney is to be commended for their willingness to consult on scripts and proposed activities with FRNSW's Media and Communications Unit, ensuring a great messaging outcome.

Senior Firefighters Brett Carle and Vanessa Osburg talked to Mikey about what it takes to be a firefighter, emphasising the importance of teamwork and training in delivering a safe, efficient and effective emergency service. Brett and Vanessa as FRNSW spokespeople were great role models, hopefully inspiring both boys and girls to dream about firefighting as a possible career. Chester Hill's A Platoon stepped up for action scenes that included both hose handling, and also search and rescue sequences, to demonstrate the teamwork discussed in the interviews.

This segment will run during Disney's online broadcast of the Avengers Assemble animations. Those kids who tune into virtual reality superheros will also be given a window into the real world and a glimpse of FRNSW at work. They will see some real firefighting skills and what teamwork can do when there is real trouble at hand. Who needs superpowers when you have trained firefighting professionals from FRNSW standing by?

When it hits the small screen, FRNSW hopes all those girls and boys watching Disney will listen to Mikey's fire safety messages and dream about their future careers as firefighters. END

Two of the children playing the role of firefighters

GETTING GREAT RETURN ON INTEREST FROM THE BANK

A major new advertising campaign for the Commonwealth Bank (CommBank) features firefighting, among other professions, as a career option for children growing up. So, what did that have to do with FRNSW?

The creative brief behind the CommBank (television, digital and possibly cinema) campaign is all about encouraging people to follow their dreams. With the commercial support of the bank, of course. Capitalising on the 'dream' of being a firefighter, the profession was included in the final creative script produced by ad-land giant, M&C Saatchi. Firefighter shares screen time with surgeon, nurse, fashion designer, pilot, police officer, paramedic, farmer, etc. All of the roles were played on-screen by an impressive ensemble of child actors, who – according to the producers, Good Oil Films – took on their adult personas with great gusto, flare and conviction.

The creatives behind the campaign wanted absolute authenticity for the various roles, in particular, firefighter. Enter FRNSW, Australia's largest and busiest urban fire and rescue service.

Good Oil Films Executive Producer, Sam Long, said the job was a big undertaking. "We've got about 120 kids all up, with about 35 lead actor roles we'll film. [For the role of firefighter] we go into an extensive wardrobe period where they're getting measured, all the fabrics have been sourced internationally and locally, and we've been rehearsing [the kids] as well at Fox Studios."

We've been quite amazed ... how accomodating the [real] firefighters have been, so, thank you!

The 'firefighters' are a mix of boys and girls from a range of backgrounds accurately portraying the 19 firefighters used in the final ad.

Filming took place in two locations, a factory warehouse in St Peters in Sydney's Inner West and City of Sydney Fire Station. Cast and crew worked closely with Superintendent Ian Krimmer from the Media and Communications Unit (MCU), Retained Firefighter Richard Summers and Deputy Captain Craig Ferns from ComSafe, getting tips on operational authenticity. The cast were complete with scaled-down PPC, modified helmet, 'movie prop' fibreglass axe and firefighting tools and replica plastic breathing apparatus set.

Good Oil Films Director Hamish Rothwell said the costumes and props were even better than they expected. "It's so much better with all the detail, they just look legitimate – looks amazing!"

Filming the firefighter scenes commenced at 5am, starting with a building fire sequence, complete with lighting to simulate a working fire and heavy smoke effects. Two stowed appliances hired for the day by the production company via ComSafe, plus a police car and uniformed 'police officer'

added to the authenticity of the scene. The cast and crew then moved to City of Sydney Fire Station to film the second and final sequence – the fire station and simulated turnout.

"We get about three and a half weeks to get everything all together once we get the script, so it's a very short period of time," said Hamish. "We're [filming] eight different scenarios and the fire department is one of them. We'll shoot for five days and I'll do post-production for about six weeks."

As this was a commercial, the FRNSW brand will not appear in the final ads, however, the unmistakable markings and style of our trucks will be recognisable to many people. All the on-screen uniforms have generic 'fire department' branding, complete with imitation 'fire department' badges on all clothing and props.

"To be honest, we've been quite amazed that we were able to get in here and how accommodating the [real] firefighters have been, so, thank you, thank you!" said Executive Producer Sam Long.

MCU Assistant Director Andrew Parsons, who also attended the all-day filming, said assessing and assisting with requests like this is part of the service MCU provides.

"When a company approaches FRNSW for involvement, the request is assessed by MCU, referred to ComSafe for equipment and resource quotes and then, providing the FRNSW brand is not compromised and it benefits our key messages, a brief is sent to the Office of the Commissioner for final approval.

"Given this campaign is about prompting young people to consider 'dream' careers – firefighter being one of them – we were keen to see the role shine among the other on-screen jobs.

"The idea resonated with what MCU aims to achieve long term through recruitment media and marketing. Who knows, a young girl or boy seeing this ad campaign may dream of being a firefighter and be inspired to one day pursue and realise that dream."

Not every ad campaign, photo shoot, TV project or independent production, e.g. documentary – regardless of size, budget or scope – will be approved. Requests should always be assessed by MCU before FRNSW resources and people are involved or committed to the project.

The CommBank nationwide ad campaign started screening in late September 2015.

https://youtu.be/fNWlY73iO0U

END

Filming on set with the young actors

Screen grab from the completed advertisement

Filming on set with the young actors

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

OR

SCAN CODE TO WATCH NOW

Media at the scene of an incident

MAKING THE CHANGING MEDIA LANDSCAPE WORK FOR YOU

The advent and ever-increasing uptake of social media and smartphones have drastically changed the media landscape. FRNSW's Media and Communications Unit (MCU) demonstrates how you can make the media work to your advantage.

A picture really can paint a thousand words.

In response to the Media Pocket Guide released in 2014, MCU reports a very positive uptake of firefighters sending images and video of some of the great work being done by crews throughout the community.

Being careful to follow the instruction of not showing accident or fire victims, as outlined on the back of the media pocket guide card, images sent in to the Media Team by firefighters have shown crews working in a variety of settings and situations. These pictures – and videos – are often included in the official @FRNSW tweets (via Twitter) and FRNSW Facebook posts. Many are picked up by media and shared on social by our followers or online news services.

Followed by thousands of journalists and hundreds of thousands of members of the community, the official FRNSW social media accounts for Twitter, Facebook, Youtube, Instagram and Soundcloud are a great way to showcase our work to a diverse and very appreciative audience.

News is a very content-hungry beast

If you have a picture or short video of an incident your crew has attended, and the pictures don't show victims of accident or fire, you can send them to media@fire.nsw.gov.au. You can also send pictures of community engagements, community activities and special events. Make sure you include your name, contact number, incident number and a brief description of the incident and be sure to get it to us as soon as possible so it's not old news by the time we receive it. The Media Team will help share your stories with the community and promote the profile of firefighters and FRNSW with the community.

'Like' and 'share', it's a great way to increase our profile

In the next edition of *Fire & Rescue News*, MCU will share some great examples (including tips and tricks) of the good work stations are doing on their Facebook pages to promote the profile of firefighters and FRNSW.

In the meantime, if your station is operating a Facebook page, make sure you don't miss out on the opportunity to 'share' important material and stories from our main Facebook page. By 'liking' the FRNSW Facebook page, you'll have immediate access to updates, news from around FRNSW as well as key community safety messages and content. Add this to the great work you're sharing with your community via your local Facebook page.

#FRNSW TRENDING

- **Periscope** | 27 September, Dulwich Hill burst water main media conference with Supt Adam Dewberry, live video – 4,107 interactions
- **Twitter** | 16 September, Bateau Bay Hail (video sent in by DCapt Ian Dancaster) – 14,942 interactions
- **Twitter** | 13 September, Concord 3rd Alarm structure fire – 15,975 interactions
- **Facebook** | 26 August, bstreetsmart demonstration at Sydney Olympic Park – 128,163 interactions, 921 likes and shares
- **Twitter** | 21 August, Clareville hazard reduction burn notification and pictures from the fireground – 16,635 interactions
- **Facebook** | 17 August, new rumbler siren post and video – 251,229 interactions 3,198 likes and shares

A great way of maximising exposure of what you and your crew are doing to a diverse internal and external audience is to contact the Media Team via media@fire.nsw.gov.au. The Media Team can help support the great work you're doing locally with your community and local media.

The rise and rise of citizen journalism

"News gathering is an expensive business and newsrooms can't have a news crew in every suburb – ready and waiting for news to break," said Andrew Parsons, Assistant Director Media and Communications Unit.

"But a significant majority of people have camera and data-enabled smartphones. Something significant happens now on the street and in an instant, social media will come alive with first-hand accounts, video, pictures and the dreaded 'selfie' from the scene."

In a relatively short period of time, the power of news gathering and social influence of mainstream media shifted from the media to the citizen. The term 'citizen journalism' was coined and through the power of a technology, e.g. smartphones, the public became news camera operators, photographers and reporters. This has created a content-rich environment for mainstream media to pick from and seen a decrease of in-house resources, e.g. staff news photographers, camera operators and journalists.

"Video streaming on platforms like Periscope and Meerkat now put multiple live cameras on the street," said Mr Parsons. "This content, while having a time limit post event, can be accessed, shared and downloaded as video on demand – perfect for newsrooms and online media. In fact, any number of popular social media platforms allow users to upload and share video, very quickly."

TV networks still engage freelance camera crews (commonly referred to as 'stringers' in the old days) to film overnight news. They too are affected by cutbacks in newsrooms, driven by the changing business model and the way material is sourced for reporting e.g. 'citizen journalists'. Freelance camera crews aren't as prevalent as mobile phone users.

"News is a very content-hungry beast," said Mr Parsons. "It's not uncommon to see house fires from other states on the news services we see here in NSW. It's content, it's newsworthy and, if newsrooms have pictures – of course they'll run them. Just like viewers in those other states will see the work of our firefighters at suburban house fires and factory fires etc. Similarly, if there's no mainstream media at our incidents, newsrooms will try and source material from 'citizen journalists'."

As MCU sources more and more material from crews on the ground, or (when possible) FRNSW media officers attend incidents and gather material, newsrooms will eagerly use that content (on-air or online). However it's important to remember that taking images must never interfere with operational duties however "FRNSW's main business is fire, rescue, hazmat – anything 'media content related' comes after the main mission is complete. Where we can, particularly at the major incidents in the GSA, we'll send media officers to manage media on the ground, assist the Incident Management Team with messaging and capture pictures, audio and video. But, we can't always be there – particularly in the outlying regional areas."

Bushfire media – sharing our story

In the midst of the bushfire emergency of October 2013, a picture of FRNSW Retained Firefighter Jeff Kryger looking after a dog rescued from a burning home in the Blue Mountains was shared more than 2.6 million times globally on social media.

Stories of rescues, firsthand accounts of firefighting and great saves emerged from the horror of the fires and played a significant role in keeping the community informed about what FRNSW was doing during the crisis.

As the possibility of a busy bushfire period in early 2016 develops, firefighters are reminded that what you do is of great interest to the community and media. If the Media Team knows about it, it can be shared with the news networks via social media, media releases and even via picture (and interview) opportunities on the ground.

During periods of high operational tempo, the Media Team will support the overall bushfire communications effort by sharing critical bushfire information from other agencies. The Media Team will also share details on the FRNSW specific bushfire response and activities that support or lead the overall bushfire effort.

END

OCT 2013 BUSHFIRE MEDIA STATS

150
TV news and radio stories

85
Facebook updates shared with 1.3 million people

152
FRNSW specific newspaper stories

525
Tweets with more than 5.2 million retweets

RetF Jeff Kryger caring for a dog rescued from fire

THE MEDIA TEAM WANT TO HELP TELL YOUR STORY

If you have something to share with media or need assistance, contact the Media Team at media@fire.nsw.gov.au or call 0418 181 00 (24 hours) or (02) 9265 2907 (0730 to 1700 – Monday to Friday).

BE HEARD STRATEGY PROMOTES SAFE, RESPECTFUL AND HARMONIOUS WORKPLACES

FRNSW's Be Heard – Embedding Respectful Workplaces Strategy & See Act Say has been launched to embed a values-based work culture based on trust, professionalism and mutual respect.

The Strategy was officially launched by Commissioner Greg Mullins on 4 August at the State Training College at Alexandria.

"This strategy is all about taking positive action at every level of the organisation," said Commissioner Mullins. "FRNSW is committed to building a modern, diverse and dynamic workforce, and workplaces where everyone feels valued and treated with respect."

President of the Anti-Discrimination Board of NSW, Dr Stepan Kerkyasharian, also spoke at the launch. He shared his observations and insights into workplace bullying, harassment and discrimination, and the impact these behaviours have on Australian organisations today.

FRNSW has a zero tolerance for any form of bullying, harassment, disrespect, discrimination or racial vilification. All staff are accountable for ensuring that such behaviours are eliminated from the workplace.

The important three-year Be Heard Strategy introduces a range of new initiatives focused on embedding appropriate behaviours at all levels of the organisation to achieve safe, respectful and harmonious workplaces. This includes enhancing management capability to recognise the signs and manage issues regarding inappropriate behaviours; giving staff the confidence to speak up and voice concerns; delivering training to raise awareness and reinforce key messages; and using Yammer (an internal social media network) to communicate and share information with all staff to enhance engagement and improve their knowledge of issues and trends.

The introduction of tools, resources and training is intended to provide all staff with the confidence to be proactive if they **see** inappropriate behaviours, to **act** quickly and **say** something.

FRNSW's Be Heard Strategy also aligns to the *Behaving Ethically Framework* for the NSW Government sector which requires all government sector employees to conduct themselves in ways that demonstrate the core values of integrity, trust, service and accountability.

Behaving Ethically includes a package of resources designed to help government sector employees better understand their obligation to act ethically and in the public interest.

Be Heard aims to:

- encourage employees to voice their concerns and be heard without fear of retaliatory action
- embed ethical and lawful behaviours that are the foundation of a healthy workplace culture at all levels of FRNSW
- encourage early **SEE ACT SAY** intervention to address and quickly resolve inappropriate behaviour, e.g. if staff **see** inappropriate behaviour they should **act** upon it and **say** something
- reinforce a zero tolerance approach to bullying, harassment and discriminatory behaviours.

Collectively, Be Heard:

- strengthens and embeds knowledge and methods of addressing behaviours which can lead to bullying and harassment
- builds confidence to speak up without fear of negative consequences if inappropriate behaviour occurs or is seen
- ensures reports of inappropriate behaviour are taken seriously and acted upon quickly and decisively at all levels.

What's in it for staff?

- Resources and tools to assist all staff to respond to and manage bullying and harassment concerns.
- Management capability and clear understanding of roles and responsibilities regarding complaint handling through the provision of training, support, mentoring and coaching.
- Strengthened management accountability for embedding values-driven, respectful and tolerant workplaces.
- Social media platforms and other communication mediums for all staff to participate in, review and share knowledge to enhance their awareness of initiatives, issues, risks and trends.

FRNSW is committed to building a modern, diverse and dynamic workforce

- Enhanced electronic systems to record and manage low level complaints at a local level.
- Regular reporting and analysis across all areas to identify key issues, trends, training needs to develop understanding and accountability.
- A performance and development system encouraging open two-way communication and feedback as part of creating a respectful workplace and a well-informed and engaged workforce.
- Introduction of healthy station audits to identify and recognise initiatives that have been implemented in workplaces where an engaged, cohesive and respectful workplace culture exists.

This is an exciting time for all FRNSW. The Be Heard Strategy and its initiatives provide all staff with the opportunity to play a significant role in ensuring a healthy organisational culture. For more information, visit the Be Heard toolkit on the Intranet (Toolkits → About You → Be Heard – Respectful Workplace Strategy).

END

BE HEARD
SEE ACT SAY

VIEW VIDEO AT
fire.nsw.gov.au/frnews
OR
SCAN CODE TO WATCH NOW

MUDDIED FIREFIGHTERS GET TOUGH ON BREAST CANCER

Team of female firefighters who competed in the Miss Muddy event

Crawling under netting as part of the obstacle course

There was mud, sweat and tears on Saturday 26 September, as a team of female firefighters from all three NSW fire agencies competed in the Miss Muddy obstacle course for the McGrath Breast Cancer Foundation.

Miss Muddy is a multi-themed obstacle race based on a military-style boot camp. Participants tackle both individual and team-based obstacles over a 5km course. The obstacles include rope climbs, wall jumps, weight bag shoulder carries, ice baths, slippery tunnels, hurdles, giant trampolines, monkey bars, paint cannons and the trademark 50-metre mud pit which must be crawled through on your stomach.

This year more than 5,000 women took part in the Miss Muddy event at the Penrith Regatta Centre.

The firefighter team, wearing modified turnout 'shorts', included 13 firefighters from FRNSW (both permanent and retained), Llandilo NSWRFS Brigade, Aviation Rescue Fire Fighting Service and the country's highest ranking female firefighter, Acting Superintendent Michelle Young from Queensland Fire and Emergency Services.

Station Officer Bronnie Mackintosh said the Miss Muddy contest offered firefighters a unique opportunity to compete together as a multi-agency team while also promoting firefighting as a career.

"There are huge parts of the population who don't know that women are already doing the job and many are unaware of the range of skills you need to be a firefighter," SO Mackintosh said.

"By engaging with fit, strong women at events like Miss Muddy, we're able to show them that they can do the job and it does offer a flexible and rewarding career."

Women and Firefighting Australasia have partnered with Miss Muddy for their full calendar of events held throughout Australia and New Zealand. This will provide all urban and rural fire agencies in Australasia with ongoing opportunities to reach out to fit, strong and smart women.

END

FIREFIGHTERS A KNOCKOUT AT ABORIGINAL RUGBY LEAGUE CHAMPIONSHIPS

Promoting safety and firefighting as a career

FRNSW firefighters took part – both on and off the field – in the NSW Aboriginal Rugby League Championship in Dubbo at the beginning of October.

Firefighters Peter Jensen, Craig McLaren and Quinten Silva competed while former NRL player and Firefighter Michael Lett, Station Officer Bill Spek, Qualified Firefighter Dean Dobson, Firefighter Terry Manton and Retained Firefighter Jason Nolan answered questions and promoted safety messages on the FRNSW stand.

They were also joined by current Indigenous Fire & Rescue Employment Strategy (IFARES) participants Shawn Orcher, Brad Russel and Alex Frail, as well as Inspector Drew Wilson and 'A' platoon from Dubbo Fire Station.

The knockout competition, held every year for the past 45 years, attracts an estimated 15,000 spectators and is considered a modern day corroboree. The 2015 event included more than 120 men's, women's and junior teams and was telecast live by NITV.

"With most attendees coming from regional locations, it offered a great opportunity to promote fire safety and firefighting careers to Indigenous men and women," said SO Spek.

"It's an important message to communicate – Aboriginal families are more than twice as likely to experience a house fire as other demographics in NSW," he said.

"The organisers of the event were very impressed with the commitment shown by FRNSW and I'm sure the benefits will come back tenfold as the partnerships grows and the respect increases. With next year's knockout being held in Redfern in Sydney, it is a great opportunity for FRNSW to play a major role." **END**

KEEPING IT REGIONAL IN THE RANKS

Progressing through the ranks of FRNSW is nothing new. Making the journey from Firefighter to Superintendent in regional NSW is rare – and newly appointed Zone Commander RW1, Superintendent Gary Barber may even be the first in the organisation's history to do it.

For Supt Barber, life hasn't always been about the fire brigade. After leaving school he joined the Commonwealth Bank in Port Macquarie, and then in Sydney, before electing for a regional transfer.

"I ended up at Gilgandra on the Western Plains of NSW and settled into playing rugby with the Gulargambone Galahs," said Supt Barber. "When the banks started closing in the mid-nineties I decided I needed to think about a proper career. I joined FRNSW in 1995."

After two years at City of Sydney and several more as a reliever, he was stationed as a firefighter at Dubbo in 1999.

"In 2003 I looked to engage more with firefighters across the organisation and started to apply for Senior Instructor Country (SIC) positions. My time at a regional fire station working with a great group of Retained Firefighters prepared me well."

Supt Barber was appointed to the position of SIC in the then RW7 (Leeton). It was a role that gave him a great appreciation of the challenges faced by both Retained and Permanent Firefighters in other regional locations.

Just a year later he sat the Station Officers exam and was promoted to Station Officer in 2005, subsequently applying for the position as Station Commander 280 Dubbo C Platoon.

"Working at Dubbo Fire Station was a great experience, from conducting cordage drills off local buildings, hazmat drills on the Macquarie River to a period when we responded to 50 house fires in the space of a month. In Dubbo we were a secondary rescue station, intermediate hazmat and quite busy with fires and community activities. This gave me exposure to a number of different directorates within FRNSW."

By 2012, Gary had itchy feet again, and after sitting the Inspector's exam, he was open to taking any position he was offered.

"It so happened that Dubbo was available. I took up the position and was able to acquaint myself again with a lot of faces I had last seen on the rugby field across the zone.

"Stations across RW1 are extremely accommodating and the settings are some of the best in world. Be it going underground into opal mines at Lightning Ridge to sitting on the banks of the Barwon River at Brewarrina, it is a great experience with fantastic people."

Supt Barber and crewmember with basic life support equipment

Although he has made progressing through the ranks look easy, Supt Barber admits the study is very demanding. Despite the challenges, he says the background knowledge is invaluable and study itself is "habit forming".

This year, Supt Barber took what he says was an opportunity to make a greater contribution to FRNSW, and in particular regional firefighters, by becoming Zone Commander RW1.

Supt Barber said he has great mentors in his fellow regional Zone Commanders and his Area Commander, Chief Superintendent Neil Harris, who encouraged him to take on the role.

Chief Superintendent Neil Harris said Supt Barber is an outstanding officer who has set the benchmark in Regional Operations.

"Gary is proof that firefighters and officers have an equal opportunity to progress their career through the ranks in both Regional and Metropolitan Operations.

"Working in Regional West over the past 16 years, he has closely observed a number of talented officers and developed his skills in the critical areas of leadership, management and fireground operations. As have other officers including Chief Superintendent Dave Felton and Superintendents Greg Lewis, Jeremy Fewtrell and Adam Dewberry."

After 16 years at FRNSW, Supt Barber is an advocate for working in regional NSW and the opportunity it can bring.

"Of course the primary benefit is the relaxed lifestyle and the opportunity to raise a family in a fantastic environment," he said. "The benefit to anyone wanting to broaden their career is also extremely high. Making the tree change has many positives and it is something all firefighters should seriously consider."

END

NEW PORT MACQUARIE FIRE STATION OPENED

The new Port Macquarie Fire Station 'open for business'

On 24 August, the Minister for Emergency Services, David Elliott, and Commissioner Greg Mullins officially opened the new Port Macquarie Fire Station in the city's emergency services hub. They were joined by the Member for Port Macquarie Leslie Williams, firefighters both past and present, school students, and community leaders and members.

In opening the state-of-the-art building, Minister Elliott said the new fire station would provide firefighters with facilities worthy of a modern fire and rescue service. "The NSW Government has invested $3.4 million in this new fire station which will meet the needs of firefighters and the community well into the future."

Commissioner Mullins said the new station would enhance provision of fire and emergency services to the residents of Port Macquarie and surrounding areas.

"The new station accommodates two fire appliances as well as a hazardous materials van, boat and trailer and incorporates facilities for firefighters to refill breathing apparatus cylinders. It also provides office space for FRNSW's Mid North Coast zone management team," he said. "Being located within the Port Macquarie emergency services precinct will also improve coordination and cooperation between the emergency service agencies."

Station Officer Gaven Muller said the station's location was more central to the expanding town. "Being in the industrial area means a quicker response time and better service to the community."

The new station is a far cry from the early days. The original brigade was housed in a shed on Council land. The first fire station in Port Macquarie was built and officially opened in August 1958. The appliance at that time was a 350gpm Dennis.

Port Macquarie firefighters responded to more than 720 fires and other emergencies last financial year. They also carried out more than 220 community fire safety education activities.

END

Family, Cobar crew and Commissioner Mullins with new pumper proudly bearing the HOWIES numberplate

HOWIES' FIRE TRUCK ON THE ROAD IN COBAR

256 Cobar recently received a new fire appliance that, for the first time in FRNSW history, carried a personalised registration plate to honour a fallen firefighter.

Commissioner Greg Mullins travelled to Cobar on 22 September to personally present the crew with keys to their new $310,000 Mercedes Benz Class 2 pumper. The new appliance displays the number plate 'HOWIES' in a tribute to Retained Firefighter Daniel 'Howie' Howard.

RetF Howard was fatally injured by falling debris when a wall collapsed at the height of firefighting operations at the New Occidental Hotel in Marshall St, Cobar, on 17 August last year. His death deeply affected his family, the township of Cobar and the entire NSW firefighting family.

Zone Commander RW1, Supt Adam Dewberry earlier approached the Commissioner asking if FRNSW could request a personalised registration plate for its new pumper. After liaising with Roads and Maritime Services and other emergency services, permission was granted for the Cobar appliance to carry the plate to perpetuate the memory of RetF Howard.

The special registration plate were kept secret from the crew and family until the new pumper was unveiled and the keys officially handed over. Commissioner Mullins said it was a small but unique gesture to keep Firefighter Howard's memory alive.

END

BUILDING A NEW HQ

Architectural rendering of the new Headquarters building

Work is now well underway to create a modern, spacious and light-filled new FRNSW Headquarters in Greenacre. When completed, 1 Amarina will be equipped with smart technology and interactive, collaborative spaces.

Completion of the new HQ is expected in June 2017.

What has happened so far?

September
- Contract awarded to ADCO Constructions
- New traffic flow introduced along with new parking arrangements during construction
- ADCO established the construction site on 22 September

October
- Site preparations made
- Demolition of Building A completed

November
- Ground works commenced including footings and service provisions

December
- Construction of the Building A planned to commence

Meet the Greenacre WoW group

In September the Greenacre 'Ways of Working' Group was formed to raise any issues onsite with the project team and develop solutions. They are the first port of call to ensure issues and ideas are being heard. Find out who is in the Greenacre WoW group on the intranet under Toolkits → Organisation Wide → Asset Management & Property → 1 Amarina Ave → Greenacre Ways of Working Group.

Don't just read about the construction – watch it!

Check out the time lapse camera and see firsthand the progress over the last few months.

Find out more

To get a better idea of how 1 Amarina will look, access FAQS, latest project information and resources visit the intranet toolkit (Toolkits → Organisation Wide → Asset Management & Property → 1 Amarina Ave). **END**

VIEW VIDEO AT
fire.nsw.gov.au/frnews
OR
SCAN CODE TO WATCH NOW

Bill and Beth King in the early days (bottom) and recently (top)

LIFE AS THE WIFE OF A FIREFIGHTER

By Beth King

Bill King and I had been going together for about two years when he joined the Fire Brigade in 1961 after being rejected from the Police force as being too short.

One of his fellow inductees, Rex Hartas, who was too short for even the Fire Brigade, succeeded in being accepted after putting thong soles inside his socks before being measured to increase his height! Another of Bill's inductees was Billy Todd, the renowned boxer at that time.

There was no passing out parade, just a letter advising him of his successful application.

We married on 2 February 1962, and I was thrown into being a shiftworker's wife. His shifts were 7am – 3pm, 3pm – 11pm and 11pm – 7am. In those days, the day they knocked off and the following day was counted as two days off. At that time Bill had no leave owing, and we spent one day at Terrigal and two at Forster, which was the sum of our honeymoon!

Many married couples crumbled under this shift regime, and divorces were common. Also, to make enough money to get ahead, most firemen had "quarries" and Bill was a qualified plumber. He also detailed cars, played rugby league for Concord United and Western Suburbs, was in the Pipes and Drums of the 30th Battalion which eventually became the 17th Battalion, Royal News South Wales Regiment (RNSWR).

To compensate and for an interest, I formed a baton twirling team and the girls were decked out in a uniform which had short Black Watch tartan skirts, red jackets and glengarries (hats) similar to the band's drummers. We practiced at the army drill hall in North Sydney, where the band had their practices, and performed quite a lot with the boys.

We also performed with the many rugby league teams at the time. We started the first cheer girl squad for Canterbury when Peter Moore was in charge. We were Australian Champions and attended many festivals around Australia over a period of 20 years.

When we had our first child in 1966, Bill was on day shift and was not allowed time off to be with me while I gave birth to our daughter Belinda at King George V Hospital. At 2.30pm my doctor said "would you like me to ring your husband and advise him he has a daughter?" He visited the hospital after he finished his shift.

There was no leave for Bill to help out with his new daughter, and time with his family had to be fitted in between his plumbing (illegal at that time as far as the Fire Brigade was concerned), band engagements and football.

When Belinda was two and a half I resumed my position as Secretary in the Department of Anatomy at the University of Sydney. Bill used to pick Belinda up from her babysitter after his 7–3 shift ended, until I returned home, which gave him a little time with her.

We moved into our new house at Elanora when Belinda was six weeks old, and Bill was transferred to Crows Nest Fire Station from Drummoyne. Bill did all the plumbing on our new home. His career, which has been well documented, went on from there.

The shifts they worked were real killers, and I can see why many men and their wives crumbled under the pressure. I think we survived because his parents lived in Nowra and mine in Brisbane, so we had to make it on our own no matter what. In Elanora and surrounding suburbs we had many firies as friends and their wives were also supportive. We had a piffling amount from Child Endowment and that was it. Everything we earned was by our own hand.

I had to do all the shopping, visits to baby health centre, doctor etc all by myself, mostly while Bill was working, and prepare dinner only to see him go to sleep straight after with exhaustion!

Our sons contracted infantile gastroenteritis aged 18 months and three years and even with Stuart in the Children's Hospital at Camperdown, and Evan ill at home, he still could not get leave to help.

The kids got the usual childhood diseases, sometimes I got them as well, but there was no leave for that either. The child rearing, housekeeping, school, homework, sports, school activities, were mainly the responsibility of the women in the 60s to 90s, with very little help from the men. I venture to say that was the reason for the failure of a lot of family partnerships.

The firefighters of today don't realise how good they have it, or maybe they do, as the hundreds of applications for new firies seem to point out that it is a job coveted by many!

With the advent of 24 hour shifts, I think that this will be very beneficial to all firefighters and their families. **END**

SO Bill King retired on Boxing Day 2014 after 53 years as a firefighter. He was farewelled at Manly Warringah Leagues Club on 24 February 2015. His son, Stuart, is a Firefighter at City of Sydney.

FIREY PASSION FOR HISTORY LIVES ON IN COOLAMON

Retired RetF Chris Berry and his wife Joanne with firefighting memorabilia

Outside the recently-opened Coolamon Fire Museum

The discovery of a single brass helmet more than 30 years ago led to a lifetime of collecting for retired Retained Firefighter Chris Berry in the Riverina town of Coolamon.

For Chris and his wife Joanne, their fire brigade story began shortly after they first moved to Coolamon with their three children, Belinda, Johnathon and Daniel, in 1976. As well as running a furniture factory, Chris became a dedicated Retained Firefighter and Engine Keeper with the Coolamon and Temora brigades. He also received the National Medal in 1996.

One day, while installing a new kitchen for a retired firefighter called Bluey at West Wyalong, Chris caught sight of a brass helmet sitting on top of the old kitchen cupboards he was dismantling.

"I was so excited, Bluey's wife said I could have it along with Bluey's belt, axe and spanner," Chris said. "I was overwhelmed and pledged to purchase my very first collectables from Bluey. From that day, my collecting was set in motion."

Over the next three decades, Chris was always on the lookout for anything associated with firefighting, not just in NSW or Australia but also from around the world.

He went to clearance sales, garage sales, markets, swap meets and in later years he advanced to eBay. And his family always knew what to buy him for his birthday, Father's Day and Christmas.

Gradually his collection grew and now includes more than 100 helmets, uniforms, breathing apparatus, leather fire buckets, axes, foam branches, telephones, rattles used as emergency alarms, a hose reel cart, a horse harness, badges, and more than 200 toy models.

After he retired, Chris leased the old 262 Coolamon Fire Station, which remains much as it was when it first opened in 1933, to realise his dream of opening a fire museum.

"When I found I could have the old Coolamon Fire Station, I started to get excited," Chris said. "But I didn't realise I had so much stuff until I started to unpack it."

With hundreds of items to display, Chris built all the cabinets for the museum himself while his son helped paint the fire station doors their original colour.

On Monday 5 October, Commissioner Greg Mullins raised the Australian flag and cut the ribbon to open the museum to the public.

With the unique collection now proudly on show, Chris and Joanne hope the museum can become a tourist attraction for Coolamon and also a learning environment for school students.

Chris and Joanne said they were honoured to have Commissioner Mullins open the Coolamon Fire Museum and thanked the Coolamon Shire Council and all involved for helping to make their dream a reality. END

Coolamon Fire Museum, 46 Cowabbie Street, open 10am to 4pm daily, visitors welcome by kind donation.

Event organiser QF Mathew Pridham, with MND sufferer Adam Regal and his family

CLIMBING 1,500 STAIRS RAISES MORE THAN $180,000

On Sunday 4 October around 160 FRNSW firefighters from across the State climbed a staggering 1,504 stairs in the Sydney Tower Eye in full turnout gear to raise much needed funds for research into motor neurone disease.

Working in partnership with Macquarie University, the Firefighters Climb for Motor Neurone Disease raised more than $180,000.

Event organiser, Qualified Firefighter Mathew Pridham, said his inspiration came from his close friend, Adam Regal.

"Adam was diagnosed with motor neurone disease about 18 months ago and since then, he's been determined to raise awareness of it, so I wanted to help him with that cause," said Mathew. "Adam is a loving husband and father and a great mate. It was devastating to see him diagnosed with such a debilitating disease."

Professor Dominic Rowe is the head of Macquarie University Hospital's Motor Neurone Disease clinic, the largest of its kind in Australia.

"Motor neurone disease is an unpredictable and wretched disease. While 10% of patients have it due to inheriting a faulty gene, 90% of patients have sporadic motor neurone disease with no known cause.

"We are thrilled with the donation from FRNSW firefighters to our research centre. It is only with research that we will understand what the elements that cause this disease are and how it progresses, which will ultimately lead to therapies that slow and stop it."

After the stair climb, Adam Regal said he was overwhelmed by the support.

"I would have to be one of the luckiest blokes to have the mates that I have ... [Matt Pridham] has bought some absolutely brilliant people together to help raise the profile and raise vital research funds to MND.

"I got to meet his work colleagues from across NSW and what a great bunch of legends they are. They came from everywhere, Newcastle, Port Macquarie, The Hunter Valley ... everyone should be proud of what they achieved."

In an email to all staff following the fundraiser, Commissioner Greg Mullins praised the support given to this initiative. "I was stunned by the turnout of firefighters who decided to do their bit in a fight against a deadly killer – motor neurone disease (MND).

"As your Commissioner I want to take this opportunity to sincerely thank each and every one of you who volunteered your time to either climb the tower or to support those who did." **END**

THANK YOU FRNSW

Professor David Wilkinson of Macquarie University wrote to Commissioner Mullins after the stair climb to thank him for FRNSW's support.

"On behalf of Macquarie University I would to thank Fire & Rescue NSW for its support of Sunday's 'Fire Fighters Climb for MND' of which the Motor Neurone Disease (MND) Research Centre at Macquarie University was the beneficiary.

The feedback I have received has been heart-warming. There have been stories of immense community spirit and generosity as well as tests of physical endurance. The figure raised by the event currently sits at $171,000 – an incredible achievement for an event in its first year. My team advise they are confident that this figure will rise ...

I would like to thank every one of the 158 fire fighters who raced up 1,504 steps (some twice) and raised funds for the event. I would like to particularly thank fire fighter Matt Pridham who initiated the event. It is members of the community such as Matt who make such a difference in raising both awareness and much-needed funds for medical research.

The collaborative nature of this event highlights the synergy between fire fighters and our MND researchers – that of being in the business of being committed to saving peoples' lives. We look forward to working with Fire & Rescue NSW to make this an annual fundraiser."

NEWCASTLE BALL RAISES $20,000 FOR BURNS SURVIVORS

Chief Supt David Felton and Susie O'Neill, KIDS Foundation

On Friday 18 September, 220 FRNSW firefighters, admin and trade staff and their families turned out in their finery for the Newcastle Firefighter's Fundraising Ball at Wests Leagues Club, New Lambton.

With a host of special guests in attendance, including Commissioner Greg Mullins, Deputy Commissioner Jim Smith , Dr. Raj Kumar, Director of Trauma and Surgery at John Hunter Children's Hospital and Ms Susie O'Neill, Founder and Managing Director K.I.D.S. Foundation Burns Survivors Network, the night raised $20,000 to assist burns survivors.

This was in addition to a cheque for $10,000 presented on the night to Dr Kumar by Commissioner Mullins, from Newcastle and the Hunter region firefighters' payroll deductions.

The $30,000 donation for 2015 brings the grand total raised and donated to $433,550 since the inception of the Firefighter's Ball in 2000.

John Hunter Children's Hospital Burns Unit will use this year's donation to purchase video/games equipment for the burns treatment room (which has been fully funded by previous donations) to help distract children from the traumatic experience of burns dressings.

The donations to K.I.D.S. Foundation will ensure burns survivors from Newcastle and the Hunter (both children and adults) are able to attend the burns survivors camp to be held in December.

END

NO. 2 FIRE STATION A BIG HIT WITH SICK KIDS

The hospital's fire engine mural and 57 stn crewmember helping one of the children in the garden

FRNSW's No. 2 Fire Station, the Burns Unit in Westmead Children's Hospital, is now revamped and officially open for business!

The $180,000 refurbishment to the Burns Unit courtyard, courtesy of 40 companies donating labour and materials, was officially opened with a ribbon-cutting ceremony on Monday 14 September.

The spectacular makeover from courtyard to playground includes a life-size and very red FRNSW fire station mural adorning the southern wall, shady trees, colourful flowering potplants and watering cans, a bike path complete with bicycles and little helmets, and a popular climb-on fire truck.

The crew from Station 57 B Platoon was on hand at the launch to help small VIPs explore the playground and clamber in and out of the miniature truck. When it came to gardening, no hoses were in sight, but watering cans appeared to do the trick!

The Head of the Burns Unit, Dr John Harvey, believes the new playground will aid patients in their rehabilitation. "It will excite the children and stimulate them to exercise," he said. "Children need to be rehabilitated as fast as possible to pre-burn life, and this playground will help that process."

END

TAKING THE CHAMPIONSHIPS TO THE COMMUNITY

When hosting the Regional Firefighting Championships in August 2015, 224 Berry took their community responsibility even further by raising $1,500 for local schools. The crew organised a colouring in contest for the local school, preschool and special needs school and raised $1,500 in sponsorship money.

Retained Firefighter Ross Goodger said the money was split between Berry Primary School, Berry Preschool and Havenlee Special Needs School. "The money paid for 75 $20 book vouchers for the schools. More than 300 children also entered the colouring-in competition. It was a great way to get the local community actively involved with the brigade and the championships."

A schools education day was also held ahead of the championships with around 400 school students attending the display. The day was hosted by FRNSW with NSW Police, NSW Rural Fire Service, Ambulance Service of NSW and NSW State Emergency Service also participating. Over the championships weekend, 20 brigades were represented across 17 competing teams with entrants travelling from as far away as Broken Hill and Dorrigo to the south coast town of Berry.

END

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

OR

SCAN CODE TO WATCH NOW

Firefighters and villagers gather at the completed school library

FIRE IN THEIR BELLY TO BUILD FIJIAN LIBRARY

In August 2015, six FRNSW firefighters set off on a trip to the Fijian island of Kadavu to construct a school library in the remote village of Vacalea.

In his previous life as a scuba diving instructor, Kogarah Senior Firefighter Andrew Verus lived and worked on Kadavu with his family. He established a strong relationship with the local people and witnessed their efforts to educate their children locally to avoid a five-hour walk to the nearest government-built school.

The idea of building a school library was born, and together with Station Officer Peter Eastment and Senior Firefighters Paul O'Sullivan, Dan Clay, Greg Daly and Steven Richards; SF Verus set to work making it a reality.

After months of preparation in NSW, the team gave up their own time and money to spend a week constructing the library building from scratch, including installing electricity, glazing and smoke detectors.

Despite some minor challenges due to the Fijian weather, the team completed the project in record time and also had the opportunity to promote fire safety with SO Eastment giving a fire safety talk to the village.

Following the trip, SF Verus and more volunteers worked to turn the new building into a fully functioning library by completing the fitout. Stocking the library with more than 3,000 donated books has begun and will continue in 2016.

A/Assistant Commissioner Gerry Byrne said the team was a credit to FRNSW.

"Fantastic job, well done to all the firies that were involved. The work, time and effort you have put in will benefit the local children and community for years to come." **END**

From: **SF Andrew Versus**
To: **FRNSW**
Subject: **Construction day 4**

Our last big day on the job! Paul and Steve (Jaffa and Stef) worked on capping the roof, Greg installed the lights and power outlets, and everyone else was on windows and cladding. The last few hours felt like the countdown on The Block but we finally got there. Finished the day with a talk on/installation of smoke detectors before lots of singing, dancing – and kava of course – with our new friends.
A wonderful experience for the boys!

From: **SF Andrew Versus**
To: **FRNSW**
Subject: **Job complete!**

Our last task was to install the front door, pack up our tools and say some heartfelt goodbyes. Jaffa installed more needed smoke alarms in the girls' dorm and we signed the school visitors' book, FRNSW occurrence book style. What an amazing week, thank you to everyone back home for all the great support and FRNSW for making the time possible for us to do this. See you all back home soon.

From: **SF Andrew Versus**
To: **FRNSW**
Subject: **Coming home**

Overall it was such a successful trip; the village was very excited about their new library and sincerely grateful to the boys for giving up their time to help. At the same time, the experience of spending time with these beautiful people affected us all so greatly we left thinking we got much more than we put in. We'd like to thank the many people who donated books for the library and a special thanks to Assistant Commissioner Gerry Byrne and FRNSW senior management for their great support of the project.

QF Jeremy Crumblin on the winner's podium

ON YOUR MARKS, GET SET, GO!

Firefighters are accustomed to racing the clock when they respond to calls. At the World Police and Fire Games held every two years, firefighters and police officers get the chance to compete against each other to see who is the fittest, fastest and strongest.

Story by Qualified Firefighter Jeremy Crumblin

From 26 June to 5 July this year, almost 12,000 athletes made up of active and retired personnel from 70 different countries gathered in Virginia, USA to attend the 2015 World Police and Fire Games. The biennial event included over 60 different sports run to a professional standard at 53 venues. More than 3,000 volunteers worked, some for up to 18 months, to prepare for hosting the sGames.

Dubbed 'the Games of Heroes,' the World Police and Fire Games is the third biggest multi-sport event on Earth, behind the World Masters Games and the Summer Olympics.

More than 25 FRNSW personnel – both current and retired – attended the 2015 Games, along with their family and friends. Athletes competed in a varied array of sports including traditional Olympic-style sports such as track and field, rugby sevens, swimming, golf, as well as more specialised and occupation specific sports such as orienteering, stair race (both full gear and non-gear), open water swim, toughest competitor alive, ultimate firefighter and indoor rowing (both individually and in teams).

FRNSW had ample cause to celebrate at this year's Games following a strong performance by its team, with 16 medals won across a number of different sports and events.

Area Commander Regional South, Chief Superintendent Ken Murphy, was the most successful with a seven-medal haul in swimming events.

Close behind was Qualified Firefighter Jeremy Crumblin from City of Sydney A Platoon who won five medals. "It was an honour and a privilege to represent FRNSW to compete at the Games, and I found no shortage of camaraderie while both competing and cheering on others," said Jeremy. "Some of my best memories of the Games included cheering on the Aussies in ice hockey, dodgeball and boxing events."

Station Officer Stuart Sutton of 304 Gosford D Platoon competed in track and field and won three medals. "After training hard for the last two years, it was terrific winning three medals at the games," said Stuart. "But the highlight was competing against fellow firefighters and police officers from Brazil, Poland, Spain, Russia, Iceland, Germany, Turkey, Croatia and the USA."

In keeping with tradition, FRNSW fielded teams in rugby 7s. In the Over 35s, FRNSW achieved the upper hand against strong competition in some closely fought matches while dominating others, keeping the winning formula going all the way into first place and the gold medal.

Retired Mosman Station Officer Bill King AFSM is a veteran of many Games and competed this year in the indoor rowing. Bill placed 4th in a competitive race and was cheered on by his support crew.

By the end of the Games, Australia's overall medal tally stood at 121, with 56 gold, 33 silver and 32 bronze. This put Australia in seventh place overall behind the USA, Canada, Russia, Spain, Brazil and the UK, improving two places on Australia's ninth place finish in the 2013 Belfast Games.

While FRNSW athletes enjoyed great medal success, it was the camaraderie of competing with athletes from around the world and the friendships made, as well as the spirit of the games and cheering on fellow competitors, that brought the most satisfaction to all those involved.

A major attraction of the Games was the opportunity to enter as a team and build morale while competing, having fun, making friends from around the world, and supporting one another. Many stories were shared and it was interesting to inspect the appliances and gear of local brigades, and quiz the locals on the ins and outs of the job, seeing how it compared to the way things were done back home.

Seemingly just as quickly as the Opening Ceremony had initiated proceedings, the Closing Ceremony arrived. It was then time to hand the torch to the Montreal organising committee who are hosting the next Games in 2017. So on that note, get training! **END**

FRNSW MEDAL WINNERS INCLUDED THE FOLLOWING

Ken Murphy: 2 gold (100m backstroke, 200m freestyle relay), 4 silver (men's 200m medley relay, mixed 200m medley relay, 50m backstroke, mixed 200m freestyle relay) and 1 bronze (200m individual medley).

Jeremy Crumblin: 3 gold (stair race, orienteering sprint, mixed pairs indoor rowing, 1 silver (full gear stair race) and 1 bronze (full gear team stair race).

Stuart Sutton: 2 gold (discus, hammer throw) and 1 bronze (shot-put).

Rugby 7s Over 35s Team: gold.

BLUE SKIES FOR A BEAUTIFUL GAME OF RUGBY

On Friday 11 September, FRNSW and NSW Police competed for the second annual 9/11 Memorial Cup at Sydney's waterfront Taplin Park.

The 9/11 Memorial Cup was contested over two games on a perfect spring afternoon with Commissioner Greg Mullins and Superintendent Rob Critchlow, past president of the Police Rugby Union, joining a large crowd.

During the event Commissioner Mullins reflected on the ultimate sacrifice made by New York City's first responders on 11 September 2001 and led a poignant minute's silence.

On the field, FRNSW women's team, led by SO Bronnie Mackintosh and featuring three present or past Australian reps (rugby and rugby league), put on a dominant display of rugby. They stunned the Police team and delighted the FRNSW spectators with an amazing display of power, precision and superb skill to run out 45-5 winners.

The following men's game was a far closer affair with neither team able to trouble the scoreboard throughout the match. FRNSW had several opportunities to score but pushed the final pass and were unable to convert possession to points. In the final play of the match the Police team scored the only points to finish 5-0 victors in another thoroughly entertaining game.

With one game apiece on the day, last year's winners, FRNSW, retained the 9/11 Cup title.

Wellbeing Coordinator SF Mark Dobson said both games were played in a spirit that honoured the memory of our fallen New York firefighter and police brothers and sisters.

"There was fierce on field competition followed by an afternoon of camaraderie that epitomises our joint values of respect, courage and service." **END**

Images courtesy Andrew Parsons and Damon Chamberlain

MOSAIC PROFILING WINS AFAC KNOWLEDGE INNOVATION AWARD

At the 2015 AFAC Conference Welcome and Awards Ceremony in September, FRNSW received the 'Knowledge Innovation Agency Award – 2015' sponsored by Motorola Solutions. The award recognises FRNSW's use of socio-economic data to develop a community profiling tool. The tool is based on Mosaic data and is an innovative product, combining fire injury risk data with lifestyle data to identify households at greater risk of experiencing a home fire. This intelligence-led approach has also led to the creation of FRNSW's Station Risk Profile.

Assistant Director Community Safety, Chief Superintendent Chris Lewis, said knowledge-led interventions better target problem areas, ultimately leading to a reduction in residential fires, fire injuries and the associated costs of emergencies.

"In the past, fire prevention strategies and policies have relied on a broad brush approach to identify and target 'at-risk' groups," he said. "This meant that any engagement was based on a one-size-fits-all approach. Not only does Mosaic identify down to the individual household the community members known to be at greatest risk to fire, importantly it also identifies the best medium for successful engagement." **END**

VIEW VIDEO AT
fire.nsw.gov.au/frnews
OR
SCAN CODE TO WATCH NOW

HOME FIRE SAFETY CHECKS VIDEO WINS BEST LEARNING AWARD

At the LearnX Impact Awards in September, FRNSW won gold in the Best Learning Video category for the Home Fire Safety Checks animated promotional video after live judging on the night. The awards recognise the best in workplace learning in Australia and New Zealand, with other winners including the Commonwealth Bank of Australia and the Australian Sports Anti-Doping Authority.

The Home Fire Safety Checks (HFSC) Program is a prevention and early intervention initiative which provides education, advice and intervention to at-risk households via a home visitation program. To support this initiative, FRNSW's Community Engagement Unit in collaboration with its Partnership, Evaluation & Marketing section and the Project Management Office, engaged global workplace learning company Kineo to create a self-paced online learning module, showing how to complete a HFSC and use the supporting IT solutions. **END**

RETAINED FIREFIGHTER AVAN CHRISTIE AWARDED FOR SELFLESS ACT IN THE SURF

In August, Casino Surf Club Treasurer and Evans Head Retained Firefighter Avan Christie received a NSW Rescue of the Month Award at the Surf Life Saving NSW Awards of Excellence ceremony. He was also awarded a National Rescue of the Month Award at a special ceremony held at Parliament House in Canberra.

On 6 April 2015, Mr Christie stopped in at the surf club to get a receipt book when he was told people were in trouble at Main Beach. Mr Christie, who is not an active patrolling lifesaver, grabbed a board and went out to rescue a young girl and her grandmother who were caught in a rip near the breakwall. After he got them back to shore he was told two more teenagers were stuck in a rip a further kilometre up the beach. After going back out but beginning to fatigue himself, he was assisted by fellow lifesaver Rolan Murcott who helped both the eenagers and Mr Christie back to shore. **END**

INSPECTOR MARTIN HOFSTADLER RECEIVES PARRAMATTA CITY COUNCIL AWARD

FRNSW Inspector Martin Hofstadler, Duty Commander MW2, was honoured for 'Commitment' at The Lord Mayor's 2015 Frontline and Community Services Awards held in Parramatta in August.

The awards recognise members from the NSW Police Force, Fire & Rescue NSW, Ambulance Service of NSW, NSW State Emergency Service, nurses, midwives and the Royal NSW Lancers in five award categories.

In awarding Insp Hofstadler, a Parramatta City Council official said he is well respected by his fellow senior officers and admired by the personnel under his command.

"Inspector Hofstadler's commitment to the community of Parramatta is demonstrated by his untiring pursuit to maintain public safety while ensuring his personnel and stations are fully prepared to deal with any emergency they may be called upon to attend," he said. **END**

FIREFIGHTER PETER JENSEN RECOGNISED AT TAFE NSW GILI AWARDS

On 22 October, Redfern Firefighter Peter Jensen was presented with an Achievement Award at the 2015 TAFE NSW Gili Awards at Ultimo TAFE. The awards acknowledge the outstanding achievements of Aboriginal students, the contribution and dedication of TAFE NSW staff, and the outcomes of TAFE NSW engagement with industry, schools and Aboriginal communities. While FF Jensen was undertaking the Certificate lll in Fitness as part of FRNSW's inaugural IFARES program, he demonstrated excellent attendance, enthusiasm and participation. He also took on the role of class mentor and helped guide his fellow students through the course. FF Jensen graduated from the State Training College at Alexandria in July 2015 after exceeding the benchmark required to join FRNSW as a full-time firefighter. **END**

TRIPLE ZERO KIDS' CHALLENGE RESOURCES HIGHLY COMMENDED

The Triple Zero Kids' Challenge – Parents and Teacher's Guide and Resource Pack project was highly commended in the 2015 Resilient Australia Awards. This project was nominated by FRNSW on behalf of the national Triple Zero Awareness Work Group, which FRNSW chairs.

On Tuesday 13 October, Assistant Commissioner Mark Whybro attended the presentation ceremony at NSW Parliament House and accepted the award on behalf of the Work Group. The Awards were presented by the Deputy Premier and Minister for Justice and Police, Troy Grant and the Minister for Emergency Services, David Elliott.

The Triple Zero Kids' Challenge game aims to make young children more aware of the Australia's emergency services number, Triple Zero (000). It is an interactive online game that uses twelve scenarios (covering Fire, Ambulance and Police) to teach practical steps in how to deal with emergencies, and how to get help in an emergency. The game is also available in six other languages besides English (Chinese, Vietnamese, Arabic, Burmese, Hindi and Dinka),

The Guide and Resource Pack were recently developed to align the game to the National Curriculum, making it easier for teachers to deliver lessons in their classrooms. The Guide and Pack are accessed through the game's homepage as free downloadable PDFs. They include lesson plans and group activities that will embed children's learnings from playing the game scenarios. Since the launch of the Teacher's Guide in December 2014, almost 9,000 Guides have been downloaded, a remarkable penetration into primary schiools.

To access the game, go to www.triplezero.gov.au and click on the Kids' Challenge link. **END**

FIREFIGHTERS PRAISED IN NSW PARLIAMENT

Minister David Elliott practises basic firefighting skills

On 27 July, Minister for Emergency Services, David Elliot, Glenn Brookes, Member for East Hills, and Ned Manoun, Mayor of Liverpool, attended 8 Liverpool for a 'Firefighter for a Day' experience. In a Private Members Statement in the NSW Parliament on 11 August, MP Brookes spoke highly of the experience and praised the work of firefighters:

"It was a great experience that showed me just how professional our modern-day firefighters are and demonstrated the courage they require to do their very important job.

" As firefighters for the day, we searched for victims in a simulated burning home and had the chance to use the high-pressure water hoses. We operated the jaws of life and were given a ride on a fully extended 37-metre cherry picker ... being able to participate in the activities of the day refreshed my appreciation of the hardworking firies in our State.

"It reminded me of how dependent we are on these men and women to save lives. We do not often get an opportunity to think about the work they do, and I thank them for their continued hard work and courage." END

Source: *Legislative Assembly Hansard 11 August 2015*

THE PUBLIC SAYS THANKS

Thank you to RetF Jen Williams

"Please pass on my thanks to one of your firefighters, Jen Williams, for assisting me in the rescue of two elderly people who were inside their submerged vehicle.

At approx. 20:00 last night [1 November] I was tasked to attend a domestic assault. On my way to this case I came across the Thompson Street causeway and noticed a car caught in flood waters and a gentleman trying to secure the car with a rope. I stopped to help and noticed two elderly people inside the vehicle trapped by confinement. The creek was flowing fast and rising. As I went into the water, Jen was walking past and stopped to render assistance. Jen made contact with Fire & Rescue for further assistance. The water was inside the vehicle up to the dashboard and both people still had their seat belts on. Once I released the seatbelts and got them out I handed each patient over to Jen who put them in the ambulance reassuring and comforting them until I could further assess them.

Both patients were suffering from hypothermia and were transported to Cootamundra hospital for further observation.

It's comforting to know that we work well together for the one cause."

Andrew Barton
NSW Ambulance Station Officer, Cootamundra

Thank you to 460 The Entrance

"I have had a couple of wonderfully caring recruits assist me over the past week or so with the replacement of my faulty smoke alarm.

"I felt it only fair to let you know these people were just wonderful; friendly and professional and they are a credit to the station and the service (The Entrance Truck 460).

"I thank them and your service of the replacement batteries and installation of new detectors very much."

Debbi Lalor JP

Judy Egan
September 2015

"Thank you – you guys are awesome. A few lovely blokes visited my Mum recently to sort out beeping smoke detectors. No charge, but more importantly you made her feel secure and cared for and valued by the community."

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Thank you to 510 Yamba

"My wife Kate, two year old son Max and I were holidaying in Yamba. My son is obsessed with fire trucks, Fireman Sam, firefighting uniforms and all apparatus involved at the moment. Just before departing Yamba Kate & Max took one last walk to view the fire truck parked outside when Dave [Yamba Captain Dave Woods] arrived at the station. Without hesitation he offered them the opportunity to take a closer look at the brand new truck parked inside and also hop up into the cab.

"I arrived at the station a short time later and marvelled at the look on Max's face! After having a thorough look at the truck Dave gave us a guided tour through the station and to top it off presented Max with a reprint of a job from the day before (just like on Fireman Sam!).

"Max got a great thrill out of this experience and we think it made his holiday!"

"Thanks and all the best."

Michael McCaffrey

Angela Woodcock
October 2015

"I just wanted to highlight how wonderful, brave & professional our emergency service personnel are. It was my neighbour who was trapped in his collapsed garage (Canada Bay, 23/10/15) and I witnessed the entire rescue operation and wish to extend my thanks and appreciation to them, for coordinating his extrication safely and without any further injury or damage. Well done and thank you."

Like • Comment • Share

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Thank you to 434 Hamlyn Terrace

"I wanted to send in a thank you to the wonderful firefighters from Hamlyn Terrace station. Last week they visited our centre, and were amazing. Their organisation and safety of the children was a credit to them. The visit was very informative for all the children and teachers.

"It was one of the best groups of people we have had come through the centre ... so THANKYOU!!!! Extremely professional, organised and helpful.

"Keep up the amazing work."

Kylie Jones
Centre Manager, Kids Academy Woongarrah

Lou Price
July 2015

"I would like to thank the men from Wentworthville Fire Station who rearranged their day to come to our Kindy showcase today. Your time was greatly appreciated by the kids, the teachers and the parents :-) "

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FAREWELL AND THANKS TO THOSE RETIRING

Name	Fire station/business unit	Date retired
RetF M Langham	Boggabri	14–Jun–15
RetF D Bennett	Mudgee	19–Jun–15
RetF R English	Bowraville	19–Jun–15
Capt P Mitchell	Kiama	2–Jul–15
SO S Gleeson	Hamilton	16–Jul–15
QF J Brigden	Shoalhaven	17–Jul–15
SF M Wilson	Firefighter Initial Training	19–Jul–15
RetF B Reeves	Kyogle	21–Jul–15
SO A Leak	Cranebrook	21–Jul–15
SO D Grant	Blacktown	23–Jul–15
SF P Doesburg	Bulli	24–Jul–15
Capt D Brown	Cowra	31–Jul–15
SO M Maher	Tweed Heads	31–Jul–15
SO R Bennett	Matraville	31–Jul–15
RetF R McArthur	Ballina	4–Aug–15
DCapt S Harrison	Rhodes	7–Aug–15
SF G Sykes	St Andrews	10–Aug–15
SF K Aitken	Sydney Comms	10–Aug–15
SO B Hitchcock	Newcastle	14–Aug–15
SO D Ebbels	Queanbeyan	14–Aug–15
SO K West	Avalon	14–Aug–15
SO M Kelly	Botany	14–Aug–15
DCapt G Sutherland	Tweed Heads	20–Aug–15
RetF J Gosby	Rhodes	21–Aug–15
SF G Lendrum	Belmont	22–Aug–15
SF D Clifton	Randwick	2–Sep–15
SF K Harding	Newcastle Comms	3–Sep–15
Insp G Reid	Metro South 2 Zone Office	4–Sep–15
SO G Robertson	Campsie	4–Sep–15
SO G Breen	Fleet Operations	8–Sep–15

VALE: WITH GRATITUDE FOR SERVICE TO THE PEOPLE OF NSW

Name	Fire station/business unit	Date retired
Retired FF R Hill	Revesby	25–Jul–15
Retired Capt C Jones	Cobar	8–Aug–15
FF D Cullen	Fairfield	11–Aug–15
Retired Superintendent V Crum	QFSM Headquarters	13–Aug–15
Retired Capt T Prior	Holbrook	23–Aug–15
Retired SO K Rendoth	Katoomba	24–Aug–15
Retired RetF B Stubbs	Mt Victoria	1–Sep–15
Retired SF B Wright	Sydney Comms	13–Sep–15
Volunteer Firefighter M Haylor	Riverstone	Sep–15
Retired SO J Boyt	Waterloo, Maroubra, Katoomba and Maitland	4–Oct–15
Retired SO C Ewin	BA Section and Newcastle	9–Oct–15
Retired District Officer A Steyns	Leichhardt, Headquarters and Alexandria	9–Oct–15
Retired RetF A Willis		Oct–15
Retired DCapt R Bradley	Parkes	15–Oct–15

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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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