

# Fire & Rescue

June 2015

# News



**OPERATIONS  
JOURNAL:  
MAJOR  
FACTORY  
FIRES**

**STORM AND FLOOD  
OPERATIONS**

**USAR  
DEPLOYMENT  
TO VANUATU**



Fire &  
Rescue NSW

# The Minister WRITES



# The Commissioner WRITES



As someone who has worked in various combat agencies, I'm committed to supporting and promoting the outstanding work of emergency services workers who put their lives on the line without thought of personal safety.

Before entering Parliament in 2011, I worked for former federal MPs Bronwyn Bishop and Former Prime Minister John Howard and the NSW Police media unit before being commissioned into the Army. I later joined the staff of then-NSW Opposition Leader Peter Collins before becoming the national campaign director for Australians for a Constitutional Monarchy and also serving with peacekeeping forces in Bougainville, as well as working for the Australian Hotel Association and the Civil Contractors Federation (NSW).

I am proud of the fact that our State's world-class expertise in disaster management is internationally recognised and regularly called upon. This was amply demonstrated in March this year when Tropical Cyclone Pam swept across Vanuatu's chain of islands, causing widespread devastation. As soon as assistance was requested, Australia responded with a multi-agency FRNSW-led Urban Search and Rescue (USAR) Task Force quickly formed and deployed to help our stricken Pacific neighbours. The article in this issue outlines some of the great work done by the Task Force in helping to restore hospitals, schools and other critical infrastructure across the battered nation.

This expertise was once again on display in April when severe storms battered many areas of NSW. Once again we saw FRNSW and other emergency services swing immediately into action, working closely with other agencies and the community to respond to the thousands of incidents and to facilitate recovery and rebuilding efforts.

I look forward to meeting more of you during my time as Minister and being your strong advocate inside the NSW Cabinet.

**David Elliott MP**

Minister for Corrections, Emergency Services and Veterans Affairs

In the last issue of Fire & Rescue News, we reported on the results of the recent readership survey to which many of you responded. One thing you told us through this survey was that the two types of information you found most relevant were operational news and incident reports.

Based on this feedback, I decided to reintroduce the detailed incident reports previously published in a separate publication, the Fire Operations Journal, and more recently in cut down form as intranet stories. These reports are prepared by Inspector Kernin Lambert, and from now on will form a significant part of the magazine. I have received a lot of feedback affirming the value of these reports and I believe that reinstating them will contribute to us being a more effective learning organisation committed to continuous improvement.

In this issue, Kernin has researched and written up three of the larger and more complex structure fires we attended in recent months, with details of how each incident unfolded, the resources allocated, the challenges and strategies employed, and learnings from each incident. I would appreciate hearing your feedback on this change to the magazine.

In addition, we are increasing the magazine's operational news component, particularly in the What's New section, to ensure that all staff are kept informed about key projects, achievements and new developments in operational matters.

This edition also covers two of our recent major incidents and deployments. In addition to the FRNSW-led multi-agency USAR deployment to Vanuatu, we have included a summary of FRNSW's wide-reaching response in conjunction with the SES and other emergency services to the severe weather event which caused widespread devastation over extensive parts of the State in late April and early May. This was one of FRNSW's busiest periods on record, and I thank all staff for their huge effort in responding to such a major weather event in often extremely challenging conditions.

I also take this opportunity to welcome David Elliott, who was recently appointed as the new Minister for Corrections, Emergency Services and Veterans Affairs. The Minister has already shown a keen interest in, and strong support for, FRNSW.

**Greg Mullins AFSM**  
Commissioner



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# NEW TRAINING PROP HONES USAR SKILLS

In February, FRNSW officially opened a new state-of-the-art facility at its Disaster Training and Response Centre at Ingleburn.

**T**he Urban Search and Rescue (USAR) Prop is a custom-built training site designed to recreate search and rescue scenarios, such as earthquakes or building collapses, that firefighters may face in NSW, across Australia and overseas. It enables FRNSW firefighters and other emergency services to constantly revise, practise and build on their USAR knowledge and skills.

The prop includes:

- a lift shaft for mock high-rise and lift rescue training
- a train tunnel and derailed train
- a rubble pile with an intricate network of tunnels, including submerged tunnels
- specially engineered concrete walls to simulate a disaster scenario such as a building collapse.

The prop was in constant use for skills maintenance training from February through to mid-April. The 4-day program covers skills acquisition in the

**From 11-13 May the prop was used for a major 48-hour USAR exercise by NSW Task Force 1**

2015 United Nations INSARAG guideline changes, rapid damage assessment, GPS/navigation, shoring, concrete cutting, tech roping, metal cutting and search techniques. Those attending included FRNSW rescue staff, with USAR Category 2 operators practising their enhanced skills while USAR Category 1 operators were trained in skills required to support a USAR field operation.

The first USAR Category 2 course for 2015 commenced on 20 April. The course was completed by 18 rescuers and two Ambulance paramedics. Those attending received real life instruction when they were called upon firstly to conduct rapid damage assessments in the third week

## The USAR Category 2 course conducted search and rescue operations in various situations associated with USAR in a real life situation

of April following the severe storm and flooding experienced in Dungog, then back to Huntingwood in Sydney's west following collapse of a number of factories due to hail damage on Saturday 25 April.

From 11-13 May the prop was used for a major 48-hour USAR exercise by NSW Task Force 1. The exercise simulated an earthquake disaster which caused widespread damage to the area, with particular impact on a commercial / residential complex which collapsed trapping numerous people. The USAR Category 2 course conducted search and rescue operations in various situations, including a two storey pancake collapse, train derailment inside tunnel and rubble pile search as well as other functions associated with USAR in a real life situation.

Apart from FRNSW crews, the USAR prop has also been used to train personnel from various other government agencies including the Ambulance Service of NSW Special Operations Team members, the NSW Police Force and various units from the Australian Defence Force. **END**



## NEW SEARCH KITS HELP SAVE LIVES

New search kits, comprising remote control cameras and seismic and acoustic sensors, were initially installed at key heavy rescue fire stations – City of Sydney, Eastwood and Liverpool fire stations. In 2015/16 the kits will be rolled out to all heavy rescue appliances. This will increase FRNSW's operational capability to detect and locate victims who have been affected by structural collapse. Similar equipment is used around the world, and was used by FRNSW after the Japan and Christchurch earthquakes in 2011 and the Rozelle shop fire in 2014.

"This new equipment will extend the search and rescue capability of firefighters allowing them to perform rapid searches for casualties in the initial phases of an incident," said Commissioner Mullins. "This technology will ultimately save lives."

The kits consist of two separate units:

### SearchCam Recon III Camera

- Is small enough to manoeuvre easily in rubble for rescue work, but also extends long enough for multi-floor search operations
- Can be used in water

### Delsar Mini Life Detector

- Uses two types of sensors to detect and locate casualties in the voids of collapsed buildings or similar entrapment situations
- Is equipped with seismic sensors to detect sound vibrations generated by a victim's movement or activity travelling through the structural remains of the building
- Is also equipped with acoustic sensors to detect sound vibrations travelling through the surrounding airspace within the rubble
- Allows two-way communication with victims



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## NEW MULTIPURPOSE HELMETS IMPROVE PROTECTION FOR FIREFIGHTERS

New multipurpose helmets are being issued to all firefighters in addition to the MSA Gallet F1 structural firefighting helmets. The new helmets will replace the current ones worn at rescues, bushfires, storm recovery, etc.

**T**he Pacific HR6NV Dominator improves on the Bushranger helmet previously in use. It meets the requirements of AS/NZS 1801:1997 for a Type 3 helmet suitable for bushfire fighting.

The Dominator is more compact than the old helmet, and features a flame-retardant neck protector, four-point chin strap with quick release buckle, nylon webbing cradle for optimal comfort, and padding and sweatband which can be removed for cleaning. It provides increased impact resistance, penetration resistance, retention strength and wearing stability. It is ideal for rescues wherever space is limited without compromising its suitability for bushfire, and storm and tempest work. ■END



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Clockwise from top left: Supt Phil Lindsay, Insp Chris Wilson, SO Dean Wellfare and SO Alan Barrell test the integrated device

## The ADASHI First Responder project has rapidly gained momentum with the trial in Metro South Zone 3 commencing in March 2015.

**A**s part of the trial, 20 offline (non-ESCAD integrated) rugged mobile data terminals were installed in vehicles. This included 14 permanent fire crews and five retained fire crews, covering pumpers, rescue pumps, ladder platforms, and one Duty Commander vehicle.

The non-ESCAD integrated devices provide on-board (locally stored) maps, aerial imagery, hydrant locations, PIP data, weather feed from the BoM, in-built navigation and access to SOGs, chemical data sheets, safety and operations bulletins at your fingertips.

Following this, the trial of the fully integrated ADASHI First Responder devices went live in June. This means that in addition to the above features, crews can be dispatched directly from the Emergency Services Computer Aided Dispatch (ESCAD) used by FireCOM.

Assistant Director Operational Communications Greg Wild said it allows appliances to respond immediately by acknowledging the incident and confirming their response with the press of a button for Code 1 and Code 3 status changes in ESCAD. "No more waiting for the radio to be clear. This dramatic change in dispatch capability is being monitored and continually assessed for accuracy, operational impacts and feedback from the field."

The ADASHI First Responder application took shape following comprehensive engagement with both the pilot 'Super User Group' and FireCOM with a key focus on ensuring the application is intuitive and easy to use en-route to incidents.

The Super User Group, which includes MS3 Zone Commander Superintendent Phil Lindsay, Duty Commander Inspector Chris Wilson

# ADASHI AT YOUR FINGERTIPS



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and Station Officers and Firefighters from all four platoons in the pilot zone, meets regularly to discuss issues, and provide feedback on the design, layout and functionality.

Macquarie Fields Station Officer

## It's all about building up mental 'situational awareness'

Dean Wellfare said the device is user friendly, provides a wealth of information and will cut down radio chatter. Inspector Chris Wilson, Duty Commander MS3 agrees it will be very useful on the fireground.

"The potential for firefighters to bring up information at their fingertips will make them operationally more effective," Insp Wilson said. "There's so much you have to remember when you go to a job these days. There are so many different variables but now you

can look it up and say 'have I done these things?'. I think it's a great tool."

This new capability will improve incident management and reduce radio congestion for non-critical radio messages at large-scale incidents. It will also immediately provide critical information to other arriving crews about the incident, and close the gap between FireCOM and responding firefighters.

"It's all about building up mental 'situational awareness'. It will improve our service delivery and safety for both the community and responding firefighters." Chief Supt Wild said.

Spearheading this flagship program, Project Manager FireCOM Mike Hinton says he is proud of the collaboration, energy and effort from the field and across each of the Directorates in realising this complex and multifaceted project.

Following the successful completion of the trial, it is envisaged that mobile data terminals will be systematically introduced across the entire FRNSW fleet. **END**

## ADASHI FIRST RESPONDER BENEFITS

- No need to wait for radio congestion to ease to send code 1, 3 or 4s.
- See who else has been assigned to the incident and who is the IC at any time.
- View hydrant locations, hazard details, site PIPs, utility details, aerial imagery of incident area.
- Access updated SOGs, Operations and Safety Bulletins.
- Follow turn-by-turn navigation to incident location.
- Provide AFA status confirmation before leaving site.
- Directly enter incident completion (STOP) messages for standard incident types (AFA 700 codes).



# NEW SOGS STRIVING TO KEEP YOU SAFE

FRNSW firefighters have access to the latest technology and equipment to deal with emergency incidents from structural firefighting PPC to Altair gas detectors, state-of-the-art helmets, advanced rescue equipment, CAFS and mobile data terminal technology. However, the world's best technology is only as good as the incident management guidelines that back it up.

**A**s a large and busy emergency service, it is vital FRNSW takes the time to review operating procedures at incidents to ensure the ongoing safety of every firefighter.

"As a professional fire service and a member of AFAC, FRNSW contributes to making incident sites safe for all workers and the public," said Capability Manager, Incident Management Superintendent Greg Rankin. "To do this we must provide the safest work site possible using a number of different tools and methods."

Until the commencement of a new project last year, FRNSW's Incident Management Standard Operational Guidelines (SOGs) had not been reviewed since their introduction by then Assistant Commissioner Mullins in 1997, nor did they consider the changes made to AIIMS (the Australasian Inter-Service Incident Management System) in 2013.

The project team, led by Supt Rankin, asked a number of pertinent questions about FRNSW's incident management practices:

- Did we know where each firefighter was and what they were doing at every incident attended by FRNSW?
- Did each firefighter have a reporting line of one level up and one level down?
- Were officers or firefighters 'freelancing' at incidents outside of the Incident Action Plan (IAP)?
- Was there always a strong command presence at incidents?
- Were the critical factors identified and addressed using the risk management process?
- Did we provide officers and firefighters a simple risk management plan and incident phase change model that was adaptable to all types of incidents attended to by FRNSW?
- If the IAP was not working, did we provide commanders with a simple review process to identify this and build a culture that it's OK to change a plan?

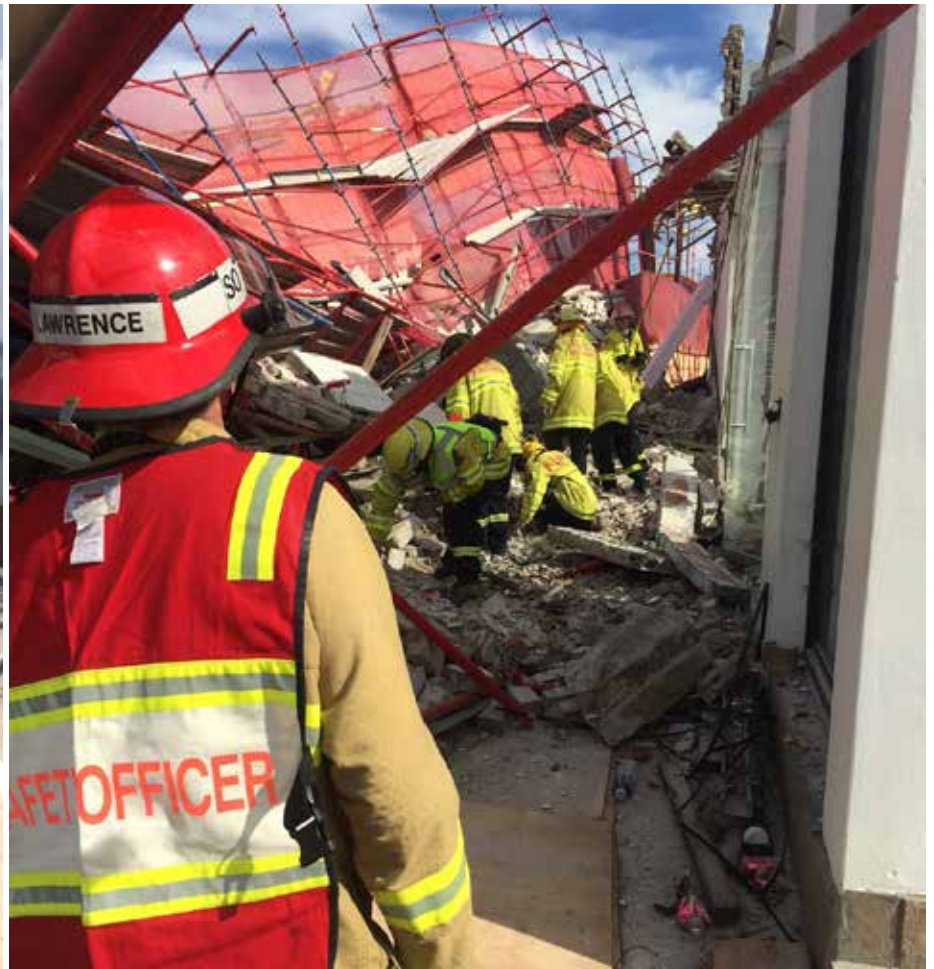
The review process identified a number of gaps in current procedures and a need to provide background

information for incident management practitioners to understand.

In March 2015, new Incident Management SOGs and a Guideline Support Document (GSD) were launched. This was followed up with publication of e-learning modules and an Incident Management Policy to provide information on the legal framework,

**Operational Capability is working with all sections of FRNSW to provide firefighters with the latest equipment, methods, procedures and policies to make the incident site as safe as possible**





principles, roles and responsibilities of FRNSW staff at incidents.

The e-learning package, which is available through the Learning Hub on the intranet, is also being supported by face-to-face training for both permanent and retained firefighters. This training has commenced in regional areas for Captains and Deputy Captains and will be delivered to all permanent crews over the next twelve months.

“The team at Operational Capability is working with all sections of FRNSW to provide firefighters with the latest equipment, methods, procedures and policies to make the incident site as safe as possible,” said Supt Rankin. “Please take the time to do the incident management e-learning modules. I know it’s a lot of theory and it’s not a tangible piece of shiny new equipment, but it is a vital part of making sure that firefighters, other emergency service workers and the public are kept safe at every incident site attended by FRNSW.”

For more information see the Incident Management toolkit on the intranet (Operational → Incident Management → Incident Management System). The toolkit includes information about the major differences from the previous SOGs, answers to frequently asked questions, links to the e-learning modules and Incident Management Policy. **END**

**Fire & Rescue NSW**

## Incident Management Standard Operational Guidelines Launch

Produced by Operational Capability and Education & Training

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**Examples from the e-Learning Program**

Module 2: Command

Command position

Next Article

Thumbnail

Fire & Rescue NSW



## SUMMIT TARGETS THE FUTURE OF FIREFIGHTING

On 6 May permanent and retained firefighters from across the State gathered at Sydney's Powerhouse Museum for a summit to discuss the future of firefighting at FRNSW.

In his opening address, Commissioner Greg Mullins spoke of the need for FRNSW to be the best in a constantly changing environment. He was followed by Assistant Director Fire Safety, Chief Superintendent Greg Buckley who presented on the current and future challenges firefighters face within the built environment. SEMC Climate Change Chair Christopher Lee also presented on predicted climate change trends and the risks they pose for firefighting.

Attendees were then split into two groups with each having a chance to have their say on training and equipment. All participants were also involved on a session regarding future-proofing FRNSW's capability.

Facilitated by Operational Improvement, the Firefighting Summit follows on from the successful Rescue Summit in 2013 which resulted in the publication of the '2020 Rescue Roadmap'. A report on the Firefighting Summit will be published in the coming months.

END



Fire & Rescue NSW Commissioner's Orders 2015/11  
ADMINISTRATION & TRADES STAFF NOTICES

**Appointments**

New staff appointed to Fire & Rescue NSW

Service No.	Name	Position	Start Date
W1501	A. Pepp	Station Officer	21 May 2015

**Separations**

Service No.	Name	Position	End Date
W1501	David Absalom	Station Officer	31 April 2015
W1502	David Absalom	Station Officer	31 April 2015

Greg Mullins AFPM  
Commissioner  
3 June 2015

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## SENIOR FIREFIGHTER BRETT CARLE AND OLIVIA BLACKBURN HELP DRIVE CHANGE AT FRNSW

In 2014 the Commissioner's Participative Council (CPC) was formed to provide an opportunity for all FRNSW staff to help shape the future of the organisation.

This advisory group consists of 25 FRNSW staff from admin, trades and operations. They have already met twice this year to continue working out how to build their skills, gather ideas from their peers, identify and progress good ideas for action, and work together to support and achieve organisational goals.

To ensure they build on and assist the good work already occurring within FRNSW, the group 'started small' and have already achieved some wins. For instance, 10 years ago, Station Officer David Absalom suggested standardising first aid signage across the FRNSW fleet as some appliances had small signage, some simply had a cross and some appliances had no signage at all.

### FRNSW wants staff members at all levels to be more involved in suggesting and implementing improvements

This great idea has finally been made a reality. CPC member Senior Firefighter Brett Carle worked together with Assistant Director Fleet Peter Fanning to find a simple, timely and cost-effective solution which enabled stations to fix the new signage to their appliances.

This solution strengthens workplace health and safety and also gives greater ownership to stations – a good example of people across FRNSW working together to bring good ideas to fruition.

Another great example of the council's work is Olivia Blackburn's idea to include administrative staff information in Commissioner's Orders. FRNSW is one organisation where all staff work together to provide a service to the community so it is very important that processes reflect this. The addition of administrative staff in the Commissioner's Orders is a timely reminder that we are 'One FRNSW'.

These and other deliberately small 'wins' have enabled the council to learn more about the organisation, and about innovation and effective change management strategies. While it is early days, one thing is clear – FRNSW wants staff members at all levels to be more involved in suggesting and implementing improvements.

So, how does this affect you? The council needs your ideas and suggestions in order to truly represent FRNSW and achieve our collective potential. What issues and ideas are discussed at your station, directorate or branch? And what solutions do you have? If you have ideas on how FRNSW can improve in any area, contact a CPC member and let them know your thoughts. CPC members are listed on the intranet at Toolkits → About You → Committees and Networks → Commissioner's Participative Council.

END



# NEW STATION RISK PROFILE TOOL HELPING COMBAT ACCIDENTAL HOUSE FIRES

Stations can now identify and target households at greatest risk from accidental fires with a new online community profiling tool.

**L** launched in March by FRNSW's Community Engagement Unit (CEU), the Station Risk Profile (STRP) is designed to help us better understand the types of people we serve. The STRP maps community segmentation data and incident data to identify those households at greatest risk of accidental fires.

### What is community segmentation data?

Community segmentation classifies all Australian households and neighbourhoods into 49 unique types and 13 overarching groups, providing a 360-degree view of household choices, preferences and habits. It is built using Australian demographic data from the 2011 Census and other best available data sources (a total of 238 variables). CEU is now using Mosaic data to target community engagement activities at the top 10 'at risk' groups which represent:

- 21% of households in NSW
- 37% of fires over six years
- 43% of injuries over six years

This data is now available to all FRNSW staff through the STRP.

### Getting started

You can access the STRP via a dedicated area in the Employee Self Service (ESS) reporting module using your current login and password details.

**CEU is now using Mosaic data to target community engagement activities at the top 10 'at risk' groups**

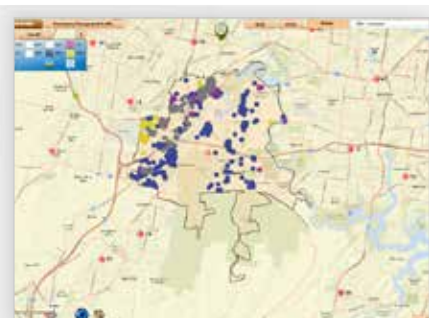
### e-learning module

The e-learning module (available in the Learning Hub on the intranet) shows how the STRP works and provides an interactive walk-through of how you can use the system in your station. The module takes approximately 10-15 minutes and all FRNSW staff planning community safety activities should complete it.

### What next?

Visit the Home Fire Safety Checks toolkit on the intranet (Operational → Community Safety → HFSC) for the latest information and resources, as well as for further instructions on how to access the STRP and e-learning module through the Learning Hub. Users can also contact the STRP Project Team at CEU@fire.nsw.gov.au.

**END**



### STATION RISK PROFILE IN ACTION

Around 15 stations are now making the STRP an essential aspect of their community engagement activities. Bonnyrigg Heights Station Officer Donald Peters said he uses the STRP to help plan community safety activities and hydrant checks. "We are focusing our time on the highest risk areas that are shown in the STRP. We are still spending the same amount of time carrying out checks or engagement activities, but we now know that we are doing them in the areas that will give us the best outcomes for our efforts."



**ISSUE 1:**

**FIRE &  
RESCUE  
OPERATIONS  
JOURNAL**

## EDITOR'S NOTE

Firstly, this is an opportune time to welcome everyone to this first issue of *Fire & Rescue Operations Journal* which will now be published as part of *Fire & Rescue News*. I'd like to thank members of the Media and Communications Unit for their generous and professional assistance in preparing the journal. It's also an appropriate time to thank so many people for their support of the journal and it's great to see that as a result of your enthusiasm and effort, it is back.

This edition contains technical reports of firefighting operations at three major fires; an oil recycling plant fire, a plastics recycling facility fire and a large furniture factory fire. All three were very complex fires, containing numerous hazardous conditions, operational difficulties, tactical challenges and other significant issues. All three incidents were controlled in an extremely professional manner by responding firefighters. The journal reports on the fireground strategies, tactics and considerations that enabled these incidents to be safely and effectively controlled. These incident reports contain some very positive lessons for everyone.

A goal of the journal is to share the knowledge and experience of those who attended these incidents with the wider organisation, so that all firefighters can benefit from the experiences of those who responded. There is something in the journal for everyone to help improve and perform our role with even greater safety and effectiveness. The journal is a tool to provide practical material to support station drills, pre-incident planning exercises and general discussion on firefighting operational issues.

The journal also contains another popular feature; firefighting operations associated with installed fire protection systems. In this issue, we look at water storage tanks and how they can assist firefighters at major structure fires, particularly when there is a large demand for water and mains supplies are being exceeded.

Again, welcome to *Fire & Rescue Operations Journal* issue one. I hope everyone enjoys and benefits from this issue. I look forward to continually improving this publication with each issue. Happy reading.

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



Aerial Pumper 47 is about to commence fire attack as a sudden wind change pushes heavy fire onto Sector Bravo exposures. The burning plastic bundles produced intense fire conditions.



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## 10TH ALARM REQUIRED TO CONTROL LANSVALE PLASTICS RECYCLING PLANT FIRE

Report by Inspector Kernin Lambert

**Incident summary:** Fire broke out within an open storage yard containing large quantities of recyclable plastic materials which were stored on timber pallets. Fuelled by a heavy and volatile fuel load, the fire quickly spread, rapidly involving all materials within the storage yard, as well as several large stacks of construction formwork timbers and a machinery building. When firefighters arrived on scene, the storage yard, timber stacks and machinery building were heavily involved in fire. Fire conditions were ferocious, and the fire was producing a large plume of thick black smoke. Numerous exposures on all sides and in close proximity to the fire were under direct threat and in imminent danger, including factories, further large timber stacks, workshops, offices, car stacks and a large car disassembly yard. The site contained numerous LPG cylinders used to power forklifts. Firefighting operations were conducted under difficult, highly oppressive and exhausting conditions, as crews battled to protect

numerous exposures being impacted simultaneously by intense fire activity; all crews were exposed to fierce radiant heat produced by the fire, on a day when temperatures reached 40°C. From the commencement of operations, firefighters encountered severe water shortages. At the height of firefighting operations, a sudden wind change resulted in the formation of extreme fire behaviour and a rapid escalation in conditions being encountered by firefighters, including the impact of large flames and heavy fire activity onto a number of exposures. Determined firefighting operations and skilful placement of handlines and aerial streams at key locations resulted in fire spread being stopped and this extremely fierce fire contained to its location of origin. Deployment of compressed air foam systems (CAFS) attack streams resulted in significant fire knockdown.

**Incident type:** Plastics recycling plant fire and timber stack fire.

**Time, date and place of call:** 1528 hours on 21 November 2014 to report of a fire in a storage yard at Day Street, Lansvale.

**FRNSW response:** Pumpers 73 (Fairfield), 49 (Cabramatta), 41 (Smithfield), 65 (Rydalmere), 10 (Redfern), 14 (Ashfield), 16 (Concord), 48 (Mortdale), 20 (Hurstville) and 32 (Mount Druitt) and Runner 1 (City of Sydney), CAFS Pumper 31 (Busby), Rescue Pumpers 57 (Wentworthville), 62 (Bankstown), 101 (Bonnyrigg Heights), 8 (Liverpool) and 15 (Burwood), Aerial Pumpers 97 (Huntingwood) and 47 (Revesby), Ladder Platforms 27 (Parramatta), 21 (Kogarah) and 92 (St Andrews), Heavy Rescue 8, Hazmat Pumper 85 (Chester Hill), Heavy Hazmat 85, Incident Control Vehicle Alpha, Logistics Support Vehicle 97 and Rehabilitation pod 1.

Duty Commanders MW2 (Parramatta), MW1 (Huntingwood) and ME3 (Ashfield), Zone Commander MW2 (Parramatta) Superintendent Selwyn Mathias, Area Commander Metropolitan West Chief Superintendent Rick Griffiths, Director Regional Operations Assistant Commissioner Rob McNeil, Acting FRNSW Commissioner Jim Hamilton, Commissioner's Staff Officer, Fleet Operations Officer, Assistant Director Media and Communications Unit Andrew Parsons, Operational Media Coordinator Superintendent Ian Krimmer and Team Leader Hazmat.

In addition to the above, a further 36 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:** Police, Ambulance, gas authority, electricity authority and Environmental Protection Authority.

**Total fire ban**

It is of note that on the day of this fire, a total fire ban was in place, resulting in the deployment of 20 inner-city FRNSW appliances to the bush/urban interface on Sydney's outskirts. Despite this significant re-deployment of resources, capability was maintained for response to this large urban structure fire.

**Fireground description**

**Sectors**

- Sector Alpha - Day Street, to south of fire location
- Sector Bravo - Area to west of fire location
- Sector Charlie - Hume Highway and area to north of fire location
- Sector Delta - Area to east of fire location

**Fire location**

Storage yard, 21 Day Street, Lansvale, an open area 60m x 60m, used for the storage of recyclable plastic materials and scrap metals. A large number of plastic recyclable material bundles/stacks, located on timber pallets, were



During initial firefighting operations, wind was blowing from west to east. Note smoke plume blowing from left to right.

stored in the open yard. Stored recyclable plastic materials on site included compressed plastic bottles, plastic shopping bags, polystyrene foam slabs and assorted other plastic materials and products. Numerous intermediate bulk containers (IBCs) and metal pallet cages were located in the yard, containing assorted scrap metal materials including pressurised gas cylinders and 200-litre drums. Metals on site included aluminium, brass, cast iron, copper, lead, nickel, stainless steel, steel and zinc.

A machinery building, single level, 15m x 40m, steel frame, cement sheet clad and cement sheet roof, was located on the northern edge of the storage yard, in contact with the stored materials.

Two 10m x 20m timber stacks were located on the eastern edge of the storage yard. These stacks consisted of timber beams, planks and plywood sheets, used for construction formwork.

Numerous other materials were located on all sides of the storage yard including further large stacks of timber sheeting, metal scaffolding, trucks, forklifts and machinery.

With the exception of the front of the storage yard, the fire location was surrounded and almost 'built in' by other structures, with minimal direct access for firefighters.

The fire location was not fitted with any installed fire protection systems or equipment.

Exposure Charlie 3 was fitted with a 100mm hydrant system, consisting of twin-headed pillar hydrants attached to an AS 2419.1 brigade booster fitting, consisting of two supply hydrants and two booster inlets, located at the entrance to the site on the Hume Highway.

**Exposures**

- **Exposure Alpha 1:** Three shipping containers, located on the southern edge of the storage yard
- **Exposure Alpha 2:** Numerous large timber stacks consisting of plywood formwork sheets, planks and beams and a delivery truck located on the southern edge of the storage yard
- **Exposure Alpha 3:** Workshop, 40m x 10m, steel frame and iron sheet construction, located 20m south of the fire location
- **Exposure Alpha 4:** Office building, 40m x 15m, two levels, metal sheet construction, located 20m south of the fire building
- **Exposure Bravo 1:** Factory, 130m x 15m, brick construction and cement sheet roof, located 2.5m west of the fire location
- **Exposure Bravo 2:** Factory, 130m x 15m, brick construction and cement sheet roof, located 20m west of the fire location
- **Exposure Charlie 1:** Metal elevated car storage racking, 45m x 5m, three levels, used for the storage of pre-delivery new motor vehicles, containing 45 motor vehicles, located 5m north of the fire location
- **Exposure Charlie 2:** Factory, 130m x 15m, brick construction and cement sheet roof, located 15m north-west of the fire location
- **Exposure Charlie 3:** Factory, 130m x 25m, brick construction and iron roof, located 18m north of the fire location
- **Exposure Charlie 4:** Factory, 150m x 15m, metal sheet construction and iron roof, located 10m north of the fire location
- **Exposure Delta 1:** Storage building, 35m x 15m, steel frame and metal sheet construction, open sided, containing large quantities of stacked timber



Pumper 49, supplying water to Aerial Pumper 47. The protective stream of Ladder Platform 27 is visible on the left side of the photograph.

**Response increased to 6th Alarm**

At 1547 hours, the Incident Controller sent the following RED message:

“FIRE COMMS, LANSVALE CONTROL RED! RED! RED! STRUCTURE FIRE SIXTH ALARM. HAVE AN EXTERNAL STORAGE YARD, 60M X 60M, CONTAINING LARGE QUANTITIES OF RECYCLED PLASTICS ALIGHT. ALSO HAVE LARGE AMOUNTS OF TIMBER AND SCAFFOLDING ALIGHT WITHIN AN ADJOINING TIMBER YARD. THERE ARE NUMEROUS PROPERTIES UNDER THREAT. REQUIRE THE NEXT ARRIVING AERIAL APPLIANCE TO RESPOND TO DAY STREET TO SET UP FOR EXPOSURE PROTECTION.”

Following transmission of the 6th Alarm, the Incident Controller designated an appliance staging area on Day Street, at the intersection with Knight Street.

**Operations to protect Sector Delta exposures**

Shortly after Pumper 49 arrived on scene, Pumper 73 arrived at the fireground and deployed to 19 Day Street, to establish protection of Sector Delta exposures. Strong winds were pushing the fire towards exposures, in particular Exposures Delta 1 and 2, open-sided structures containing large timber stacks. Pumper 73 firefighters deployed a ground monitor towards the Alpha/Delta corner, enabling a protective water deluge to be directed across the front of Exposure Delta 2. Operations in Sector Delta were conducted under the command of Sector Commander Pumper 73 SO Bruce Fitzpatrick.

Third arriving appliance, Hazmat Pumper 85, was positioned at 19 Day Street. At this time, Pumper 73 firefighters were placing the ground monitor into operation, however the appliance tank water was beginning to run low. Pumper 85 firefighters assisted to secure a water supply for Pumper 73 from reticulated street mains on Day Street. Fierce and intense fire activity from the heavily involved timber stacks burning on the edge of the open yard continued to threaten the large timber stacks located within the open sided Exposure Delta 1 structure. Pumper 85 firefighters directed a 70mm fire attack stream onto the involved timber stacks, in an attempt to reduce fire intensity from within the stacks. Pumper 73 Firefighters wearing SCBA advanced a 38mm fire attack line through the Exposure Delta 2 building and out the northern side of the structure, to enable a stream to be deployed for the protection of Exposure Delta 1. Embers from the burning timber stacks were igniting the roof gutters of Exposure Delta 1 and were entering the open structure. Firefighters wet down the stored timbers and extinguished spot fires in and around the exposures, including the burning roof gutters. Crews worked under highly oppressive conditions, due to the intense heat and thick smoke being produced by the fully involved timber stacks located only metres away.

- (beams, planks and plywood sheets), located 10m east of the fire building.
- **Exposure Delta 2:** Workshop, 60m x 15m, steel frame and metal sheet construction, open-sided storage building, containing large quantities of stacked timber (beams, planks and plywood sheets) and machinery, located 20m east of the fire building
- **Exposure Delta 3:** Car disassembler/storage yard, 50m x 100m, containing approximately 500 motor vehicles in various states of disassembly, located 40m east of the fire building

**Initial call and response**

At 1528 hours on 21 November 2014 FRNSW Sydney Communications Centre received the first of many 000 calls reporting a fire in a storage yard at Day Street, Lansvale. Pumpers 49 and 73 were initially responded to the call. From the engine bay, Pumper 73 saw large volumes of black smoke in the direction of the reported fire and requested the response of a Structure Fire 2nd Alarm. As firefighters responded to the fire, a large column of thick black smoke was rising vertically above the fire.

**Firefighters arrive on scene**

Pumper 49, under the command of SO Glenn Mallee, was the first appliance to arrive on scene and found the storage yard heavily involved in fire. A fierce and intense fire was burning within the stacks of plastic recycled materials, producing ferocious flame activity and

a thick, heavy smoke column rolling upwards and rotating near its base as air was being drawn in. SO Mallee sent an immediate RED message on arrival for the response of a structure fire 4th Alarm. SO Mallee immediately implemented Incident Control System (ICS) protocols, formally establishing incident control and a Control Point, known as 'Lansvale Control'. SO Mallee became the initial Incident Controller.

In addition to fire involving recycled plastic materials within the storage yard, two large timber stacks were also heavily involved in fire on the eastern side of the storage yard, producing significant flame, intense radiant heat and large quantities of airborne burning materials. The burning timber stacks were only metres away from Exposures Delta 1 and 2. At that time, the wind was blowing from west to east, pushing the fire towards Sector Delta exposures. Fire had also entered a machinery building on the northern side of the storage yard and was burning fiercely.

**Initial firefighting operations**

Sector Delta and Alpha exposures were now coming under immediate threat. Pumper 49 firefighters wearing SCBA deployed a 70mm fire attack line, which was positioned at the Alpha/Delta corner, enabling firefighters to direct a protective stream along the eastern and southern edges of the fire area, in an attempt to control fire spread.

**Aerial operations Sector Alpha**

Aerial Pumper 47, under the command of SO Daniel Cuskelly, was positioned in Sector Alpha and commenced operations conducting a direct attack on the storage yard fire, to reduce fire intensity. The aerial crew experienced severe water shortage problems, greatly reducing the effectiveness of the aerial attack. Firefighters from Aerial Pumper 47 deployed a 70mm hand line which was used to cool a 200kg LPG cylinder being directly impacted by fire and in danger of producing a boiling liquid expanding vapour explosion (BLEVE).

**Sector Charlie exposures under threat**

As firefighting operations were getting underway in Sectors Alpha and Delta, Exposures in Sector Charlie were coming under fire impact and were being significantly threatened. The Incident Controller received information that structures to the north of the storage yard, located at 70 Hume Highway, were in imminent danger. Upon receiving this information, the Incident Controller sent a RED message to Fire Communications at 1542 hours for the next arriving appliances to go directly to this address to commence protecting properties.

Rescue Pumper 62, under the command of SO Chris Dascolias was the first appliance to arrive at Sector Charlie, positioning on the western side of the storage yard, in a laneway to the west of the Exposure Charlie 3 factory. Firefighters obtained water supply from a pillar hydrant located on the Charlie/Delta corner of the fireground and deployed 38mm and 70mm hose lines, protecting stored cars located on the elevated racking, shipping containers and cooling Exposure Bravo 1 and Charlie Exposure factory walls.

Rescue Pumper 101, under the command of SO Steve May, positioned in Sector Charlie behind Rescue Pumper 62. Firefighters wearing SCBA placed a 70mm fire attack line into operation and commenced protection of cars located on the 3-level elevated car storage rack. Firefighters had to cut through the metal chain fence to gain access to the stacked cars, which were all being impacted by severe radiant heat and in imminent danger of ignition.

Pumper 41 was located at the brigade booster fitting at the entrance to the property on the Hume Highway and commenced pumping into the booster to improve water supplies within the installed hydrant system. Pumper 41 experienced water supply difficulties, necessitating Pumper 41 pump operator supplementing the two booster supply hydrant lines with two additional supply lines from reticulated main/standpipe supplies.

Operations in Sector Charlie were conducted under the command of Charlie Sector Commander Pumper 41 SO Alan Roberts.



Defensive firefighting operations are well underway in Sector Alpha.



Fire intensity of the burning timber stack (right side of photograph) and plastic stacks (left side of photograph) indicated by severe flame activity.



From Sector Alpha, combined aerial attack was successful in protecting exposures and reducing fire intensity. Rescue Pumper 8 supplies water to Ladder Platform 27.



**Sudden change in wind direction**

At approximately 1600 hours a significant change in wind direction occurred, as a strong south-easterly wind impacted the fireground. This had a major impact on firefighting operations, as exposures previously considered to be at lesser risk were suddenly directly in the fire's path and being seriously threatened. In particular, exposures located on the northern and western sides of the fireground were now under imminent threat. The large thick black smoke column was rising above the fireground, rotating upwards in a clockwise direction, as large volumes of air began to be drawn in at the fire base. As fresh supplies of oxygen were drawn into the fire, re-ignitions of smoke immediately above the fire occurred, creating extremely fierce fire conditions, of intense rolling spherical flames.

**Protection of exposures Bravo and Charlie**

When the wind changed direction, the fire front suddenly burned towards Exposure Bravo with ferocious intensity. From the northern side of the fireground, firefighters from 62 and 101 stations maintained position and conducted a desperate defensive operation to protect Bravo and Charlie exposures with 70mm fire attack lines.

Rescue Pumper 8 was positioned in Sector Alpha and initially deployed two 70mm fire attack lines, protecting the eastern wall of the Exposure Bravo 1 factory, which was being impacted by fire.

From the southern side of the fireground, Ladder Platform 27 was positioned in line with the western edge of Exposure Bravo 1, now being heavily impacted by intense flames. Rescue Pumper 8 shutdown the handline attack and supplied Ladder Platform 27 with water, enabling the aerial to direct a protective stream along the eastern wall of the threatened factory. The aerial stream was also used to cool and protect a 200kg LPG cylinder, truck loaded with timber pallets and several LPG powered forklifts on the southern edge of the storage yard being directly impacted by fire. The aerial crew reported water shortage restricted the effectiveness of the aerial stream.

Officer-in-Charge of Runner 1 SO Andrew McNamara was tasked with establishing a water relay to improve water supplies to Ladder Platform 27. SO McNamara consulted the hydrant map book and identified a large water main suitable to support a water relay. A water relay was established along Day Street, consisting of base pumper Runner 1 and Pumper 10 supplying water to Rescue Pumper 8.

From the northern side of the fireground, Aerial Pumper 97 positioned to conduct an aerial attack, in an attempt to secure the northern edges of the fire and protect exposures via an aerial master stream. 70mm hand lines being operated from Rescue Pumper 101 were shut down, enabling supply lines to be connected to the aerial. The aerial stream

was alternated between protection of threatened exposures in proximity to the Charlie/Delta corner and direct attack on the fire.

**Response increased to 10th Alarm**

As conditions continued to deteriorate, the response was increased to a structure fire 10th Alarm at 1558 hours. At this time, firefighters had been working in extremely oppressive conditions, with the ambient air temperature reaching 40°C. Response of a 10th Alarm ensured there were adequate firefighters on scene to conduct crew rotations, ensuring fresh crews engaged in fire attack, releasing working crews to attend fireground rehabilitation.

**Incident control transferred**

Duty Commander Parramatta Inspector Jeff Hogan arrived on scene and conducted a hand-over briefing with SO49, resulting in a transfer of Incident Control to Duty Commander Parramatta. SO49 was designated Sector Commander Alpha.

**Operations Sector Delta**

From Sector Delta, firefighters continued to protect threatened exposures. Rescue Pumper 57 firefighters were conducting fire attack preventing fire spread into Exposure Delta 1. Firefighters from 65, 55, 15 and 8 stations assisted crews from 73 and 85 stations, extinguishing the timber stack fires. Firefighters began opening up and pulling apart timber stacks, enabling extinguishment to take place. Firefighters continued to experience poor water pressure.

**Crew rotations**

Due to the high ambient temperatures, firefighting crews were rotated regularly to manage heat stress. Firefighters from Pumpers 10 and 41 and Runner 1 worked with 62 and 101 stations deploying 70mm hose streams, protecting heavily at risk Exposure Bravo 1.

**Incident control transferred**

Zone Commander MW2 Superintendent Selwyn Mathias arrived on scene and conducted a hand-over briefing with DC MW2, resulting in a transfer of Incident Control to Zone Commander MW2. DC MW2 was designated Operations Officer. A short time later, Area Commander Metropolitan West Chief Superintendent Rick Griffiths arrived at the fireground. Chief Superintendent Griffiths acted in a command senior advisory capacity.

At 1617 hours, the Incident Controller, Zone Commander MW2 Superintendent Mathias, sent the following situation report:

**"FIRE COMMS LANSVALE CONTROL BLUE. HAVE AN AREA 60M X 60M, CONSISTING OF TIMBER PALLETS, SCAFFOLDING AND RECYCLED PLASTICS ALIGHT. TWO STRUCTURES IN SECTOR CHARLIE ALIGHT. EXPOSURE BRAVO UNDER THREAT. HAVE AERIAL APPLIANCES AT WORK PROTECTING EXPOSURES."**

**Operation of compressed air foam system (CAFS) appliance**

CAFS Pumper 31 was deployed to Sector Alpha. Lines to Aerial Pumper 47 were shut down and switched to CAFS Pumper 31, which was then placed into operation. Firefighters operated two 38mm CAFS Class A foam handlines from east and west sides of Sector Alpha, advancing lines towards the centre of Sector Alpha in a 'pincer' movement, extinguishing fire. Officer-in-Charge of CAFS Pumper 31 SO Chris Hughes reported the application of CAFS Class A foam achieved substantial fire knockdown.

**Fire brought under control**

Firefighters continued to direct aerial master streams onto exposure edges, ensuring protection remained in place as the main body of fire was brought under control. After approximately two hours of intense firefighting and with all exposures protected, fire activity within the storage yard began to significantly diminish, enabling aerial streams and the water relay to be shut down and on-site firefighting resources to be reduced.

**Final extinguishment**

After the fire was brought under control, firefighters remained on scene for a further 30 hours, undertaking overhaul and completing final extinguishment. The fireground overhaul operation was slow, arduous and exhausting, requiring all timber sheeting to be pulled apart, enabling burning timbers to be fully wet down to ensure complete extinguishment.

**Post-fire situation**

Upon final extinguishment of the fire, stored materials within the open storage yard, two timber formwork stacks on the eastern edge of the storage yard and a machinery building had been severely damaged by fire. Cars located on the storage racking, a delivery truck and four shipping containers and contents had been impacted by radiant heat and smoke. All other exposures were protected.

**Operations notes**

The following is noted in relation to this incident:

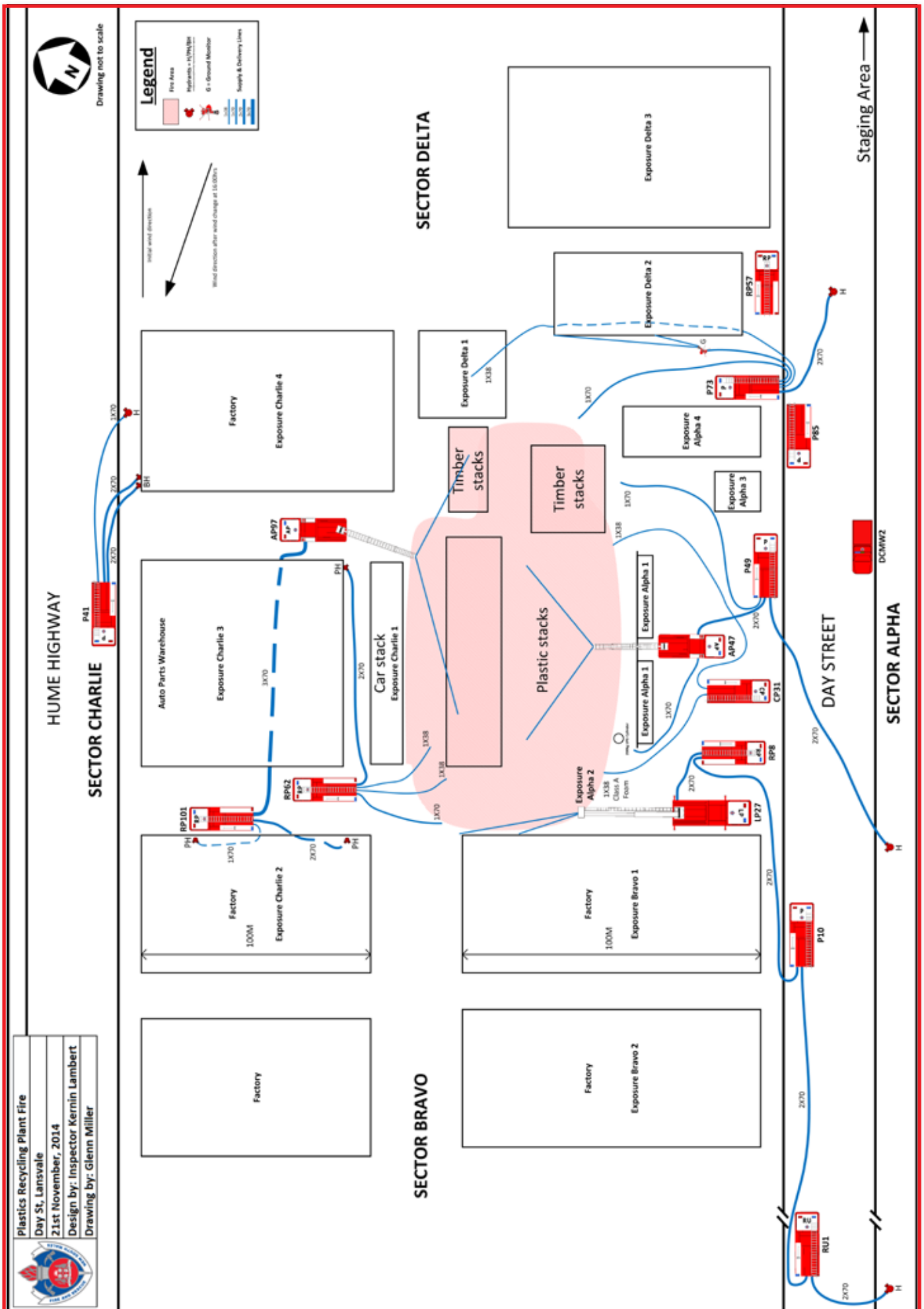
1. Plastics fires result in fire activity that is fierce and ferocious, releasing large quantities of radiant heat, intense flames and large quantities of thick, oily, black smoke. Plastic has a very high heat release rate of 39.85 Kj/g. This thermal energy is almost as great as burning propane gas (and is higher than most other combustible materials).
2. Fire conditions at the subject fire were worsened due to the large quantity of stored materials, packed closely together and the storage arrangement of materials, facilitating significant aeration. Due to materials being stored in an open yard (as opposed to an enclosed structure), air supply to the fire was plentiful and unhindered, increasing fire intensity.



3. Once involved in fire, timber stack fires produce intense flames, large quantities of radiant heat and significant embers. Timber stack fires are difficult to extinguish, usually involving prolonged operations, requiring the stack to be opened up, pulled apart and individual timbers wet down.
4. On a day when temperatures reached 40°C, a significant component of the firefighting safety strategy was to ensure adequate provision of relief crews. Response of a 10th Alarm ensured sufficient firefighters were on the fireground to enable adequate crew rotation and rehabilitation.
5. The wind change became a game-changer at this fire, causing a significant increase in fire intensity and fire behaviour, resulting in heavy fire suddenly threatening exposures previously not at risk. The initial strategy of containment on all sides ensured that when additional exposures suddenly and unexpectedly came under threat, protection was already in place, enabling the heavily threatened exposures to be successfully defended.
6. A robust fireground command structure, consisting of sectoring of the fireground and placement of sector commanders enabled firefighting operations to be conducted in a coordinated, safe and effective manner. Significantly at this fire, most sectors were unsighted from each other; nevertheless a coordinated firefighting operation across the fireground involving hand-lines, ground monitors and aerial appliances was successfully undertaken. The command structure was built out as additional senior officers arrived at the fireground, strengthening the integrity of command processes.
7. This fire was a textbook example of fireground command strategy. Early size-up by the first arriving Station Officers identified fire location, direction of fire travel and exposures threatened, enabling a sound fireground strategy to be employed, consisting of effective placement of cut-offs and heavy weight of attack resulting in safe and effective fire control and knockdown and protection of all exposures.
8. The nominated staging area enabled effective management of resources and avoided congestion at the fireground.
9. Significant safety hazards were identified during the early phase of firefighting operations by firefighters (in particular LPG cylinders being impacted by fire), ensuring appropriate control measures and safety strategies could be put in place, enabling firefighting operations to be carried out as safely as possible.
10. Use of compressed air foam systems (CAFS) Class A foam resulted in significant knockdown and diminishing of fire activity.
11. Water shortage was a critical factor at this fire, overcome by examination of hydrant maps and identification of mains from which to establish water relays. Once in place, water relays assisted to overcome water shortage issues. Use of on-site hydrant systems and brigade booster fittings enabled firefighting operations to get underway without the need for lengthy hose lays.
12. Only the determination, skill and sheer hard work of firefighters operating under difficult and highly oppressive conditions prevented fire spreading to nearby exposures. Numerous factories, warehouses and industrial sites were located in close proximity to the fire location; fire spread to exposures could have resulted in uncontained fire activity and extremely serious consequences. **END**



Aerial Pumper 47 is about to commence fire attack as a sudden wind change pushes heavy fire onto Sector Bravo exposures.



Aerial Pumper 86 directs a water deluge onto Sector Delta exposures, providing protection from fierce radiant heat produced by the fire building. Image credit Jason Donnelly




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# FRNSW CONTROLS ENORMOUS 12TH ALARM FIRE AT ST MARYS OIL RECYCLING PLANT

Report by Inspector Kernin Lambert

**Incident summary:** Fire broke out within a storage yard containing a large number of stacked 1,000-litre intermediate bulk containers (IBCs) storing flammable liquids including methanol and cooking oil. Almost immediately following ignition, fire heat caused the hardened plastic walls of the IBCs to melt, releasing thousands of litres of flammable liquids that rapidly ignited and began to spread as a running flammable liquid fire. Fire quickly entered the recycling plant factory, spreading rapidly and involving two internal bulk storage tanks and numerous stored 200-litre drums of methanol. Fire activity was ferocious and highly destructive. Numerous explosions occurred, enormous flames broke through the roof of the factory and fireballs erupted within the thick, heavy black smoke plume that extended to over 1km above the involved factory. Multiple exposures in proximity to the fire building came under threat from the fierce fire activity. Numerous other exposure structures were impacted by large quantities of

flaming embers, produced by materials within the fire building and eucalypt trees located in proximity to the fire. As firefighters commenced operations, crews discovered hydrants in proximity to the fire were unserviceable, necessitating the establishment of water relays to supply first arriving attack pumpers. A major firefighting operation, involving multiple aerial appliance operations, multiple water relays, numerous hand line and ground monitor deployments and a Class A CAFS foam attack necessitated the response of a 12th Alarm to safely bring this extremely dangerous and highly destructive fire under control. During operations, firefighters worked in particularly strenuous and oppressive conditions, with a recorded ambient temperature of 36°C.

**Incident type:** Oil recycling plant fire. Note: The plant was used for the conversion of cooking oil to biodiesel.

**Time, date and place of call:** 1250 hours on Saturday 17 January 2015 to report of a fire at an oil recycling plant at Severn Street, St Marys.

**FRNSW response:** Pumpers 98 (Cranebrook), 96 (Schofields), 301 (Glenbrook), 82 (Richmond), 83 (Riverstone), 81 (Windsor), 43 (Seven Hills), 72 (Merrylands), 94 (Kellyville), 67 (Baulkham Hills), 27 (Parramatta), 65 (Rydalmere), 41 (Smithfield), 55 (Guildford), 58 (Beecroft), CAFS Pumper 31 (Busby), Rescue Pumpers 63 (Blacktown), 57 (Wentworthville), 102 (Regentville), 71 (Castle Hill) and 101 (Bonnyrigg Heights), Aerial Pumpers 86 (Penrith), 97 (Huntingwood) and 7 (Horningsea Park), Ladder Platform 27, Hazmat Pumpers 77 (St Marys) and 85 (Chester Hill), Heavy Hazmats 77 and 85, Heavy Rescues 63 and 102, Logistics Support Vehicles 1 (City of Sydney) and 97, Incident Control Vehicle Alpha and Rehabilitation Pod 1.

Duty Commanders MW1 (Huntingwood), MW2 (Parramatta), MS3 (St Andrews), ME3 (Ashfield) and MW3 (Blue Mountains), Zone Commander ME3 (Ashfield) and Zone Commander MS1 (Illawarra), Area Commander Metropolitan South, Director Metropolitan

Operations, FRNSW Commissioner Greg Mullins, Assistant Director Media and Communication Unit, Fleet Operations Officer, Operational Media Coordinator, Team Leader Hazmat Advisory Response Team, HART 4, HART 5, Operational Safety Coordinator, Team Leader Community Fire Units, Manager Logistics, Manager Counter Terrorism and Aviation Unit, Manager Community Engagement Unit and Fire Investigation and Research Unit.

In addition to the above, a further 37 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:** Police, Ambulance, Gas authority, Electricity authority, Local Council, Regional Emergency Management Officer (REMO), liquid waste removal contractors, heavy machinery contractors and Environmental Protection Authority.

### Fireground description

#### Sectors

- Sector Alpha – Severn Street, to south of fire location
- Sector Bravo – Area to west of fire location
- Sector Charlie – Private laneway and area to north of fire location
- Sector Delta – Area to east of fire location

**Fire building:** Oil recycling plant, Severn Street, St Marys, located on a site 90m x 40m and consisting of:

1. An open rear storage yard, 40m x 30m, housing the following:
  - Approximately 100 x 1,000 litre intermediate bulk containers (IBCs), containing various Class 3 flammable liquids including methanol
  - Approximately 50 x 200 litres metal drums containing various Class 3 flammable liquids including methanol
  - Approximately 50 x 20 litre metal drums containing various Class 3 flammable liquids
  - A small 5,000 litre tanker
  - Stack of coal
  - Pile of shredded rubber tyres.
2. Heavy distilling and petrochemical processing and refining equipment, including a distillation tower, boiler, furnaces and associated pipework and pressure vessels, located in an area 30m x 20m, at the north-east corner of the site.
3. Loading dock, 20m x 10m, attached to the northern end of the factory, of steel frame and metal sheet construction.
4. Factory structure, 20m x 30m, of steel frame and metal sheet construction. A 20,000 litre storage tank containing glycerol and a 20,000 litre storage tank containing cooking oil were located within the factory.
5. Office building, single level, 20m x 10m, cement sheet clad, timber frame and



The scene that confronted SF Brett Staines and SF Garry Scott when they reached the storage yard at the rear of the factory. Numerous intermediate bulk containers (IBCs) have ruptured, causing a running flammable liquid fire consisting of burning methanol. Image credit SF Brett Staines.



One of several large explosions. Note a large sheet of iron at the top of the photograph, propelled by the force of the explosion. Photo by FF Martin Zeballos.

iron sheet roof, located at the front of the factory structure.

- 6. A 1m wide drainage canal of concrete construction was located on the eastern side of the fire building, in proximity to Exposure Delta 1. No installed fire protection systems were found at the fire building. Bravo and Delta exposures contained installed fire hose reels. The three closest reticulated hydrants to the fire building on Severn Street were out of service.

**Exposures**

- **Exposure Alpha:** Office building, single level, 20m x 10m, cement sheet clad, timber frame and iron sheet roof, attached to the front of the factory structure
- **Exposure Bravo 1:** Storage building, 110m x 20m, brick construction, heavy timber frame and iron sheet roof, located 12m to the west of the fire building. Note: this building was constructed in 1942 to store explosives and was formerly part of the Commonwealth Government St Marys Munitions Filling Factory. In accordance with the purpose of its construction, the building was formed of blast/fire resistant double brick walls and doors, explosion blast vents in the roof, internal blast/fire separation walls and did not contain windows
- **Exposure Bravo 2:** Metal scaffolding and portable stage stacks x two, 100m x 15m, located 10m west of the fire location
- **Exposure Charlie 1:** Office building, 30m x 25m, weatherboard clad and iron roof, located 25m north-west of the fire building
- **Exposure Charlie 2:** Factory, 120m x 45m, concrete slab construction and metal clip-lock, located 35m north-west of the fire building
- **Exposure Charlie 3:** Factory, 130m x 35m, concrete slab construction and metal clip-lock roof, located 15m north of the fire building
- **Exposure Charlie 4:** Factory, 110m x 115m, brick construction and cement sheet roof, located 20m north-east of the fire location
- **Exposure Delta 1:** Storage building, similar construction to Exposure Bravo 1. Numerous hazardous materials were stored within this building including sulphuric acid and methanol, contained within 1,000-litre intermediate bulk containers and 200-litre drums on timber pallets, located 10m east of the fire building
- **Exposure Delta 2:** Workshop and office building, 20m x 15m, cement sheet clad and metal sheet roof, located 12m east of the fire building
- **Exposure Delta 3:** Storage building, 10m x 15m, cement sheet clad and metal sheet roof, located 22m east of the fire building

- **Exposure Delta 4:** Numerous external stored 1,000-litre intermediate bulk containers and 200-litre drums on timber pallets, containing sulphuric acid and methanol, located 20m east of the fire building
- **Exposure Delta 5:** Factory, 100m x 75m, brick construction and iron sheet roof, located 40m east of the fire building

**Initial call and response**

At 1250 hours on Saturday 17 January 2015 FRNSW Sydney Communications Centre received the first of numerous 000 calls reporting a fire at an oil recycling plant at Severn Street, St Marys. Aerial Pumper 86, Pumper 98, Hazmat Pumper 77 and Heavy Hazmat 77 were initially responded to the call. En route to the call, firefighters from initial responding stations observed a large column of thick black smoke in the direction of the call address. Pumper 98, under the command of SO Rod Kinder had the clearest view of the smoke column and sent a RED message en-route, increasing the response to a Structure Fire 2nd Alarm.

**Firefighters arrive on scene**

Aerial Pumper 86, under the command of SO John Smith, was the first appliance to arrive on scene, followed closely by Hazmat Pumper 77 and Heavy Hazmat 77. As appliances turned into the street, building occupants were waving firefighters down. Upon arrival, firefighters observed a fierce fire burning in the rear yard of the factory, producing large volumes of thick black smoke. S086 sent an arrival message confirming the response of the 2nd Alarm, while firefighters conducted investigations to determine what was alight and the extent of fire.

**Initial firefighting operations**

86 Station firefighters Brett Staines and Garry Scott donned SCBA, assisted by firefighters from 77 Station, and began to advance a 70mm attack line along the Sector Bravo driveway to the rear of the factory to make investigations and commence fire attack. A large volume of cooking oil 15cm deep was flowing from the rear of the factory down the driveway towards the street, due to storage containers failing. The fire attack crew initially entered the factory checking for fire spread and found fire had not spread into the structure. Firefighters Staines and Scott then exited the factory and continued to advance the fire attack line along the driveway towards the rear of the factory. After travelling approximately 50m, they reached the northwest corner of the factory, near a loading gantry. Firefighters found intense and ferocious fire activity involving the IBC stacks in the rear yard. Fuelled by large quantities of flammable liquids, flames 15m high were roaring from the IBC stacks. Numerous IBCs had ruptured, resulting in methanol and oil pouring from the IBCs, flowing across the ground and igniting. Intense flames fuelled

by a mixture of methanol and cooking oil were travelling rapidly towards the northern end of the factory. Firefighters directed a 70mm attack stream onto the fire, in an attempt to push the fire back and stop it reaching the factory. At this time, an area of at least 30m x 20m in the rear yard of the factory, consisting of stacked IBCs containing flammable liquids, was fully involved in fire and spreading.

**Response increased to 4th Alarm**

Pumper 98, under the command of SO Rod Kinder arrived on scene on the Sector Delta side of the fire and was able to see the extent of the fire, involving an open storage area, 20m x 30m, at the rear of the factory that was heavily involved in fire (not visible from the location of S086). From this vantage point, S0986 sent a RED message at 1305 hours, increasing the response to a Structure Fire 4th Alarm.

At the same time as the Aerial Pumper 86 fire attack crew were attempting to stop the fire entering the factory, a second 70mm fire attack line was deployed from Aerial Pumper 86 by SCBA crew firefighters Peter Sargent and Andrew Tonkih, to the entrance of the factory in Sector Bravo, in preparation for an internal attack and an attempt to establish an internal cut off in the event that fire entered the factory. At this time this line was not charged.

**Severe water shortage**

As the fire attack crew were attempting to control the fire, Aerial Pumper 86 appliance driver was attempting to locate a hydrant to secure a water supply. The appliance driver attempted to place three separate hydrants into operation, however each one was found to be out of service. The closest serviceable hydrant was located over 200m from the fire building (at the intersection of Severn Street and Dunheved Circuit), necessitating establishment of a water relay to supply water to Aerial Pumper 86. When the appliance driver reported this situation to S086, the response was increased by an additional two pumpers for establishment of a water relay from the serviceable hydrant to Aerial Pumper 86.

Firefighters Staines and Scott continued to fight a desperate battle to stop the intense fire reaching the factory, however fierce flames began to erupt from beneath the loading gantry. The iron sheet walls of the factory began to glow red and buckle, indicating that the fire had crossed the cut-off point and was now burning with strong intensity within the factory. At about this time, Aerial Pumper 86 ran out of water, forcing all firefighters to withdraw, backing the attack line out of the site.

In an attempt to extend water supplies, a 70mm supply line was connected from Hazmat Pumper 77 to Aerial Pumper 86, enabling 2,000 litres of appliance tank water to be transferred to the main fire attack appliance, Aerial Pumper 86.



### Operations continue to stop internal fire spread

Once a temporary water supply was re-established to Aerial Pumper 86, Firefighters Staines and Scott again re-entered the site, advancing the 70mm attack line about 30m along the Sector Bravo driveway of the factory and commenced a direct attack on the fire, in an attempt to halt fire spread. As the fire progressed towards the front of the factory, firefighters were forced to progressively keep backing out, in line with the advancing internal fire front. Firefighters Staines and Scott entered the factory through a side door, advancing about 15m in an attempt to stop the fire advancing internally. Crews experienced poor visibility due to a heavy smoke condition. Numerous explosions began to occur from the rear of the factory. Aerial Pumper 86 driver warned firefighters the appliance onboard tank water supply was again beginning to run low, forcing firefighters to withdraw. As crews backed the attack line out, they came across a forklift LPG cylinder which was being impacted by fire and beginning to vent. Firefighters directed a cooling stream onto the cylinder, effectively cooling the cylinder and preventing a dangerous boiling liquid expanding vapour explosion (BLEVE) from occurring, exhausting the last of the appliance supplies.

During the entire time firefighters were attempting to advance lines into the site, large volumes of cooking oil from

ruptured storage tanks continued to flow in the locations crews were working, making the ground slippery underfoot and hose lines slippery and extremely difficult to handle. As well as creating a major slip hazard, the flowing oil fire began to ignite.

As firefighters withdrew from the site, the 70mm attack line was secured with the branch in the open position, tied off to a post, to enable the line to be used as a monitor once water was re-established. The line was placed to protect the Exposure Alpha office.

### Initial protection of Sector Delta exposures

At the same time firefighters from 77 and 86 stations were conducting fire control operations within the site of the fire building, fire from the heavily involved Sector Charlie storage yard was impacting exposures in Sector Delta. Structure roof guttering, filled with fallen leaves from overhead gum trees, was alight. Timber pallets in contact with the side of Exposure Delta 1 were alight. Firefighters from Pumper 98 wearing SCBA used an installed fire hose reel to extinguish these spot fires. The SCBA crew then deployed a 70mm fire attack line about 30m down the side of Exposure Delta 1, using the fire attack stream to cool and protect the western side of the exposure building, which was being directly impacted by flames issuing from the involved factory. Firefighters also directed the cooling stream onto the distillation tower and

associated processing vessels on the eastern side of the fire building being heavily impacted by fire, fearing a major explosion of these large steel pressurised vessels. Firefighters remained in this position for as long as possible, until the Pumper 98 onboard water tank supplies were exhausted, forcing firefighters to withdraw.

### Incident control transferred

Duty Commander MW1 Inspector Glenn Launt arrived at the fireground and conducted a hand-over briefing with S086, following which Incident Control was transferred to Inspector Launt.

### Response increased to structure fire 8th Alarm

Following transfer of Incident Control, Inspector Launt conducted a size-up. Part of the size-up considerations undertaken by the Incident Controller included the size of the fire, water supply problems, and the high ambient temperatures being experienced that day, which would require additional relief crews. As a result of size-up, the response was increased to a structure fire 8th Alarm with a special call for CAFS Pumper 31.

At 1324 hours the Incident Controller transmitted a RED message, increasing the response to a structure fire 8th Alarm and directing all incoming appliances to report to the staging area on Links Road.

From Sector Alpha, in line with Exposure Delta 1, Heavy Rescue 102 was deployed as the Rapid Intervention Team.



Aerial Pumper 86 directs a water deluge onto Sector Bravo exposures. Note fire ignitions within the smoke plume. Image credit Jason Donnelly



Aerial Pumper 97 shuts down to reposition out of danger, as fire spreads rapidly towards Severn Street and explosions begin to erupt from the factory. Image credit Jason Donnelly



The high heat release rates of the burning flammable liquids produced an extremely turbulent and buoyant smoke plume.

**Fire conditions intensify**

Firefighters reported an increase in wind, resulting in fire conditions intensifying. Fire progression through the involved factory was rapid. As fire progressed through the factory, numerous 200-litre drums containing flammable liquids were impacted by heavy fire, resulting in large explosions occurring. Within minutes, the factory was fully involved and large flames were now venting 25-30m above the roof of the structure, placing exposures on all sides under serious threat. A large column of thick black smoke was extending into the sky above the factory. As the turbulent smoke column rolled upwards above the roof of the factory, fire balls erupted within the smoke plume, 30m above the roof of the factory. Oil burnt with fierce intensity. Within the rear yard of the factory, most IBCs had now failed, releasing thousands of litres of flammable liquids that flowed in all directions, creating a ferocious running flammable liquid fire.

Flames were now impacting structures within Sectors Bravo and Delta. Firefighters received information that Sector Delta exposures contained large quantities of hazardous materials, including sulphuric acid and methanol, stored within 1,000-litre IBCs and 200-litre drums.

The canopies of large gum trees in and around the oil recycling plant became involved in fire, resulting in the release of large quantities of burning eucalyptus leaves that travelled varying distances to numerous other exposures within a 400m radius of the fireground, resulting in the ignition of multiple spot fires.

**Firefighters establish fireground water supply**

Incoming appliances overheard radio messages from Aerial Pumper 86, reporting that they were now out of water and requesting additional appliances to establish a water relay from the closest serviceable hydrant at the intersection of Dunheved Circuit and Severn Street. Rescue Pumper 102 was the first appliance to reach this location and obtained water from supply hydrants attached to a brigade booster fitting located at the front of a factory on Dunheved Circuit. Rescue Pumper 63 entered Severn Street, positioning midway between Rescue Pumper 102 and Aerial Pumper 86, enabling supply lines to be laid and a water relay established to Aerial Pumper 86. Once the relay was operating, firefighting operations were able to continue. Firefighters continued an attack with 70mm handlines, however extreme fire intensity made this attack too unsafe to continue. The aerial boom of Aerial Pumper 86 was placed into operation, enabling firefighters to alternate the aerial stream between a direct attack on the involved factory and protection of exposures within Bravo Sector and Delta Sectors being directed



impacted by fire. Firefighters located in line with Delta Sector exposures guided the aerial operator, who did not have sight of the Sector Delta exposures. The aerial stream of Aerial Pumper 86 was able to extinguish timber pallets that were again alight, against the doors of the Exposure Delta 1 structure, preventing fire spread into the structure. Despite the establishment of a water relay from Dunheved Circuit, water supply remained poor, restricting the effectiveness of the aerial attack.

### Operations to protect Sector Delta exposures

With Exposure Delta 1 remaining at serious risk, Rescue Pumper 63 and Pumper 67 firefighters deployed a ground monitor along the western side of Exposure Delta 1, directing a protective water deluge onto the side of the threatened structure. During placement of the ground monitor, firefighters were exposed to intense radiant heat produced by the fierce flames coming from the factory.

Two 38mm hand lines were placed in operation from Rescue Pumper 63 to Sector Delta, used by 63, 65 and 71 Station firefighters to extinguish spot fires burning in proximity to Sector Delta exposures, in particular Exposure Delta 4, an open storage area where numerous 1,000-litre IBCs were located containing flammable liquids and acids. Rescue Pumper 71 firefighters operated installed hose reels to extinguish burning timber pallets located in close proximity to Exposure Delta 1.

Pumper 96 was positioned in an open area in Delta Sector between Exposures 1 and 5, using two 38mm lines to extinguish numerous spot fires burning in proximity to exposure structures, assisted by firefighters from 82 Station.

Aerial Pumper 97 was initially positioned on Severn Street, at the western edge of Exposure Delta 1. The aerial boom was initially placed into operation, alternating the aerial stream between the factory fire and protection of Exposure Delta 1. Conditions within the factory continued to worsen as fire activity intensified, necessitating the relocation of Aerial Pumper 97 to a position of safety. In addition to fire intensity from the involved factory, a narrow canal located on the east side of the fire building contained flammable liquids and was heavily involved in fire, spreading towards the location of Aerial Pumper 97 in Sector Alpha. Power lines at this location were also in danger of falling and the Exposure Alpha 1 building was in danger of collapse. Aerial Pumper 97 was re-located to a yard to the east of Exposure Delta 1, where Pumper 96 was located. The Pumper 96 handlines were shut down and Pumper 96 was used to provide water supply to the aerial.

Prior to commencing operations with Aerial Pumper 97's aerial monitor, firefighters deployed the high pressure

hose reel to the area between Exposures Delta 1 and 5, where numerous areas of grass, bush, trees, truck tyres and other materials were alight, due to ember impact from the burning gum trees. Numerous spot fires in close proximity to structures were extinguished.

Upon extinguishment of the spot fires, Aerial Pumper 97 was placed into operation as an aerial master stream. At that time, only a single supply line was providing Aerial Pumper 97 with water, resulting in a severely limited stream, which was directed onto the roof of Exposure Delta 1, providing cooling. A second supply line was connected to Aerial Pumper 97 and the aerial monitor was fitted with a stacked tip nozzle. The additional water supply enabled the appliance to be operated at 1200kPa, enabling the solid stream to reach the fire building. The fire building was out of view of the aerial operator, necessitating a member of the aerial crew to act as a spotter. The aerial stream was impeded by the presence of large tree canopies.

Rescue 63 firefighters used a power-saw to forcibly gain entry to the Exposure Delta 5 timber joinery and furniture factory, via a metal roller door. This factory contained large quantities of stacked high quality milled timber and was at significant risk. Firefighters were concerned the large numbers of embers landing in the area could burn through alsynite roof skylights and ignite fires within the factory. Firefighters deployed a thermal imaging camera and 38mm protection line into the factory, ensuring no spot fire ignitions occurred.

Operations in Delta Sector were carried out under the command of Delta Sector Commander Inspector Martin Hofstadler.

### Response increased to 12th Alarm

Poor water supply remained a critical issue. With the need to establish further water relays from larger mains located on Forrester Road, the Incident Controller sent a further RED message at 1332 hours, increasing the response to a structure fire 12th Alarm.

### All operations switched to defensive mode

The factory was now totally involved in fire. Numerous explosions continued to occur, large flames were venting through the roof of the factory and the fire continued to expand. A large piece of red hot roof sheet iron was propelled 100m through the air due to the force of a major explosion, landing on the roof a factory (Exposure Delta 5), immediately above a roller shutter door entry point. The fire was also heavily involving equipment and machinery associated with the oil refining process, including the distillation tower, furnace and numerous assorted pressure vessels. Due to the possibility of a catastrophic explosion or fire event occurring, the Incident Controller gave a direction that all firefighting operations at the oil recycling plant would be totally

defensive, with the use of aerial master streams to protect exposures.

The Incident Control Point was relocated to a position of safety, approximately 100m to the west of the fire building, on Severn Street. The Incident Control Vehicle was positioned at this location.

### Major water relays established

The Incident Controller designated Rescue Pumper 57 SO Wayne Keever's the Water Supply Officer. SO Keever's identified two hydrants on a 200mm reticulated main located on Links Road and organised for two twin line relays to be established, for the supply of aerial operations, at maximum output.

Rescue Pumper 57 and Pumper 58 were established as the base pumpers for the respective water relays. Relay One consisted of base Pumper 58 and Pumper 43, supplying water to Aerial Pumper 97. Relay Two consisted of base pumping appliance Rescue Pumper 57 and Pumper 94, supplying water to firefighting operations in Sector Charlie.

Due to heavy fireground radio traffic, the water relay groups experienced significant communications difficulties, resulting in relay firefighters operating on a separate radio channel, Fireground Talk-group 509. Relay Officer SO Keever's reported that upon establishment of the dedicated relay channel, establishment of the water relay proceeded smoothly. This was critical while supply lines were connected and pumping operations were getting underway, between appliances largely unsighted from each other. The two relays were established and in operation in less than 10 minutes.

### Sector Charlie operations

Operations in Charlie Sector were carried out under the command of Charlie Sector Commander Inspector Martin Hofstadler for the first two hours of operations.

Pumper 94, under the command of SO Phil Nightingale, was directed to Sector Charlie to commence operations. Embers from intense fire activity involving a large area of bushes, shredded rubber tyres and other material within the rear yard at the northern end of the fire building were landing in areas of grass, bush, garden beds and a timber guardhouse in Sector Charlie, igniting spot fires that were spreading and intensifying in close proximity to several Sector Charlie exposures, including several large timber yards and joineries, placing these exposures at risk of ignition.

Pumper 94 obtained a water supply from a single 70mm supply line connected to a brigade booster fitting supply hydrant. A 70mm delivery line, reduced to a 38mm fire attack line, was used by firefighters to extinguish these numerous spot fires in proximity to Sector Charlie exposures.

The area alight within the rear yard of the fire building continued to release

significant quantities of embers towards grass, bush, gardens and other materials in proximity to Sector Charlie exposures, placing these exposures at significant risk, in particular factories containing large quantities of timber. A ground monitor was set up by firefighters from 94, 85 and 27 stations, to enable a water deluge to be directed onto the involved area. This ground monitor attack also protected 200-litre drums and 1,000-litre IBCs of methanol, being impacted by fire in adjoining Sector Delta. Supply lines from the water relay two were directed to Pumper 94, to provide the necessary water via two 70mm supply lines to enable the ground monitor stream to be effective. A further two 38mm hand lines were deployed from Pumper 94, to the rear of the factory yard. Pumper 27 firefighters cut the fence open and gained entry to the area of the rear yard fire, where fire control operations were carried out. Fire activity within the rear yard of the fire building began to diminish, with a corresponding reduction in embers produced, substantially reducing the threat of fire spread to Sector Charlie exposures.

**Sector Bravo operations**

Ladder Platform 27 was positioned in Sector Bravo, on the northwest corner of Exposure Bravo 1. A water relay from Severn Street to the south of the fireground was established via Pumper 301 and Pumper 83. Two 70mm supply lines provided Ladder Platform 27 with water. Almost as soon as Ladder Platform 27 commenced fire attack, reticulated water supply was over-run. This critical water shortage could not be overcome, forcing the aerial to be shut down and withdrawn from the fire attack.

A 70mm line was deployed from Pumper 83, with a reducer and one into two breaching, allowing two 38mm fire attack lines to be deployed in Sector Bravo. Firefighters wearing SCBA from 83, 27 and 55 stations conducted fire control among heavily involved scaffolding stacks and the flowing flammable liquid fire within Sector Bravo.

**Incident command structure expanded**

The Incident Command Structure was expanded as follows:

- **Incident Controller:** Director Metropolitan Operations, A/Assistant Commissioner Gerry Byrne
- **Operations Officer:** Area Commander Metropolitan South, A/Chief Superintendent Philip Lindsay
- **Planning Officer:** Staff Officer to Deputy Commissioner, Superintendent Chris Jurgeit
- **Logistics Officer:** Manager Counter Terrorism and Aviation, Superintendent Brian Smart
- **Safety Officer:** Operational Safety Coordinator, Senior Firefighter James Davies
- **Water Supply Officer:** Rescue Pumper 57, SO Wayne Keevers



One of several large explosions. The object at the top of the photograph is a large sheet of red hot iron, propelled by the force of the explosion, which landed on the roof of an adjoining factory 100m away, creating a further fire spread risk. Image credit QF Martin Zeballos



- **Staging Officer:** Pumper 83, Captain Jason Taylor
- **Rehabilitation Officer:** Team Leader CFU Program, Senior Firefighter Heath Langdon
- **ICMS Officer:** Pumper 41, SO Andrew Henderson
- **Sector Commander Sector Alpha:** Duty Commander ME3, Inspector Craig Davies
- **Sector Commander Sector Bravo:** Duty Commander MW3, Inspector Peter Nugent
- **Sector Commander Sector Charlie:** Manager Equipment Logistics, SO Matthew Waldon
- **Sector Commander Sector Delta:** Duty Commander MW2, Inspector Martin Hofstadler
- **Incident Communications:** An incident communications plan was implemented as follows:
  - **Strategic Communications:** Talk-group 110
  - **Command Channel Communications:** Talk-group 601
  - **Fireground Communications:** Fireground 510
  - **Relay Group Communications:** Fireground 509

A member of the incident command team reported establishment of the command channel was a vital link in the command structure, providing non-congested radio traffic between command team members. This was significant due to the heavy fireground traffic present.

Similarly, the Water Supply Officer reported establishment of a dedicated channel for the relay group overcame significant communications problems, particularly due to heavy fireground radio traffic and congestion being experienced.

#### **Commissioner attends the fireground**

FRNSW Commissioner Greg Mullins attended the fireground at the height of firefighting operations. The Commissioner met with the Incident Controller and received a full briefing concerning incident operations, after which the Commissioner conducted a tour of the fireground, guided by Duty Commander West Inspector Launt. Throughout firefighting operations, the Commissioner acted in the capacity of a senior command advisor to members of the command team. The Commissioner also provided a detailed briefing to the large media contingent that had assembled for this high profile fire, and to the Minister for Police and Emergency Services.

#### **Firefighting operations continue**

The factory and rear yard remained heavily involved in fire. The running oil fire had spread to the rear yard of Sector Bravo, placing all exposures in that sector under threat. Fire activity from the factory fire had ignited numerous spot fires within Sector Charlie and Delta. Two water relays had been established, enabling master streams to be placed into operation via Aerial Pumper 86 in Sector

Alpha, Aerial Pumper 97 in Sector Delta and ground monitors in Sectors Charlie and Delta. Master streams were securing the fire on all edges. Numerous handlines were in operation away from the area of the main fire building, extinguishing spot fires in proximity to exposures.

At 1520 hours, the Incident Controller sent the following situation report:

**"SITREP, 12TH ALARM STRUCTURE FIRE. ALL RESOURCES ARE ON SCENE. CREWS ARE IN DEFENSIVE MODE. FIRE INVOLVING COOKING OIL. PRIMARY BUILDING 20 X 30 METRES FULLY INVOLVED. SECTORS B AND D IN DEFENSIVE MODE, POSSIBILITY OF ASBESTOS. SECTOR D CONTENTS ARE SUPHURIC ACID, METHANOL AND OTHER CHEMICALS. SAFETY OFFICERS AND OPERATIONAL SAFETY COORDINATOR APPOINTED. RUNOFF INTO ADJOINING CREEK, HAZMAT AND HART DAMMING AND MONITORING. SMOKE PLUME TRAVELLING STRAIGHT UP. REHAB POD SET UP AND CREWS BEING REHABED."**

#### **Compressed air foam system (CAFS) operations**

CAFS Pumper 31 responded to the fire due to a special call from the Incident Controller and was located in Sector Alpha to pump into Aerial Pumper 86 and conduct a class A CAFS foam attack on the fire through the aerial appliance. Immediately prior to the CAFS attack commencing, firefighters reported substantial flame activity, explosions were continuing, and a large column of thick black smoke was being produced by the fire.

Two 70mm supply lines were connected to CAFS Pumper 31 from Rescue Pumper 63. A single 70mm supply line was connected from CAFS Pumper 31 to Aerial Pumper 86. Other supply lines to Aerial Pumper 86 were shut down. A stack tip nozzle was fitted to the head of the boom, in accordance with CAFS operations requirements. CAFS Pumper 31 commenced pumping to Aerial Pumper 86 at water pressure 700kPa and air pressure 700kPa, flowing foam through the nozzle, via the elevated aerial boom. Operators reported the foam projection was good, although the stream was being impacted by the wind. The aerial crew noted the foam achieved good coverage.

The initial CAFS stream was directed onto heavily at risk Exposure Bravo 1, providing a protective blanketing cover over the exposure. Following protection of Exposure Bravo 1 being established, foam was flowed from the aerial directly onto the factory fire. At one point it was necessary to bring the boom down low, horizontal to the ground to conduct fire attack. Firefighters reported the attack was very effective on the main fire, achieving significant knockdown. Foam was then applied via the aerial onto the running oil fire. Firefighters reported the foam formed a blanket on top of the oil fire, smothering the fire and achieving extinguishment.

CAFS Pumper 31 SO Jamey Towle reported the fire was reduced to 10% of its original size, following application with CAFS foam via the Aerial Pumper 86 attack, requiring the use of 12 drums of A Class foam. Notably, fire activity was significantly reduced and no further explosions occurred.

CAFS Pumper 31 was then deployed to Sector Charlie, to assist in extinguishing a large pile of shredded rubber tyres and an open coal stack fire. A single attack line was deployed from the appliance, used by Runner 1 firefighters to carry out fire control operations on the burning stacks and numerous other spot fires in the area. SO Towle reported significant fire knockdown was achieved with the CAFS attack. One downside to CAFS operations identified were the problems associated with continuously commencing and then shutting down the CAFS attack, which had a negative impact on the CAFS operations.

**Hazmat operations**

Heavy Hazmat units 77 and 85 responded to the fire and worked together to manage water run-off issues. Hazmat firefighters commenced to investigate potential water run-off pathways, identifying the street drainage and stormwater system led

to nearby Ropes Creek. This process was not straightforward, as above ground drainage disappeared below ground, requiring investigation of drain maps and local terrain, to identify the location the drainage system entered the watercourse. Firefighters were able to get ahead of the contaminated run-off and establish a series of containment points, using booms and containment equipment to construct dams, before the run-off reached the creek system. Hazmat crews worked with local council staff, who were able to provide sand for the construction of dams within concrete storm water canals, containing the contaminant. A series of reeds within the watercourse provided natural water filtration, capturing a significant amount of oil. A series of containment dams were constructed by Hazmat firefighters along the run-off course, using sand provided by the local council. Contaminated run-off water captured within containment dams was removed by liquid vacuum trucks provided by chemical waste disposal contractors. During water containment operations, Hazmat crews worked closely with staff from the Environmental Protection Agency, ensuring every effort was made to contain contaminated water run-off and prevent it entering watercourses.

**Fireground safety and firefighter welfare**

The Operational Safety Coordinator attended the fireground and took control of Incident Safety Officer responsibilities. Incident Crew Management System was established by Pumper 41 firefighters. The ICMS board was located at the Incident Control Point. Pumper 83 Captain Jason Taylor was appointed Staging Officer, ensuring all FRNSW resources entered the fireground in a deliberate and coordinated manner, maintaining firefighter accountability.

**Fire brought under control**

With all fire edges secured, spot fires extinguished and exposures protected, fire conditions within the main fire building were beginning to diminish. At 1612 hours, the Incident Controller sent a situation report, stating the fire was under control, although all resources were remaining in place.

At 1747 hours, the Incident Controller sent a further situation report, stating the main fire was now extinguished, firefighters were commencing overhaul phase and a fire duty consisting of a 3rd Alarm assignment would be required.

**Final extinguishment**

After the fire was placed under control, firefighters remained on scene for a



The fire is now well advanced, fully involving the entire factory. Image credit Jason Donnelly.

further 26 hours, undertaking overhaul and completing final extinguishment.

During fire duty operations, CAFS Pumper 31 was again deployed to the fireground, working closely with heavy machinery. An excavator was used to pull the shredded tyre pile apart, enabling SCBA crews to deploy CAFS streams onto the burning tyres, resulting in extinguishment in approximately 10-15 minutes. A significant amount of fire continued to burn under roof iron sheets at the front of the building. These irons were pulled apart with heavy machinery, enabling CAFS streams to be deployed onto the smouldering fire, achieving extinguishment. CAFS Pumper 31 SO Towle reported the CAFS application was a significant factor in final extinguishment.

#### Post-fire situation

Upon final extinguishment of the fire, the structure, stored materials and equipment within the site of the fire building were severely damaged by fire. Exposure Alpha and Exposure Delta 2 were severely damaged by fire. Exposure Bravo 1 structure, Exposure Bravo 2 scaffolding stack and Exposure Delta 1 structure were partially damaged by fire. All other exposures were protected.



#### Operations notes

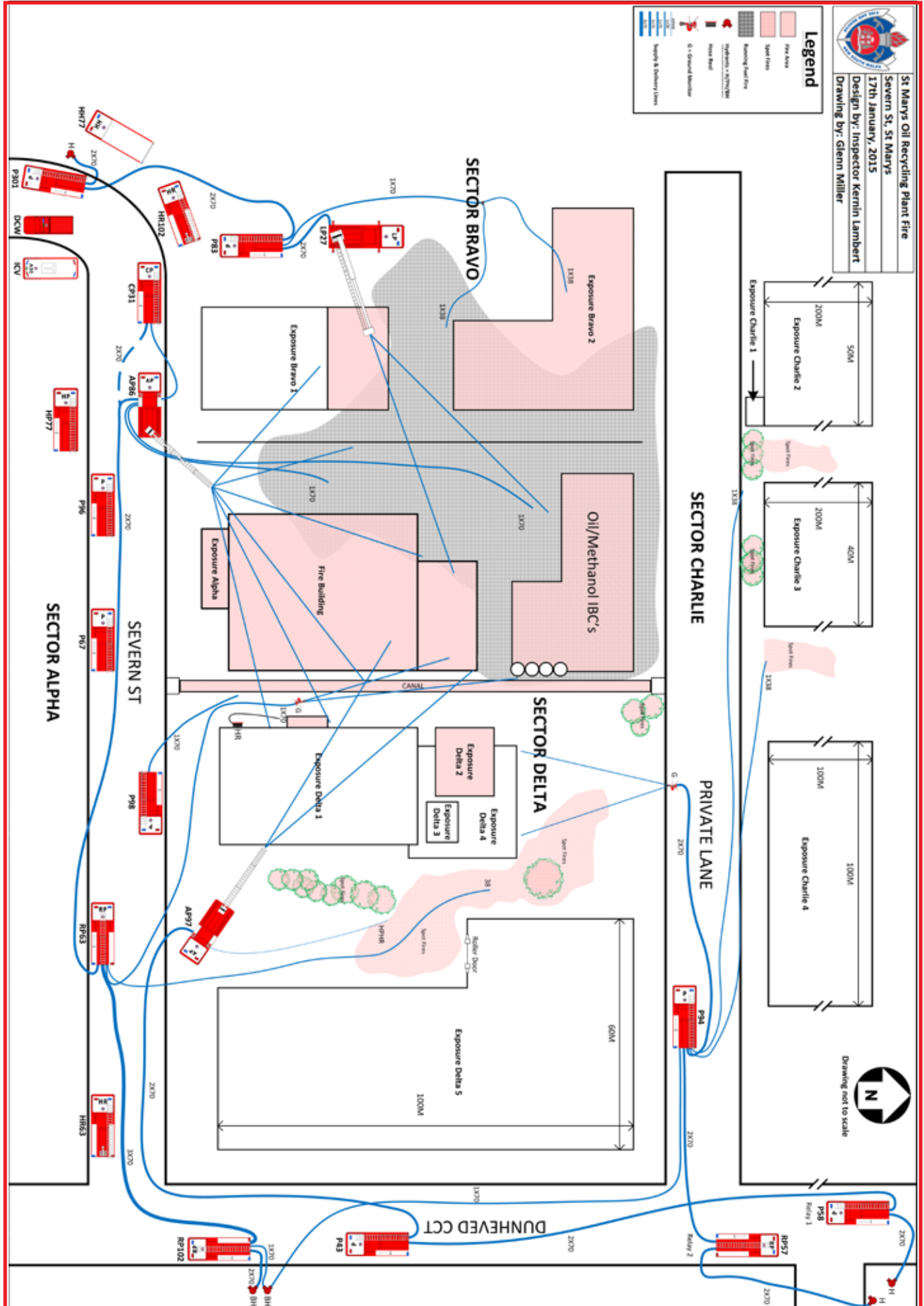
The following points are noted in relation to this incident.

1. This fire was as dangerous as it was spectacular. Due to strict adherence to FRNSW safety practices by all crews, no injuries occurred at this fire.
2. Due to the non-availability of serviceable hydrants within proximity to this expanding and highly destructive fire, a desperate situation confronted firefighters. A short-term solution to partially overcome this problem was the resupply of the main attack appliance with water from onboard tanks of incoming appliances, buying time while a water relay from a serviceable hydrant was established. This situation also highlighted the need to constantly update Pre-Incident Plans (PIPs).
3. Water shortage issues continued to significantly hamper firefighting operations. Major water relays, operating at maximum output, were established from the larger Forester Road mains, improving water supply and enabling a sustained master stream attack to be placed into operation.
4. Fire behaviour was fierce and highly destructive, due to the nature of the flammable fuels involved. The combination of large volumes of cooking oil and methanol was extremely volatile, producing intense radiant heat, extreme flame activity, rapid fire spread and an enormous thick black smoke plume that extended to over 1,000 metres. Throughout firefighting operations, numerous explosions occurred; fireballs erupted within the plume and an oil-based running flammable liquid fire developed. The force of explosions dislodged sheets of iron, propelling them significant distances through the air. The fire involved highly unstable infrastructure including a distillation tower, furnace and associated equipment, presenting the possibility of a major explosion and/or catastrophic extreme fire event. Additional materials contributing to unstable fire behaviour included large piles of coal and shredded rubber. The site also contained numerous other highly dangerous hazardous materials including large volumes of sulphuric acid, potassium hydroxide, glycerin and sodium methoxide. Under the circumstances, it was an extremely sound strategy to withdraw all crews and conduct defensive operations using master streams.
5. Master stream application ensured the application of the large volumes of water necessary for the protection of exposures and cooling of the fire area, ensuring firefighters remained at safe distances from this highly unstable fire.
6. Despite the ferocity of the fire and extensive fire spread mechanisms, all major exposures significantly at risk remained protected. This included large factories containing extensive quantities of highly combustible stored timbers being impacted by heavy ember impacts.
7. Extremities of fire behaviour/fire spread included a large red hot iron sheet, propelled over 100m through the air and coming to rest on the roof of an exposure structure.
8. The fire was an enormous strategic and tactical challenge for fireground commanders, with numerous exposures being impacted by fire and coming under serious threat. Appropriate placement of key resources at critical locations resulted in the best possible firefighting outcome, restricting fire spread, protecting threatened exposures and controlling fire within the fire location.
9. The CAFS fire attack proved decisive in controlling significant fire activity within the fire building, extinguishing the running flammable liquid fire, protecting significantly threatened exposures and completing fire overhaul of deep-seated burning materials. CAFS application was via aerial and hand-line streams. Firefighters cautioned that the air-based foam solution was vulnerable to wind impact. When planning to undertake a CAFS attack, it is important that firefighters take into consideration wind direction when siting the appliance. Firefighters also noted that when extinguishing deep-seated stack fires (in particular shredded rubber tyre piles) with CAFS, while all signs of fire may not be visible, deep-seated fire may continue to burn necessitating opening of the pile and CAFS applied to burning material. When this occurred, firefighters reported much faster extinguishment of stack and pile fires than with plain water. Note: by the end of the 2015 calendar year there should be a total of 10 CAFS appliances online in Sydney.
10. At such a large and complex fireground, radio communications were a critical issue. Establishment of a 600 series command channel significantly relieved fireground radio congestion, enabling fireground commanders to communicate effectively, without blocking fireground operations traffic. Similarly, the complex processes associated with establishing multiple water relays were eased due to the establishment of a dedicated water relay talk-group (509).
11. In the days following this major fire, the Commissioner publicly acknowledged, thanked and congratulated all firefighters and officers who attended this fire, for their diligent and extremely hard work at this very difficult and dangerous fire. **END**

**St Marys Oil Recycling Plant Fire**  
 Severn St, St Marys  
 17th January, 2015  
 Design by: Inspector Kernin Lambert  
 Drawing by: Glenn Miller

**Legend**

- Red Area
- Spot Fires
- Remaining Fuel Fire
- Exposure - 10/10/10
- Motor Fuel
- Oil - Ground Reservoir
- Height & Delivery Level



Firefighters receive a briefing prior to entering the wrecking yard.



# 13TH ALARM FIRE IN SMITFIELD WRECKING YARD AND FURNITURE FACTORY

Report by Inspector Kernin Lambert

**Incident summary:** Fire broke out within a metal recycling wrecking yard. Fire activity within the wrecking yard was fierce and intense due to the volatile nature of the wrecking yard contents. Prior to firefighters arriving on scene, fire had already spread into a nearby furniture factory. The large furniture factory was of open plan design, with no interior separation. Positioning of surrounding structures greatly limited locations where firefighters could access the fire building and establish effective fire cut offs. As the fire within the factory rapidly intensified and fire began to take hold of the entire structure, numerous surrounding structures began to come under threat. At least 12 exposures were directly in the fire's path and at imminent risk. Firefighters successfully carried out a determined operation to halt the fire's spread. This operation involved the deployment of numerous handlines and aerial appliances and the establishment of a number of water relays. Operations were underpinned by a strong incident command framework, ensuring fireground accountability and safety and ensuring all operations were conducted in accordance with the Incident Action Plan. Significantly, this fire saw the substantial operation of Compressed air foam system (CAFS) appliances, being used for defensive exposure protection and direct fire attack. Undoubtedly the use of CAFS had a significant impact on fire control operations.

**Incident type:** Wrecking yard fire and furniture factory fire.

**Time, date and place of call:** 0832 hours on 28 March 2015 to report of a fire in a wrecking yard at Woodpark Road, Smithfield.

**FRNSW response:** Pumpers 72 (Merrylands), 41 (Smithfield), 55 (Guildford), 73 (Fairfield), 27 (Parramatta), 65 (Rydalmere), 19 (Silverwater), 43 (Seven Hills), 49 (Cabramatta), 30 (Lidcombe), 67 (Baulkham Hills), 16 (Concord), 42 (Ryde), 52 (Campsie), 58 (Beecroft), 82 (Richmond), 83 (Riverstone), 92 (St Andrews) and 17 (Drummoyne), CAFS Pumper 31 (Busby), Rescue Pumpers 57 (Wentworthville), 15 (Burwood), 62 (Bankstown), 63 (Blacktown), 8



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(Liverpool), 101 (Bonnyrigg Heights) and 59 (Eastwood), Aerial Pumpers 97 (Huntingwood), 86 (Penrith), 47 (Revesby) and 45 (Miranda), Hazmat Pumpers 77 (St Marys) and 85 (Chester Hill), Heavy Hazmats 77 and 85, Ladder Platform 27, Tanker 82, CAFS Tankers 78 (Dunheved) and 93 (Narellan), Logistics Support Vehicles 1 (City of Sydney), 21 (Kogarah) and 97, Incident Control Vehicle Alpha and Rehab 1.

Duty Commanders MW2 (Parramatta), MW1 (Huntingwood), ME3 (Ashfield) and MS2 (Kogarah), Zone Commander MW1 (Huntingwood) Superintendent Alex Scott, Area Commander Metropolitan West Chief Superintendent Rick Griffiths, Director Regional Operations Assistant Commissioner Robert McNeil, Commissioner Greg Mullins, Manager Hazmat Capability Superintendent Paul Johnstone, Assistant Director Media and Communications Andrew Parsons, Fleet Operations Officer SO Glenn Breen, Operational Media Coordinator Superintendent Ian Krimmer, Team Leader Hazmat and Hazmat Advisory Response Teams 4, 5 and 6.

In addition to above, a further 42 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:** Police, Ambulance, Electricity, Environmental Protection Authority, Roads and Maritime Services, Regional Emergency Management Officer and heavy machinery contractors.

**Fireground description**

**Sectors**

- Sector Alpha – Woodpark Road, to north of fire building
- Sector Bravo – Area to eastern end of fire building
- Sector Charlie – Jumal Place, to south of fire building
- Sector Delta – Percival Road, to west of fire building

**Fire building**

1. Car and scrap metal wrecking yard, 168 Woodpark Road, Smithfield, an open area 35m x 50m, containing crushed and wrecked motor vehicles and other scrap metal material. In addition to wrecked motor vehicles, the wrecking contained numerous other materials and items including waste metallic objects awaiting wrecking such as household and commercial white goods and appliances, industrial machinery, air conditioning units, electric motors, truck components, metal sheets and piles of steel. Some of the metals located on-site included aluminium, brass, cast iron, copper, lead, nickel, stainless steel, steel, zinc and ferrous/non-ferrous metals. Numerous pressurised gas cylinders and 1,000-litre intermediate bulk containers (IBCs) were located at the site (the state of their contents was not known). Additional hazardous conditions on site included a pit, elevated platform, numerous LPG powered forklifts and heavy machinery. A 6m high steel plate fence was located on the southern side of the wrecking yard.

2. Furniture factory (used for the assembly and storage of office chairs), 83 Percival Road, Smithfield. Building single level, 40m x 175m, steel frame and iron sheet roof. The factory was constructed in three sections. These sections of the factory were separated by internal partition walls. The factory was not fitted with fire separation walls. The front part of the factory consisted of a mezzanine office and showroom, approximately 40m x 20m, of concrete hollow block, horizontal pre-cast concrete slab and iron sheet cladding, with an iron sheet roof. A middle part of the factory, being the assembly area, was 40m x 60m, of horizontal pre-cast concrete slab and iron sheet cladding, fitted with a metal truss frame roof and iron sheet roof. The rear part of the factory, used for product warehousing, was 40m x 85m, of concrete hollow block, horizontal pre-cast concrete slab and iron sheet cladding, fitted with an iron RSJ roof frame and iron sheet roof.

The fire building was located 1m south of the wrecking yard, separated by a steel wall. This wall consisted of several steel plates that buckled when exposed to fire, allowing spread of fire. The only access to the furniture factory was via the front of the building in Sector Alpha, through a double pedestrian door and double vehicular metal roller shutter door. Stock within the building was stored within cardboard boxes, located on wooden pallets and stacked on metal high bay racking, shelving and decking.



Aerial Pumper 97 provides protection to Sector Charlie exposures from Sector Delta.





From Sector Charlie, Aerial Pumper 47 positioned outside the collapse zone, provides protection to Sector Charlie exposures.

With the exception of the front of the building, the furniture factory was surrounded and almost 'built in' by other structures, with very little direct access for firefighters.

The fire building was serviced by a 100mm hydrant system, consisting of single-headed pillar hydrants attached to an upgraded AS 2419.1 brigade booster fitting, consisting of two supply hydrants and two booster inlets, located at the entrance to the site on Percival Road, 120m to the west of the front of the factory. A single external pillar hydrant was located on the access driveway 20m to the west of the front of the fire building. The closest reticulated main hydrant was 220m from the fire building. A number of installed hose reels were located on the external walls of the factory and throughout the factory interior.

#### Exposures

- **Exposure Alpha 1:** Factory, 30m x 30m, steel frame and iron sheet construction, located at 87 Percival Road, 1m west of the wrecking yard.
- **Exposure Alpha 2:** Distribution warehouse, 100m x 30m, steel frame and iron sheet construction, located at 89 Percival Road, 10m west of the wrecking yard
- **Exposure Alpha 3:** Factory 100m x 60m, steel frame and iron sheet construction, located 150-166 Woodpark Road, 1m north of the fire building. Unoccupied at time of fire
- **Exposure Bravo 1:** Storage building 15m x 10m, iron sheet construction, located 0.5m east of the fire building, containing plastic office chairs
- **Exposure Bravo 2:** Storage building 25m x 10m, iron sheet construction, located 2m east of exposure Bravo 1, containing plastic office chairs
- **Exposure Bravo 3:** Factory 100m x 50m, steel frame and iron sheet construction, located 3.5m to the east of the fire building. A bank of pressurised stored gas cylinders (acetylene, argon and oxygen) was located against the southern wall of this building, 3.5m from the fire building
- **Exposure Bravo 4:** Transport yard, containing approximately 50 liquid petroleum gas (LPG) road tankers, located 25m south-east of the fire building
- **Exposure Charlie 1:** Factory (timber flooring manufacturer), 25m x 30m, located at 4 Jumal Place, Smithfield, 30m west of the fire building
- **Exposure Charlie 2:** Factory (engineering), 25m x 30m, located at 6 Jumal Place, Smithfield, 10m west of the fire building
- **Exposure Charlie 3:** Factory, 25m x 30m, located at 8 Jumal Place, Smithfield, 1m south of the fire building



SO Paul Jones and Rescue Pumper 62 firefighters are confronted by a wall of fire as flames erupt from the fire building and threaten the Exposure Alpha 3 warehouse.

- **Exposure Charlie 4:** Factory, 25m x 30m, located at 10 Jumal Place, Smithfield, 1m south of the fire building
- **Exposure Charlie 5:** Factory, 30m x 30m, located at 12 Jumal Place, Smithfield, 1m south of the fire building
- **Exposure Charlie 6:** Factory (furniture manufacturer), 30m x 25m, located at 14 Jumal Place, Smithfield, 1m south of the fire building
- **Exposure Charlie 7:** Factory, 40m x 40m, located at 16 Jumal Place, Smithfield, 1m south of the fire building

#### Initial call and response

At 0832 hours on Saturday 28 March 2015, FRNSW Sydney Communications Centre received the first of numerous '000' calls reporting a fire in a wrecking yard at Woodpark Road Smithfield. Pumpers 41, 72 and 55 were initially responded to the call. Due to the number of calls being received the response was upgraded to a structure fire 2nd Alarm, resulting in the further response of Rescue Pumper 57, Pumper 73, Ladder Platform 27 and Duty Commander Parramatta Inspector Craig Easy. En route to the fire, initial responding appliance pumper 41 reported a column of black smoke in the direction of the reported

fire. Prior to FRNSW arriving on scene, calls were also being received indicating a possible building fire at the rear of the wrecking yard (fronting onto Percival Road). Fire Communications directed Pumper 72 to respond to Percival Road to investigate reports of the building fire.

#### Firefighters arrive on scene

Pumper 41 arrived at the scene of the wrecking yard and found a large area of stacked wrecked cars and other materials totally involved in fire. Officer-in-Charge of Pumper 41 SO John Perrigo stated the stack of wrecked cars was producing a large column of thick black smoke and flames. At 0840 hours SO 41 sent a message confirming the response of the 2nd Alarm while further investigations were made. Shortly after the arrival of Pumper 41, Rescue Pumper 57 arrived on Woodpark Road. Rescue Pumper 57 firefighters gained entry to the wrecking yard and to premises to the east. At that time, the furniture factory to the south of the wrecking yard was completely obscured from view to firefighters, due to the 3m high steel wall, large body of fire and significant smoke column being produced by the fire. The rear of the wrecking yard was completely inaccessible to SO41, due to the large piles of wrecked cars and other materials, preventing SO41 completing a 360° size-up. Pumper 41 firefighters donned SCBA

and commenced a direct fire attack onto the pile of burning cars with a 70mm attack line, in an attempt to reduce the fire's intensity.

Woodpark Road was the front of the wrecking yard and became known as Sector Alpha. An initial Incident Control Point (ICP) was established at Pumper 41. SO41 was the Incident Controller.

#### Firefighters arrive at Sector Delta

At the same time as Pumper 41 was commencing to attack the wrecking yard fire, Pumper 72 arrived at Percival Road and found heavy fire from the involved wrecking yard impacting the northern wall and roof eaves of the furniture factory, towards the front of the building. Officer in Charge of Pumper 72 Deputy Captain Craig Ferns immediately sent a RED message, requesting the attendance of an additional two pumpers to assist firefighting operations at the furniture factory. As a result of the message from Pumper 72, the response was upgraded to a structure fire 3rd Alarm. Percival Road was located to the west of the original fire building (the wrecking yard) and became Sector Delta.

#### Response increased to structure fire 4th Alarm

Duty Commander Parramatta, Inspector Craig Easy, responded at the time of call, due to the large number of 000 calls being received. En route,

Inspector Easy observed a large column of black smoke, increasing in size. Upon hearing a situation report that fire had now spread from the wrecking yard and had entered the furniture factory, Inspector Easy sent a **RED** message at 0851 hours, increasing the response to a structure fire 4th Alarm.

#### Initial firefighting operations

Pumper 72 firefighters observed three civilians operating two installed hose reels, attempting to fight the fire on the northern side of the factory with minimal effect. These people were at significant risk as intense flame and smoke activity began to impact their location. Firefighters directed these persons to an area of safety and crews wearing SCBA deployed a 70mm attack line and began to direct a heavy stream down the northern side of the factory, in an attempt to protect the factory from heavily impacting fire.

Deputy Captain Ferns entered the front office of the fire building where he found two men attempting to fight the fire with an installed internal hose reel. At this time, fire was now well into the roof of the factory. DC Ferns removed the two occupants from the involved building. A short time later, the internal factory ceiling in the office area collapsed.

Pumper 73, under the command of SO Troy Jackson, was directed by Fire Communications to the reported building fire on Percival Road. Upon arrival, Pumper 73 firefighters met Pumper 72 crew. SO Jackson and the crew of Pumper 73 donned SCBA and entered the furniture factory, to investigate the extent of fire spread within the factory and to ascertain the location of any possible internal cut-off points. When firefighters entered the front of the factory, SO Jackson observed fire was spreading internally extremely rapidly. Firefighters then investigated the second part of the factory (the assembly section) to identify an internal cut-off point. Fire had already entered this part of the factory. SO Jackson reported that fire spread within the second section of the factory went from minimal to full flashover within two minutes. SO Jackson further reported fire involvement within the front office went from 30% to 80% in under four minutes. Due to the rapid speed of fire spread and severe fire intensity, SO Jackson made the decision that all operations would now be conducted in defensive mode from Sector Delta. At this time, 30% of the factory was now totally involved in fire and fire was spreading rapidly from front to rear.

#### Critical water supply problems

Pumper 72's driver connected a 70mm supply line to the appliance from a single-headed pillar hydrant located in close proximity. When the hydrant was opened, there was no water

flow from the hydrant. As firefighters continued to try to stop fire impacting the northern side of the factory, Pumper 72 ran out of water, forcing fire attack to be temporarily shut down. At this time Pumper 27 arrived at Sector Delta. Pumper 27 connected a supply line to Pumper 72, providing Pumper 72 with an extra 2,000 litres of water and enabling the defensive operations from Pumper 72 to be extended.

With Pumper 72 now out of water, SO Jackson made the decision to search for a secure water supply. Pumper 73 firefighters located the closest reticulated main hydrant near the intersection of Percival Road and Jamal Place, 220m from the fire building. Pumper 73 obtained water from the hydrant and began to establish a water relay back to Pumper 72. Pumper 72 firefighters had already commenced to lay hose from Pumper 72, back towards the relay being established by Pumper 73.

#### Sector Alpha operations

Shortly after Pumper 41 arrived on Woodpark Road, firefighters commenced fire control operations within the wrecking yard, attempting to contain the fire, halt fire spread, protect threatened exposures and achieve extinguishment.

Fire activity within the wrecking yard was fierce and intense. The wrecking yard contents were particularly volatile, consisting of crushed motor vehicles and components. Firefighters also encountered burning spilled petrol from ruptured motor vehicle fuel tanks. Access for firefighters was difficult due to the large quantity of wrecked car bodies, automobile components, scrap metal stacks, heavy machinery and other materials; this also hindered the laying and advancement of hose lines. A significant body of fire was burning beneath the wrecked cars, increasing difficulties encountered placing extinguishing medium onto the fire. The burning cars were located in a large pile.

Firefighters from 41, 55 and 57 stations deployed two 70mm attack lines from Pumper 41 to the wrecking yard. A one into two breaching and reducer was placed on one of these 70mm lines, enabling two 38mm hand lines to be deployed. Class B foam was inducted into this 70mm attack line, enabling firefighters wearing SCBA to conduct a direct attack on the wrecking yard fire, via two 38mm foam lines. The foam attack was effective at controlling the flammable liquid fires. Additional SCBA crews attacking the wrecking yard fire were deployed from Pumpers 16 and 17.

From Sector Alpha, firefighters conducted operations to establish fire protection for exposures (Alpha 1 and 2) coming under threat in Sector Alpha. Rescue Pumper 57 positioned on Woodpark Road, on the western side of Exposure Alpha 3, a large warehouse structure that was starting to be

impacted by fire spreading in an easterly direction through the furniture factory. Firefighters forced entry to Exposure Alpha 3. A 38mm line was initially deployed to the external south west corner of Exposure Alpha 3, enabling Rescue Pumper 63 firefighters wearing SCBA to direct a protective stream on to the southern wall of Exposure Alpha 3, which was now starting to be heavily impacted by fire. This line was subsequently upgraded to a 70mm protection line.

As soon as Ladder Platform 27 arrived at the fireground, the aerial was positioned at the southern end of the western wall of Exposure Alpha 3. Rescue Pumper 57 pumped water to Ladder Platform 27 via two supply lines. Firefighter Ben Forner wearing SCBA was operating the aerial monitor from the ladder platform cage. The aerial stream of Ladder Platform 27 was alternated between direct attack on the involved furniture factory (via breaches due to roof sheet buckling) and protection of the southern wall of Exposure Alpha 3, now coming under significant fire attack from the furniture factory. Rescue Pumper 57 supplied water to Ladder Platform 27 via two 70mm lines. During aerial operations, the aerial cage was being impacted by significant quantities of smoke produced by the large smoke plume, necessitating Firefighter Forner wearing SCBA on the air extension line for the entire period the ladder platform was in operation. The Ladder Platform crew reported the thermal updrafts produced by the fire were quite turbulent, like a "wind storm". The aerial cage monitor was fitted with stack tips, producing a solid jet and resulting in a harder hitting, further reaching aerial stream. Water supply from the Woodpark Road main was poor and severely hindered the effectiveness of the aerial stream. Nevertheless, Ladder Platform 27 conducted a determined effort to protect the heavily threatened exposure. The aerial crew worked in conjunction with the 70mm hand line crew in an attempt to protect Exposure Alpha 3. Aerial operators reported direct attack on the fire was extremely difficult due to the iron sheet roof of the factory severely obstructing the aerial stream reaching the fire.

#### Incident control transferred

Duty Commander Parramatta Inspector Craig Easy arrived on scene and conducted a hand-over briefing with SO41. Inspector Easy then relocated to the front of the fire building in Sector Delta, where an incident command point (ICP) was established. Control of the incident was formally transferred to Inspector Easy, who was now the Incident Controller. A Control Point, known as 'Smithfield Control' was established at the ICP.



Under the most extreme of fire conditions, Rescue Pumper 59 firefighters provide fire protection for Exposure Alpha 3. Despite horrendous fire conditions, firefighters maintained their position and the exposure was saved.



Fire erupts from the involved factory, threatening the exposure Alpha 3 warehouse. Two firefighters on a 70mm hand line fight a desperate battle to protect the exposure.

**Response increased to structure fire 6th Alarm**

Upon taking control of the incident, Inspector Easy conducted a size-up of the incident and due to the rapid fire spread within the furniture factory, sent a RED message at 0859 hours, increasing the response to a structure fire 6th Alarm.

Following transmission of the 6th Alarm, the Incident Controller directed a staging area be established on Woodpark Road, at the intersection of Cumberland Highway, for the attendance of all incoming appliances. At that time, the objectives of the Incident Controller were to contain the fire and prevent it spreading to the numerous other exposures about to come under threat as the fire in the furniture factory continued to intensify and expand. The most effective way of achieving these objectives was via the strategic placement of aerial master streams at key locations to achieve fire containment and exposure protection.

At 0903 hours, the Incident Controller sent the following situation report:

**"FIRECOMMS, SMITHFIELD CONTROL BLUE. FROM 168 WOODPARK ROAD, SMITHFIELD, HAVE A CAR WRECKING YARD THAT IS WELL ALIGHT. FIRE HAS SPREAD TO A LARGE FURNITURE FACTORY, THAT IS ABOUT 30% INVOLVED IN FIRE. CURRENTLY HAVE LADDER PLATFORM 27 AT WORK IN SECTOR ALPHA CONDUCTING FIRE ATTACK AND PROTECTING EXPOSURES. REQUIRE THE NEXT ARRIVING AERIAL TO LOCATE ON PERCIVAL ROAD."**

**Response increased to 10th Alarm**

The Incident Controller conducted a further size-up of the incident, involving a survey of southern side of the involved factory and observed numerous factories within Charlie Sector either being impacted or about to be impacted by severe fire activity from the now heavily involved factory and under imminent threat. At 0906 hours, the Incident Controller sent the following RED message, requesting the response be increased to a structure fire 10th Alarm:

**"FIRECOMMS, SMITHFIELD CONTROL RED! RED! RED! REQUIRE A STRUCTURE FIRE TENTH ALARM. HAVE A LARGE FURNITURE FACTORY THAT IS WELL ALIGHT. FIRE IS THREATENING NUMEROUS EXPOSURES. REQUIRE ADDITIONAL APPLIANCES FOR PROPERTY PROTECTION."**

Shortly after transmission of the 10th Alarm, Duty Commander West, Inspector Andrew Peake arrived at the fireground and was deployed to Sector Alpha, to take command of operations within that sector. Rescue Pumper 101 SO Don Peters was the first arriving SO at the staging area and was appointed Staging Officer.

**Operations from Sector Delta**

On direction from the Incident Controller, the next arriving aerial

appliance, Aerial Pumper 97, went to the front of the furniture factory in Sector Delta, in an attempt to cut off fire spread to Charlie exposures now under imminent threat. At this time, no water supply was available to supply the aerial appliance. Aerial Pumper 97 SO David Tai and Pumper 27 SO Bob Callow searched the nearby area for an alternative water supply. SO Tai located a large 700,000 litre on-site water storage tank, normally used to supply early suppression fast response (ESFR) sprinklers, located at the industrial complex almost opposite the involved furniture factory on Percival Road. Next arriving Pumper 42 was deployed to the location of the storage tank. Pumper 42 connected a suction hose to the 150mm brigade attachment fitted to the base of the storage tank, and began to draft water from the storage tank and relay pump to Pumper 27 located in Sector Delta. At about this time, the water relay from Pumper 73 also arrived in Sector Delta. Aerial Pumper 97 was now being supplied with two 70mm supply lines (from Pumpers 27 and 72) and commenced to operate an aerial stream of limited capacity onto the fire.

Aerial Pumper 97 had been positioned in Sector Delta at the front of the furniture factory, in a manner that enabled the aerial boom to direct a protective stream down the southern side of the involved furniture warehouse, enabling protection

of exposures now being impacted within Sector Charlie. The aerial stream from Aerial Pumper 97 was swept along the northern walls of Charlie exposures, affording protection as the fire began to take a strong hold of the factory. A firefighter wearing SCBA located at the head of the boom ensured this stream was being directed as precisely and effectively as possible. The aerial stream was alternated between exposure protection and direct attack on the main fire building. Breaches in the factory roof due to buckling of iron roof sheeting provided access to the aerial stream onto the fire.

From Sector Delta, firefighters were able to remove a number of employees' private motor vehicles that were being impacted by severe radiant heat and flames away from proximity to the fire building to safety. Immediately within the front roller door of the factory, firefighters from Pumper 27, 43 and 72 used a 38mm hand line to protect a delivery truck, being heavily impacted by fire.

At 0914 hours, the Incident Controller sent a further situation report, as follows:

**"FIRECOMS, SMITHFIELD CONTROL BLUE. HAVE A FIRE THAT STARTED IN A WRECKING YARD. FIRE HAS SPREAD TO A LARGE FURNITURE FACTORY, THAT IS WELL ALIGHT. CURRENTLY HAVE TWO AERIALS AT WORK. THE INCIDENT CONTROL POINT IS LOCATED AT 83 PERCIVAL ROAD."**

### Sector Delta brigade booster fitting placed into operation

Pumper 43 positioned at the front of the fire building on Percival Road and placed the AS 2419 brigade booster fitting and installed hydrant system into operation, obtaining water supply via two supply hydrants and two 70mm supply lines to the pumper. Water was pumped back into the booster via two 70mm delivery lines and pressure increased to 1,000 kPa. The booster fitting isolation valve was placed in the **closed** position, ensuring all water entering the hydrant main was now flowing via the pumping appliance. Operation of the booster fitting had an immediate effect on the pillar hydrant located in proximity to appliances near the front of the fire building, with water flowing immediately through the hydrant.

Operation of the booster fitting and subsequent water supply to the hydrant main enabled a third supply line to be connected to Aerial Pumper 97, strengthening the aerial attack. Firefighters didn't know that the internal hydrant main within the involved factory had broken until after the fire was extinguished, allowing large volumes of water to discharge into the factory, reducing supply available for firefighting purposes.



A firefighter at the head of Aerial Pumper 47 boom directs a protective stream between the fire building and threatened Sector Charlie exposures

**Response increased to 13th Alarm**

Water supply problems continued to be experienced across many areas of the fireground, particularly in Sector Alpha. To facilitate the establishment of a water relay from the Cumberland Highway main to the fireground, the Incident Controller increased the response to a 13th Alarm.

At about this time, Duty Commander Georges River Inspector Glenn Launt arrived at the fireground. Due to the large number of resources responding to this extensive fireground, the Incident Controller identified the need to establish proper fireground accountability to ensure fireground safety and correct allocation of resources. To assist the proper tracking of resources, the Incident Controller established the role of Logistics Officer, filled by Inspector Launt, located at the ICP.

**Wrecking yard fire brought under control**

With three foam lines in operations, firefighters from 41, 57, 16 and 17 stations had been able to bring the wrecking yard fire under control, successfully protecting Sector Alpha exposures being threatened. The wrecking yard fire was largely extinguished when the Incident Controller sent the following informative message at 0945 hours:

**“FIRECOMS, SMITHFIELD CONTROL BLUE. ORIGINAL FIRE IN A WRECKING YARD IS NOW UNDER CONTROL. FURNITURE FACTORY IS NOW TOTALLY INVOLVED. CURRENTLY HAVE NUMEROUS HAND LINES AND AERIALS AT WORK. FIREFIGHTERS ARE NOW INVESTIGATING JUMAL PLACE, DUE TO REPORTS OF FIRE SPREAD TO BUILDINGS AT THAT LOCATION.”**

**Sector Charlie operations**

As fire continued to spread in an easterly direction through the furniture factory, the Incident Controller recognised that numerous factories in Sector Charlie were in danger of being impacted by fire. Appliances were deployed into Jumal Place in an attempt to protect factories under threat. Operations in Sector Charlie were conducted under the command of Charlie Sector Commander, Duty Commander Inner West, Inspector Norman Buckley.

Entry was gained to Exposure Charlie 3 and a 38mm internal protection line from Pumper 73 deployed into the exposure factory. Entry was forced into Exposure Charlie 4 and a 38mm internal protection line deployed from Pumper 30. Firefighters from Pumper 30 gained entry to numerous other Charlie Sector exposures to inspect factory interiors for signs of fire spread.

Limited yard access existed between Exposures Charlie 5 and 6, enabling Aerial Pumper 47 to set up at a location where the boom could be placed in operation and an aerial stream swept along the northern walls of Exposures Charlie 5 and 6, protecting the exposures as intense flames began to impact. Significantly at this location, horizontal concrete slab panel walls fitted to the furniture factory failed, allowing intense fire activity to directly impact Exposures Charlie 5 and 6. A firefighter wearing SCBA was located at the head of the Aerial Pumper 47 boom, directing the aerial stream precisely along the walls of the exposures, enabling protection to be undertaken. The aerial stream alternated between exposure protection and direct fire attack on the involved factory. At the time of positioning the appliance, firefighters identified the collapse potential of the wall and located Aerial Pumper 47 safely in a position outside the wall collapse zone. Pumper 30 relay pumped water to Aerial Pumper 47.

Pumper 67 was located at the eastern end of Jumal Place. Fire continued to spread through the factory in an easterly direction. As fire reached the storage section of the factory, the increased fire load caused fire activity to intensify, placing Exposure Charlie 7 under imminent threat. Fierce flames erupted



Commissioner Greg Mullins and Assistant Commissioner Rob McNeil confer in Sector Alpha.



Ladder Platform 27 worked under difficult conditions to protect Exposure Alpha 3.

from the roof of the factory and a large column of thick black smoke rose above the factory. At this time, water supply within Sector Charlie was extremely poor. Pumper 67 firefighters gained side access to the rear of Exposure Charlie 7 and attempted to deploy a protection line, in an attempt to protect the now heavily threatened exposure. Due to extremely poor water pressure, firefighters experienced significant difficulty deploying an effective hose stream. Rescue Pumper 8 was directed to an industrial complex at far end of Jumal Place where a 500,000 litre stored water tank (used to supply an ESFR sprinkler system) was located. Rescue Pumper 8 connected suction hose to the 150mm brigade attachment, obtained water and supplied lines to Pumper 67, significantly overcoming water shortage issues at the eastern end of Sector Charlie.

Pumper 30 firefighters removed numerous G-size high pressure flammable and non-flammable gas cylinders (oxygen, acetylene and argon) from a storage cage located at the rear of Exposure Bravo 2, 3.5m east of the building. (Note: major collapse of the fire building occurred at this location, allowing heavy flames to directly impact the location from which the cylinders had been removed).

Aerial Pumper 86 arrived at the eastern end of Jumal Crescent and was positioned in a yard to the south of Exposure Bravo 2. Space within the yard was quite restricted to the storage of a large quantity of materials, significantly limiting the siting of the appliance. Firefighters identified a concrete hollow block wall at the eastern end of the factory in danger of collapse and ensured the appliance was located safely out of the collapse zone (This wall subsequently completely collapsed). A water relay from base pump Rescue Pumper 8, via Pumper 67 enabled Aerial Pumper 86 to provide an aerial stream to protect the northern walls of Exposures Charlie 6 and 7. Fire activity impacting Exposures Charlie 6 and 7 was fierce and intense. Firefighters switched the aerial Elkhart hollow stream spray nozzle with a solid stream stacked tip nozzle, providing a further reaching, harder hitting water stream, enabling greater exposure protection. Following the total collapse of the eastern wall on the southern side of the furniture, fire intensity from the factory increased. Exposure Bravo 3 was only 3.5m from this venting fire. Firefighters from Aerial Pumper 86 fought a desperate battle for several hours to stop fire spreading to Exposure Bravo 3.

A protection line from Pumper 67 was deployed to the interior of Exposure Charlie 7. Significant structural wall collapse of the southern wall of the furniture factory occurred, allowing fire to directly impact Exposure Charlie 7. Firefighters successfully prevented any fire spread into the exposure.

#### Command channel established

Upon the arrival of the Incident Control Vehicle, Command Talk-group 601 was established, facilitating communications between members of the incident command team, greatly streamlining and improving communications and removing significant fireground radio congestion.

#### Operations to increase water supply

Numerous aerial appliances were now either operating or being placed into operation. Town's main water supplies in immediate proximity to the fireground were poor and water shortage was becoming a critical factor. Rescue Pumper 8 was drafting from a stored water tank in Sector Charlie, supplying water to Aerial Pumper 86. Pumper 42 was drafting from a stored water tank in Sector Delta and supplying water via a relay involving Pumper 27 to Aerial Pumper 97. Pumper 42 was also relay pumping to Sector Alpha, via Hazmat



Pumper 41 supplies fire attack lines to the wrecking yard.

Pumper 77, Rescue Pumper 15 and Pumper 55.

Rescue Pumper 101 was set up as the base pumper on the Cumberland Highway main and a relay was established to Sector Alpha, consisting of Pumps 19, 65, 49 and 59.

#### Firefighter welfare

The Ambulance Service of NSW provided a significant response of paramedics. An Ambulance paramedic treatment and triage area was established in Sector Alpha. A number of firefighters were treated by paramedics, one being transported to hospital.

Rehabilitation 1 attended the fireground with the rehabilitation pod, which was located in Sector Delta.

A firefighter rehabilitation area was established in Sector Delta and a Rehabilitation Officer appointed.

#### Commissioner in attendance

FRNSW Commissioner Greg Mullins arrived at the fireground at 0949 hours and was given a full briefing on incident operations at the ICP. The Commissioner subsequently conducted a tour of the fireground and made a number of recommendations to Incident Command, including the deployment of CAFS tankers to Sector Alpha. The Commissioner oversaw firefighting operations and provided advice to Incident Command, in a command/expert senior advisory capacity, particularly in relation to operations in sectors Alpha and Bravo.

#### Transfer of command

At 0954 hours Area Commander Metropolitan West Chief Superintendent Rick Griffiths arrived at the fireground and following a hand-over briefing, Incident Control was transferred to Chief Superintendent Griffiths. Inspector Easy was appointed Operations Officer. Assistant Commissioner Robert McNeil attended the fireground and acted in the capacity of command senior advisor.

#### Operations from Sector Alpha

As fire progressed from front to rear through the 175m long furniture factory, a number of Sector Alpha Exposures were threatened. The reach of the aerial stream of Ladder Platform 27 was unable to cover the complete length of the southern wall of Exposure Alpha 3, leaving about half the wall unprotected and the building vulnerable to fire spread.

Pumper 55 initially experienced difficulty gaining access to Exposure Alpha 3, due to the presence of guard dogs within the building. It was not until the guard dogs could be secured that firefighters were able to make entry to the structure. Within Exposure Alpha 3, numerous windows located along the southern wall faced the involved factory. These windows were quickly breached by heat from the factory fire, allowing heavy concentrations of thick black smoke to enter and fill the exposure structure. When firefighters entered Exposure

Alpha 3, the building was heavily smoke-logged and firefighters were not able to identify the nature or quantity of the building contents. Firefighters were aware the structure had previously been used to store large quantities of shredded rubber. (Note: after the heavy smoke cleared, firefighters identified there were no contents within this structure.)

Due to the heavy fire impact from the involved factory to exposure Alpha 3 and the possibility of severe and uncontrolled fire spread within this structure (at that time, it was not known that the structure contained no contents), Ladder Platform 27 was shut down and repositioned away from a position of potential danger.

#### Protection of Exposure Alpha 3

Pumper 59, under the command of SO Craig Vincent was deployed from the staging area to Sector Bravo. SO Vincent was appointed Bravo Sector Commander. As firefighters arrived at Sector Bravo, intense fire activity began to break through the buckled iron sheeting walls and roof of the furniture factory and impact the Exposure Alpha 3 structure.

The intensity of fire impacting Exposure Alpha 3 structure indicated that uncontrolled fire could spread within this structure. Due to this situation, SO Vincent directed that Pumper 59 remain outside the Exposure Alpha 3 site, in case a severe fire over-run occurred, trapping the appliance.

Firefighters wearing SCBA, under the direction of SO Vincent, deployed a 38mm attack line to the rear of exposure Alpha 3 and forced entry to the structure through a factory door. Upon gaining entry to the exposure Alpha 3 structure, firefighters found the interior of the structure alight. Firefighters then entered the structure and began to undertake internal firefighting operations. An SCBA crew from Pumper 55 were also operating a 38mm line within exposure Alpha 3, which was subsequently upgraded to a 70mm attack line. An SCBA crew from Rescue Pumper 57 had also entered exposure Alpha 3 from the western side and was conducting firefighting operations. Within the exposure structure, firefighters were operating under extremely oppressive conditions, encountering thick smoke, very limited visibility and significant heat. Firefighters were also exposed to superheated fire gases, radiant heat and airborne burning materials from the involved factory entering through the open windows, only metres away from the now fully involved furniture factory. Water supply remained poor, significantly hampering firefighting operations.

Additional lines were deployed into Exposure Alpha 3 as additional SCBA crews strengthened internal firefighting operations. Firefighters from Pumps 17, 19, 65, 82 and 83 and Tanker 82 conducted internal firefighting operations from within Exposure Alpha

3, directing attack line streams through the windows at the southern end of the building onto the involved factory fire.

#### Sector Bravo operations

Large flames began to break through the roof of the furniture factory, in close proximity to Exposure Alpha 3. Firefighters from 62 station wearing SCBA under the direction of SO Paul Jones (also wearing SCBA) deployed a 70mm fire attack line to Sector Bravo, in proximity to the rear of Exposure Alpha 3 and directed a protective stream onto the southern iron sheet wall of the exposure structure, providing cooling protection for the structure. Within the furniture factory, fire had now reached large quantities of plastic chairs stacked on pallet racking. Fire conditions significantly intensified as flames 15m high began to erupt from the roof of the factory and fire travelled directly towards firefighters located in Sector Bravo. Firefighters were located downwind of the factory and were impacted by large quantities of rolling thick black smoke. Radiant heat at this location was intense. Severe fire activity from the involved factory was now impacting the southern wall of the exposure structure. Wind activity intensified at this location, as the fire began to draw in large quantities of air. (Note: air being drawn into the fire was travelling against the direction of the prevailing wind.) Firefighters experienced ferocious conditions, however maintained position, directing the 70mm stream across the wall of the exposure, providing protection.

Firefighters worked under extremely difficult conditions in Sector Bravo continuously for a number of hours as fire continued to impact Exposure Alpha 3. Additional SCBA crews operating protection lines in Sector Bravo included firefighters from Pumps 16, 19, 52, 55, 58, 65 and Rescue Pumper 15.

#### Operation of compressed air foam system (CAFS) appliances

On direction from the Commissioner while he was en-route, two 9,000 litre CAFS tankers (CAFS Tanker 78 and CAFS Tanker 93) accompanied by qualified instructors, were responded to the factory fire. The two CAFS tankers had only been delivered to stations two days prior to the fire. CAFS Tanker 93 was deployed to Sector Alpha and CAFS Tanker 78 was deployed to Sector Bravo, to assist in protecting heavily at risk exposure Alpha 3 and to conduct direct fire attack on the involved furniture factory. From Sector Alpha, water was supplied to CAFS Tanker 93 via a single 70mm supply line from Rescue Pumper 57. CAFS Tanker 78 was supplied with a single 70mm supply line from Pumper 59. Firefighters from CAFS Pumper 31, familiar with the operation of CAFS appliances, assisted in operating the CAFS tankers.

CAFS Tanker 93 was used to conduct direct attack on the car wrecking yard





Water is on its way to Aerial Pumper 97, enabling the aerial to protect exposures in Charlie Sector.

fire and the involved furniture factory, and protect the threatened Exposure Alpha 3 warehouse. CAFS Tanker 78 was used to conduct direct attack on the factory fire and protect the Exposure Alpha 3 warehouse. Firefighters operated the front mounted foam monitors fitted to the CAFS tankers. Firefighters reported significant fire knockdown was achieved with the foam application. The class A CAFS foam concentrate was inducted at a rate of 0.3%.

Operating crews reported only minimal water supply was required for the operation of the CAFS tankers. Firefighters noted the foam stream was vulnerable to the impact of wind and advised wind direction would be a factor to take into consideration when siting the appliance. Minimal openings in the iron sheet roof of the factory limited the amount of foam agent that could be applied to the fire (an identical problem encountered by water streams being applied to the fire). However, the foam that was reaching the fire was achieving effective knockdown. CAFS operators noted that inadvertent application of water streams onto the foam resulted in breakdown of the foam cover. The firefighters operating the CAFS systems reported significant fire knockdown in the areas the CAFS foam was applied.

CAFS Pumper 31 was initially deployed to Sector Delta and class A foam was pumped through the boom of Aerial Pumper 97. Firefighters observed

significant diminishing of fire in the areas to which the CAFS foam was applied.

CAFS Pumper 31 was then deployed to Sector Bravo to assist in extinguishment of Exposure Bravo 1. A one into two breaching was placed on the CAFS foam delivery, enabling one 38mm foam line and one 70mm foam line to be deployed from CAFS Pumper 31 to Sector Bravo. Firefighters used the CAFS lines to attack fires burning within exposures Bravo 1 and 2 and reported the much lighter hoses provided increased ease of manoeuvrability and greatly assisted fire attack.

To support the operations of CAFS Pumper 31, LSV 21 was responded with additional stocks of foam concentrate.

**Firefighting operations at Exposure Bravo**

Timber pallets in contact with Exposures Bravo 1 and 2 ignited due to contact from airborne burning materials and the significant radiant heat produced from the factory fire, resulting in fire travelling through the metal sheeting of the exposure walls, igniting the structure contents. Exposures Bravo 1 and 2 contained high fuel loads consisting of large quantities of packed plastic chairs in boxes, located tightly stacked on racking, resulting in rapid and intense fire spread and were heavily involved in fire.

Firefighters cut metal cyclone wire fences to gain access to burning exposures Bravo 1 and 2. One 70mm

attack line and two 38mm attack lines were deployed from Pumper 59 to Sector Bravo. One 70mm CAFS line and one 38mm CAFS line were deployed from CAFS Pumper 31 to Sector Bravo. Firefighters wearing SCBA gained access to Exposures Bravo 1 and 2 by cutting away sections of metal sheeting with power saws, enabling firefighters to conduct external direct attacks on the involved interior contents of the structures. Fire within these exposures was deep-seated and quite stubborn to extinguish, taking several hours to achieve complete fire knockdown. These firefighting operations were prolonged, exhausting and arduous, lasting for several hours and were assisted by SCBA crews from Pumpers 16, 19, 52, 55, 58, 65 and 83 and Rescue Pumper 15.

The combined efforts of the Sector Bravo SCBA handline crews working under the command of Sector Commander SO Vincent and the aerial stream of Aerial Pumper 86, stopped further easterly fire travel from reaching the large Exposure Bravo 3 factory, only 3.5m to the east of the involved factory. Beyond Exposure Bravo 3, Exposure Bravo 4 was located, consisting of a transport yard containing approximately 50 LPG road tankers.

**Hazmat operations**

Atmospheric monitoring was provided by Heavy Hazmat 85, using Area Rae



A desperate battle by Rescue Pumper 62 firefighters operating a 70mm handline to stop fire spreading to an exposure Alpha warehouse.

monitors and four-headed gas detectors. Hazmat Pumper 85, Heavy Hazmat 77 and Hazmat Advisory Response Team (HART) conducted a hazard assessment and monitored water run-off in conjunction with the Environmental Protection Authority. Hazmat crews conducted hydrogen sulphide monitoring and pH testing at the fireground. Firefighters deployed Altair 5X five-headed gas detectors. On occasions, high levels of carbon monoxide were detected. This information was relayed to the Sector Commander, resulting in operating crews wearing SCBA within the affected sectors. Hazmat crews also attended nearby waterways to assess water run-off issues.

Heavy Hazmat units supplied additional SCBA cylinders, in conjunction with SCBA cylinders brought to the fireground by the Logistics Support vehicles.

#### Fire brought under control

After approximately five hours of intense firefighting and with all fire edges now secure, fire activity within the furniture factory began to significantly diminish. With fire activity now subsided and the situation well under control, operations began to be scaled back, including the shutting down of the Cumberland Highway water relay. At 1414 hours, the first wave of relief appliances and crews began arriving at the fireground, releasing crews assigned on the initial alarms.

#### Final extinguishment

After the fire was brought under control, a 4th Alarm (including three aerial appliances) was assigned for fire duty purposes. A significant body of fire continued to burn beneath the collapsed 7,000 m<sup>2</sup> iron sheet roof of the factory. Two excavators were brought to the scene, enabling the sheeting to be opened up, allowing hand line streams to complete extinguishment. These heavy machines were organised by the Regional Emergency Management Officer in conjunction with engineers from NSW Public Works. Fire duty extinguishment continued until approximately 1300 hours the following day. The last firefighters left the fireground, approximately 30 hours after FRNSW were first called to the scene and the site was handed over to Police crime scene officers.

#### Post-fire situation

Upon final extinguishment of the fire, the car wrecking yard, furniture factory, and exposures Bravo 1 and 2 were severely damaged by fire. Exposure Alpha 3 sustained flame and heat impact damage to the southern side, however remained protected. Exposures Charlie 5, 6 and 7 were subject to pre-cast concrete slab wall collapse from the furniture factory and fire impact, however no fire penetrated to these exposures, which remained protected. All other exposures remained protected.

#### Operations notes

The following points are noted in relation to this incident:

1. The furniture factory contained no internal fire separation walls. Under these circumstances, fire is free to progress unhindered through a structure. It is difficult for firefighters to establish effective fire cut-offs within large non-compartmentalised structures.
2. The area contained very poor reticulated water supply. Firefighters were able to identify and access on-site water storage tanks, providing large volumes of water supply to the fireground, via connection of suction hose and relay pumping. Firefighters are encouraged to identify and become familiar with the locations of on-site water storage tanks within the local area and operations required to use these tanks to access and obtain a water supply. This information should be recorded in Pre-Incident Plans (PIPs).
3. When operating from on-site water storage tanks, it is important that the back-filling valve fitted to the storage tank be placed in the **closed** position. If the valve is left in the open position, it will simply draw water from the surrounding street mains. It should be remembered numerous other firefighters are attempting to access local reticulated main supplies, via hydrants and are most likely engaged in critical operations. Backfilling storage tanks will deplete these mains at a time when they are most needed. Refilling storage tanks is not an urgent priority and can usually wait until the fire has been brought under control.
4. The placement of heavy streams from aerial appliances is an effective strategy for protecting vulnerable exposures directly under threat of fire impact from well involved structures. To be completely effective, the stream must be in contact with the surface of the threatened structure. 'Water curtains' do not absorb enough heat to be effective. Cooling potential fuels is the objective.
5. The effectiveness of CAFS as an extinguishing medium was yet again demonstrated at this fire, with firefighters reporting significant knockdown in locations CAFS was applied. When CAFS is applied, where possible the cover should not be broken up with the further application of water streams. Firefighters observed the CAFS stream is influenced by localised winds. Wind speed and direction is a factor to take into consideration when deploying CAFS streams and determining foam concentration.
6. Wrecking yards are both difficult and hazardous to operate in. Effective firefighting was conducted by SCBA



CAFS Tanker 93 in operation in Sector Alpha, utilising the front mounted monitor.



Before: Sector Charlie concrete block wall. Firefighter is operating outside collapse zone. See next photograph.

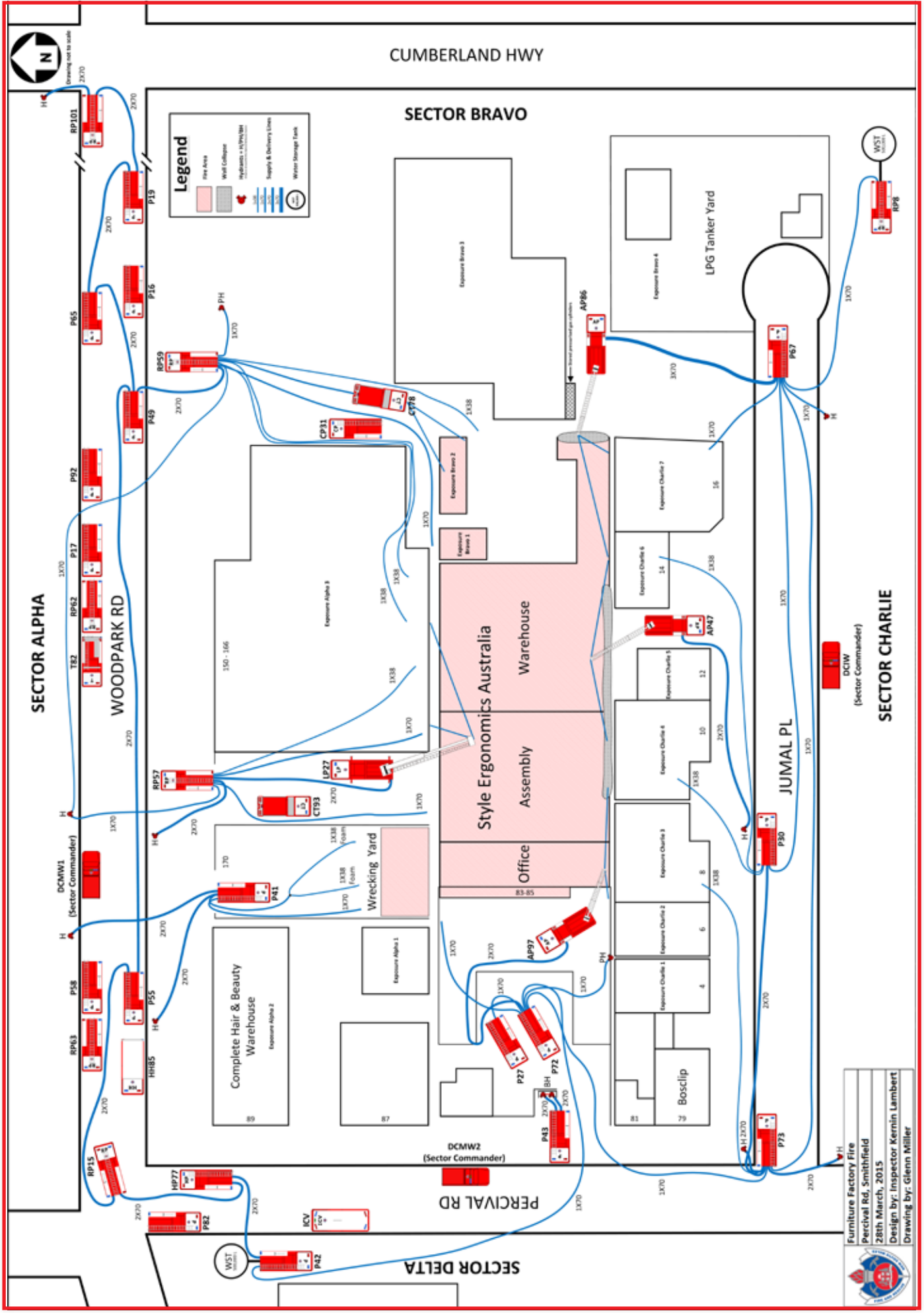


After: Sector Charlie concrete block wall, post collapse. Establishment of collapse zones prevented serious harm occurring to firefighters. See previous photograph.

crews surrounding the fire and conducting control and extinguishment operations with class B foam lines, particularly due to the large volume of class B fires present.

7. Fire attack on the involved furniture factory was particularly difficult due to the fire building being largely 'built in' by other structures, significantly hindering access. Nevertheless, firefighters were able to take full advantage of the limited access available, setting up key defensive streams that were highly effective at stopping further fire spread.
8. The establishment of a staging area enabled the large number of resources that responded to the incident to be effectively managed, increasing fireground accountability, firefighter safety and ensuring resources were deployed to where they were needed most.
9. Firefighters identified a number of walls displaying signs of collapse and established appropriate collapse zones. Subsequently, a number of the identified walls collapsed, however all firefighters remained in locations of safety.
10. At an early stage in operations, an Incident Control Point was established. As the incident increased in size and scope, the Incident Command structure was built out, resulting in clearly defined sectors, with all firefighters working under the control of Sector Commanders and in accordance with the Incident Action Plan, resulting in operations that were safe, effective and well coordinated. This was particularly important due to the large size of the fireground, complex nature of operations and the situation where all sectors were operating out of sight of each other.
11. Establishment of the radio command channel significantly eased congestion of fireground radio traffic, enhancing command communications and enabling command to function in a cohesive manner.
12. Firefighters worked extremely hard at this fire, at times during highly oppressive conditions and situations of rapid fire spread and ferocious fire behaviour. Operations were highly professional, disciplined and effective.

**END**



Furniture Factory Fire  
 Percival Rd, Smithfield  
 28th March, 2015  
 Design by: Inspector Kermin Lambert  
 Drawing by: Glenn Miller



A water storage tank in operation at a 7th Alarm factory fire, enabling the pumping appliance to provide a significant water supply to an aerial.



A typical water storage tank and brigade suction point, note no two are the same.



## USING WATER STORAGE TANKS FOR FIREFIGHTING WATER SUPPLY

In recent years there have been a number of large industrial fires requiring establishment of long water relays to provide the necessary volumes of water required to conduct firefighting operations.

Report by Inspector Kernin Lambert

At some of these fires, firefighters identified the presence of water storage tanks, used to provide water for installed fire protection systems, at nearby sites and successfully used these water supplies to support firefighting operations. The recent 13th Alarm Smithfield factory fire on 28 March 2015 demonstrated the importance of using water storage tanks; on this occasion, water storage tanks on separate sites supplied water to the fireground, helping overcome significant water shortages.

Water storage tanks are a significant asset to support major firefighting operations where there is a requirement for large volumes of water, particularly in areas of poor reticulated water supply. This report provides an overview of how fire protection system water storage tanks can assist firefighters obtain water supplies and the simple steps to take when placing these tanks into operation.

### Fire protection system water storage tanks

Some installed fire protection systems require very high volumes of water operating at high water flow rates to achieve effective operation. For example, early suppression fast response (ESFR)

sprinkler systems operate at very high water flow rates (between 100–150 litres per second). Most reticulated water mains are unable to meet these water flow requirements. To facilitate the very high water flows required to operate ESFR sprinkler systems, on-site water storage tanks are installed, containing the required volumes of water. These tanks typically contain between 500,000 and 1,000,000 litres of water, depending on the requirement of the installed fire protection system.

Many installed fire protection systems are operated by installed diesel or electric pumps. These systems are also fitted with a back-up brigade booster fitting, enabling firefighters to manually pump water into the fire protection system via pumping appliances, in the event of an installed pump failure. To facilitate these operations, water storage tanks are fitted with brigade attachments, enabling firefighters to connect 150mm diameter suction hose between the pumping appliance and the storage tank, to obtain water supply (which is then pumped back into the installed system via a brigade booster fitting). This water supply can also be used for conventional firefighting purposes.

### Components of a fire protection system water storage tank

The following components relevant to FRNSW operations are fitted to fire protection system water storage tanks, in accordance with *Australian Standard 2304 – 2011*:

- storage tank, formed of all metal construction, either cylindrical or rectangular in shape
- 150mm diameter suction hose attachment (some older storage tanks contain 70mm supply hydrants in lieu of the suction attachment); more than one suction attachment are sometimes fitted to some tanks (facilitating simultaneous multiple pumper operations)
- suction point discharge valve
- tank inlet valve
- hard stand area, to facilitate the location of brigade pumping appliances
- tank contents indicator
- sign with words "BRIGADE SUCTION POINT" printed.

### Additional features

- Although most water storage tanks are usually located above ground, some can be located below ground.
- More than one tank can exist on site, however they are interconnected and supply to a common discharge valve.

**Placing fire protection system water storage tank in operation**

1. Identify the location to position the pumping appliance by signage indicating the suction point attachment (e.g. "BRIGADE SUCTION POINT").
2. Locate the pumping appliance on the hard stand area. If there are multiple suction attachments, room should be left for additional pumping appliances if possible.
3. Connect the appliance suction hose between the appliance and the suction attachment point.
4. Place the appliance in pump gear.
5. Lay supply lines to the next pumping appliance in the water relay.
6. Slowly fully open the suction point discharge valve, allowing storage tank water to flow from the storage tank through the suction hose to the pumping appliance.
7. When the next appliance in the relay is ready to receive water, open pumping appliance deliveries and commence pumping.
8. Close the storage tank inlet valve.\*
9. Monitor the tank contents indicator.
10. When pumping operations cease, remember to re-open the tank inlet valve.

\*This step is important. If this valve is not closed, the tank will automatically refill. While this might seem like a good thing, it should be remembered water to refill the storage tank can only come from nearby reticulated mains, which are probably being used for critical firefighting purposes and will most likely already be

at capacity (which is the whole reason an alternate source is being located). Refilling the storage tank at that time is not critical and can probably wait until the fire has been brought under control. If refilling the tank depletes the local mains of water, causing firefighters to run out of supply, establishing the alternate water supply has defeated the purpose for which it was intended.

**Advantages of placing a stored water tank into operation**

A surprisingly large number of fire protection system water storage tanks exist, which means there could be one very close by to where firefighters are operating from, negating the need to establish a time-consuming, labour-intensive and long water relay.

Pumping appliances can operate at maximum output when drawing water from a water storage tank, without fear of over-running supply. Similarly, water can be drawn from a storage tank at maximum output, without fear of impacting on water supply in the surrounding street mains (providing the storage tank inlet valve has been closed).

Water storage tanks are a highly suitable water source for aerial or other master stream operations; large volumes of water can be supplied, in accordance with aerial flow requirements. These flows can be achieved without exhausting supplies being used by nearby firefighters.

A high volume master stream attack during the initial phases of firefighting operations could be the difference between

fast knockdown containment of a fire or a fire that becomes an extended incident.

**Considerations when operating a fire protection system water storage tank**

A fire protection system water storage tank is not a limitless supply; if the tank is drawn from for long enough, it will run out. However, at maximum output, a type 3 FRNSW pumping appliance will draw 210,000 litres of water from the storage tank in one hour. Most tanks have a capacity of at least 500,000 litres, providing water supply for a minimum 2½ hours at maximum pumping output. This will buy the Incident Controller enough time to establish a more substantial water relay if a large volume of water is required for an extended time. It is important that the tank contents indicator be monitored during operations to ensure tank contents do not fall too low. Should tank contents fall to a critical low level, the tank inlet valve will have to be opened to refill the tank. This should be done in consultation with the Incident Controller, as firefighters working from surrounding water mains may experience a diminished supply.

**Fire protection system water storage tank familiarisation**

Firefighters are encouraged to identify fire protection system water storage tanks within the local area, in particular taking note of:

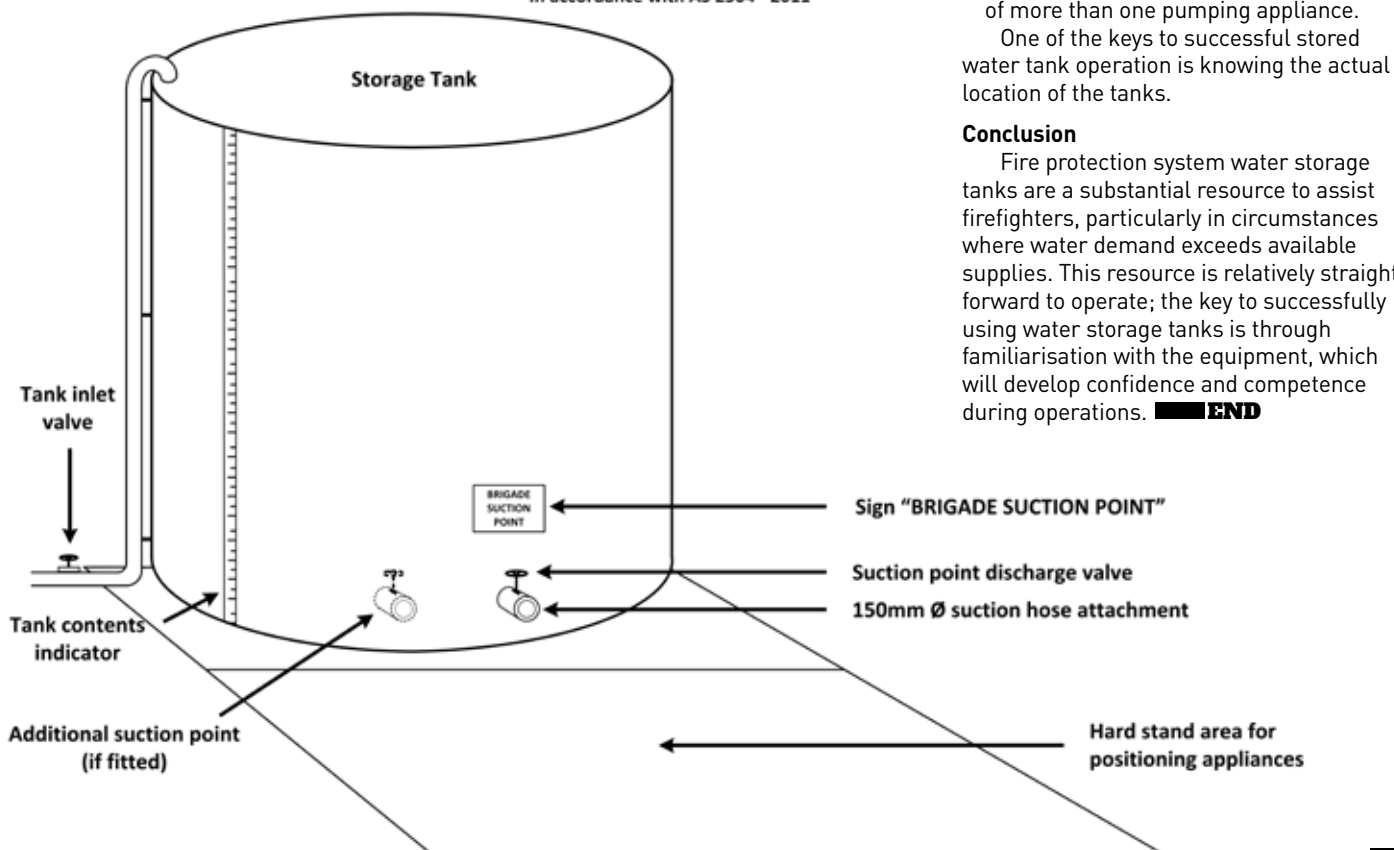
- the locations of sites containing water storage tanks
- tank capacity
- key operating components of the tank (as described above)
- procedure to place the tank into operation as a static water supply
- multiple suction points for the operation of more than one pumping appliance.

One of the keys to successful stored water tank operation is knowing the actual location of the tanks.

**Conclusion**

Fire protection system water storage tanks are a substantial resource to assist firefighters, particularly in circumstances where water demand exceeds available supplies. This resource is relatively straight forward to operate; the key to successfully using water storage tanks is through familiarisation with the equipment, which will develop confidence and competence during operations. **END**

**Fire Protection System Water Storage Tanks**  
In accordance with AS 2304 - 2011



Drawing by: Glenn Miller



# ENSURING SAFE DECANTING AT BULK TANKER ROLLOVERS

Police, Ambulance, FRNSW and other emergency services and support agencies are often responded to bulk dangerous goods tanker rollovers. These MVAs are significant incidents that can have devastating consequences on life, property, infrastructure and the environment.

## **Bulk tanker rollovers – the challenge for responding agencies**

A key priority when dealing with these types of emergencies is to decant any remaining fuel from the crashed tankers. However petroleum fuels are both volatile and dangerous, and poor decanting procedures create a high risk of fire and explosion. Observing best practice procedures is therefore absolutely critical to ensure the safety of all personnel on scene. The two incidents highlighted are typical of the sorts of bulk tanker rollovers to which FRNSW responds.

## **Why is action needed?**

Under the *Work Health and Safety (WHS) Act 2011*, FRNSW has a primary duty of care for its workers. FRNSW is responsible to ensure that people operating at their workplace have been

## **SEMI-TRAILER ROLLS IN MUDGEЕ CBD**

On 14 January 2014, a semi-trailer carrying 11,000 litres of diesel rolled over in the Mudgee CBD. When the crew from 387 Mudgee arrived on scene, they found the semi-trailer lying on its side with a ruptured fuel tank, and more than 5,000 litres of diesel having already leaked from the vehicle. Decanting of the remaining fuel was commenced by a contractor, however vapour ignition caused an explosion during this process. Firefighters quickly applied a foam blanket to prevent any further ignition. Decanting was then completed and the truck was righted, allowing the centre of Mudgee to return to normal.

adequately and suitably informed, trained and instructed to deal with the risks.

The site of tanker rollovers are workplaces for emergency services in accordance with the WHS legislation. FRNSW therefore has shared responsibility for ensuring the safety of responding personnel as far as reasonably practicable.

Decanting and product transfer processes involve specialist industry emergency responders. However determining the competency of such responders is problematic for Police and emergency services as there is no nationally recognised standard for training these personnel.

## **The way forward**

The Canberra and Regions Oil Industry Emergency Response Group (CROIERG) and the Transport Industry Skills Centre (TISC) have jointly developed a nationally





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## Petroleum fuels are both volatile and dangerous, and poor decanting procedures create a high risk of fire and explosion

accredited training program for industry emergency responders. The course is registered by the Australian Skills Quality Authority and benchmarks best practices.

Successful course participants carry a Bulk Tanker Emergency Responder Card. The card is administered by the Fire Protection Association Australia and endorsed by AFAC and the National Bulk Tankers Association.

The card gives Police and emergency services an effective time-efficient way of easily identifying competent industry responders. However, not all industry responders have been trained through this course and therefore don't carry the card. This makes it difficult for an incident management team to reliably determine industry responder competency to perform safe decanting of a tanker.

WorkCover has advised that FRNSW would be managing its risks in accordance with the WHS legislation if it insisted on proof of competency such as the provision of this card

Once this program is in place, FRNSW intends that incident controllers will require industry responders to provide a Bulk Tanker Emergency Responder Card or proof of similar competency before allowing them into the hot zone at bulk tanker incidents.

### Awareness video and annual exercise

A promotional video has been developed to raise awareness of the risks associated with overturned fuel tanker incidents and how they should be managed. It will inform responding personnel and agencies of their shared responsibility for providing a safe workplace through competent workers.

Production of the video was carried out by FRNSW's Media and Communications Unit. It was filmed at the 2015 bulk tanker emergency response exercise which was held on 22–23 January at the TISC training complex in the ACT. It is hoped that this exercise will be conducted annually to test, measure and report on response performance of participating agencies while identifying areas for improvement.

The video is in two sections – a two minute introductory video and a 20 minute training version. CROIERG described it as “a first class training tool” and have endorsed it for use in their training courses conducted by TISC for the group's members.

The video was officially launched for the transport sector at the TISC training

## OUT OF CONTROL FUEL TANKER SPARKS EMERGENCY IN MONA VALE

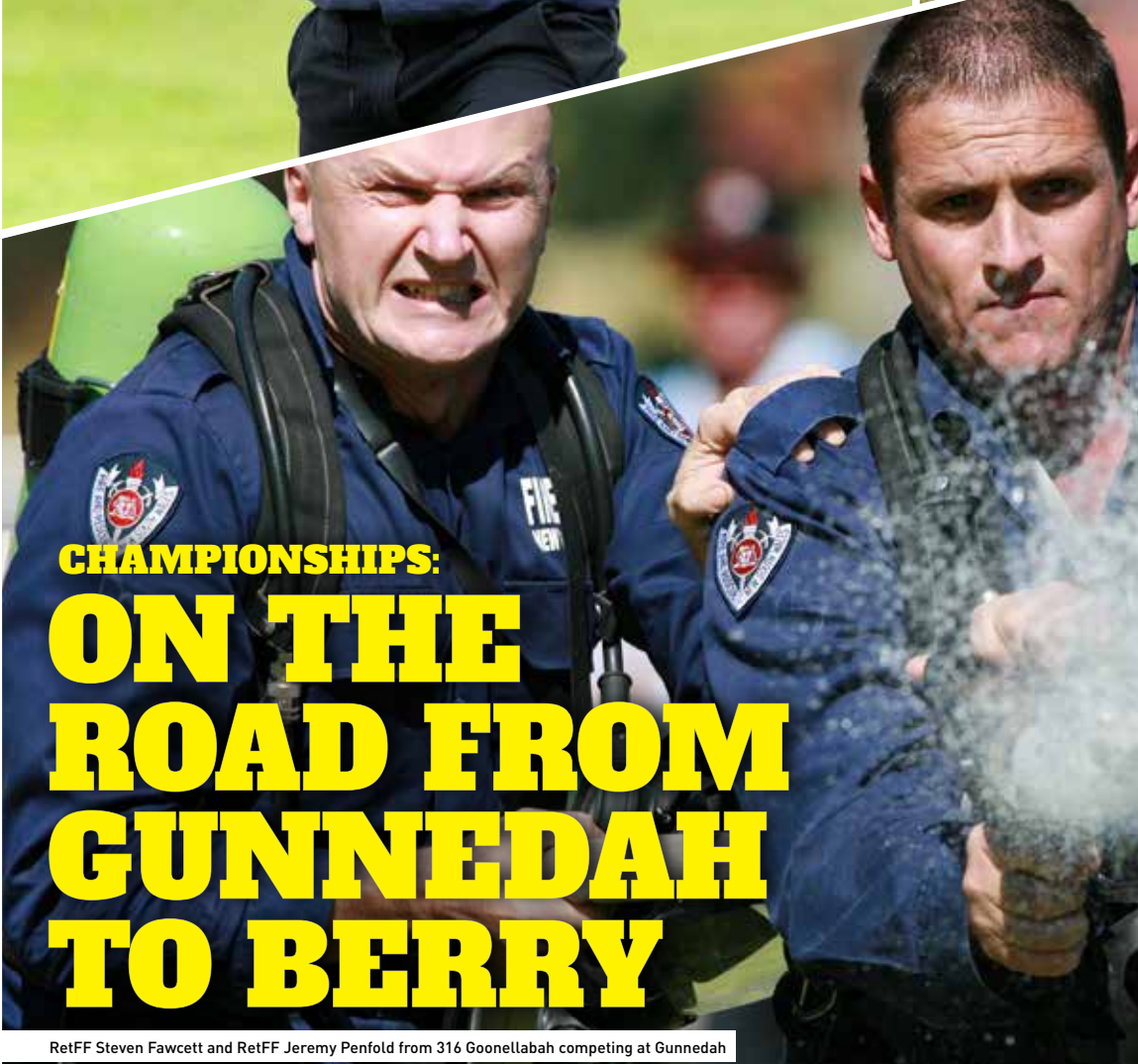
On 1 October 2014, FRNSW received multiple calls to a crash on Mona Vale Road at Warriewood in Sydney. An out-of-control petrol tanker had collided with a number of other cars, rolled on its side and burst into flames. Within minutes, four FRNSW appliances and three NSWRFs tankers were on scene. First arriving crews were confronted with flames leaping 20-30 metres into the air, a running petrol fire, explosions, multiple cars and bush on fire, and nearby buildings under threat. Tragically two people died when petrol ignited and several others were badly injured. Under difficult conditions, firefighters managed to extinguish the fire. Around 18,000 litres of fuel was decanted and the truck was righted the next day.

complex this year. FRNSW will be making the video available to all its fire crews and will incorporate it into their e-learning material. The video will also be distributed national to all emergency services via AFAC. **END**

Broken Hill RetFF Amy Ellice at Cootamundra Championships



Cootamundra RetFF Jennie Williams and Gilgandra RetFF Steve Terry at Cootamundra Championships



**CHAMPIONSHIPS:  
ON THE  
ROAD FROM  
GUNNEDAH  
TO BERRY**

RetFF Steven Fawcett and RetFF Jeremy Penfold from 316 Goonellabah competing at Gunnedah



Trangie RetFF Tony Terry at Gunnedah



## The 2015 Firefighter Championships series kicked off on a brand new purpose-built battleground at Gunnedah on 14 and 15 March, with 17 teams competing across multiple events.

**W**ith plenty of home town pride at stake, Gunnedah delivered on a successful championships event – and a sixth place finish – while Moonbi Kootingal RFS took the title.

Assistant Commissioner Rob McNeil, Director Regional Operations, said community attendance at the Gunnedah Regional Championships was the strongest he had seen in the past two and a half years.

On the field, 24 FRNSW brigades were represented from across the State as well as three NSW RFS teams. Goonellabah attended for the first time and the Firefighter Championship Association teamed them up with the Kelso State Champions through the mentor program to provide assistance and guidance.

“I know that first-timers Goonellabah would highly recommend newcomers to the championships as they’re a great way to meet other firefighters, build camaraderie, improve teamwork,

hone skills and display what we do to the community,” said Assistant Commissioner McNeil.

From Gunnedah it was south to Cootamundra for the next round on 2 and 3 May. In the Riverina, there may have been fewer teams, but the competitors were no less prepared to throw everything they had at every event. At the end of day two Moonbi Kootingal RFS were again crowned champions.

The Firefighter Championships are open to firefighters from fire services throughout NSW – volunteer, retained and permanent. Events encompass some traditional and functional firefighting operations – including hose and hydrant drills, pumping, ladder, extinguisher, suction and relay. For more information, or to register, visit [www.firefighterchampionships.com.au](http://www.firefighterchampionships.com.au).

The next championships event will take place at Berry on 1–2 August 2015.

**END**

### IN YOUR OWN WORDS

**What benefit do firefighters get from the championships?**

Retained Firefighter Judith Alderdice (JA): If there is an easier or more effective way to do something, the guys and girls are more than happy to share their knowledge and show you the little tricks of the trade which I have passed on to my fellow firefighters back at the station. I’m also more confident in my ability to stay focused under immense pressure.

Senior Firefighter Anthony Hatch (AH): The first thing I saw was the mateship, even though these guys are competing to win, I saw winning teams giving tips to other top teams on how to improve. Many of the skills are invaluable. The teamwork when it comes to getting water from the hydrant to the motor then out to the branch is excellent. Then there was the pure skill and knowledge in the Rescue and BA events. It is very nerve-racking standing there doing a functional check on your BA with the assessor checking each box as you go, and your teammates hoping you don’t miss something. These guys are good; they must practice pre-ops and functional checks a lot. As a permo we check our BA sets every shift, but when you have to tell the instructor the four differences between a pre-op and a functional check, a few of us permos may need a couple of seconds to recall it.

**Have you ever taken family or friends to a championship – what did they think?**

JA: It’s not until they actually get there and see for themselves the speed and skill involved in the events that they truly appreciate and understand the importance of our job. They walk away feeling confident they have highly skilled and efficient firefighters looking after them.

**What would you say to encourage other firefighters to compete in the championships – is it worth it?**

JA: Come and take part in a tradition that’s been going for over 100 years. You will meet people you would otherwise never get to, make lifelong friends and learn skills you may not have learnt before this. I was hooked on these events after my first time and my confidence and skill levels rise every time I attend.

AH: Would I encourage permanent firefighters to enter a team? For sure, it was a ton of fun and there was no pressure to win, it was about having a good time. Even if you can’t get a team together, many teams are always willing to give you a run in their team.

### RESULTS TABLE

Cootamundra		Gunnedah	
Kootingal RFS	1,350	Kootingal RFS	1,124
Kelso	1,068	Dorrigo	1,063
Echuca (CFA)	842	Tamworth	809
Berry	669	Kelso	626
Nowra	585	Tamworth	507
Wellington	504	Gunnedah	457
Dubbo	474	Wyong	382
Gunnedah	407	Dubbo	332
Mudgee	357	Trangie	292
Griffith	339	Forbes	277
Goonellabah	317	Uralla	242
Kurri Kurri	290	Gunnedah RFS	223
Cootamundra	275	Kurri Kurri	221
Unanderra	30	Armidale	207
		Gunnedah	207
		West Tamworth	188
		Tamworth RFS	182



# TESTING SMOKE ALARM EFFECTIVENESS



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In March, FRNSW conducted an extensive program of research burns at its Londonderry testing facility. The tests analysed different types of smoke alarms and their effectiveness in providing early notification to occupants to enable safe egress.

The test burns were conducted in a full-scale replica two-bedroom unit. The unit was fully furnished and carpeted to create realistic fire scenarios. Specialist gas sampling equipment was used to monitor toxic gases and assess conditions within the unit as the fire developed. Residential sprinklers were also tested to assess their effectiveness in containing fire and also maintaining a survivable atmosphere.

In addition to the burns, a comprehensive literature review was carried out, including analysis of data collected from incidents attended by FRNSW over a 15-year period. Superintendent Jeremy Fewtrell, Manager Fire Investigation and Research, said: "The findings of these research burns were very valuable, and will be used to support FRNSW's efforts to improve fire safety in the built environment." Details of the research findings will be published in the next issue of *Fire & Rescue News*. **END**



# PROGRAM BUILDS RESILIENCE IN ABORIGINAL COMMUNITIES

FRNSW is partnering with the Local Aboriginal Lands Council to highlight home fire safety prevention within Aboriginal households across NSW.

The Community Resilience Innovation Program (CRIP) aims to educate Aboriginal communities about unsafe practices and the importance of working smoke alarms. During the program, participants are also shown how to use a fire extinguisher and fire blanket safely and take part in a simulated disaster exercise wearing full BA.

CALD Coordinator David Weir said the program has had good representation from the Aboriginal community and elders from surrounding districts thanks to a successful partnership with the 119 Aboriginal Land Council offices around the State.

"So far successful programs have been completed in Batemans Bay, Moruya, Narooma, Bega, La Perouse, Kempsey, Moree, Coffs Harbour and Redfern with more planned for regional areas over the coming months." **END**

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# A CLEAR MESSAGE ON SMOKE ALARMS

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With FRNSW data showing more than half (56%) of fatal house fires between 2000 and 2014 had no smoke alarms present, the annual ‘Change Your Clock, Change Your Smoke Alarm Battery’ campaign is critical in improving community safety.

The 2015 campaign was launched on Wednesday 1 April by Commissioner Mullins and NSWRFs Assistant Commissioner Steve Yorke at Paddington Town Hall. They were joined by a crew from City of Sydney who used an aerial appliance for a photo opportunity in front of the town clock.

Fire stations across the State worked hard to get the message out to their local communities. More than 70 articles appeared in metro and regional newspapers with crews appealing for the public to change their smoke alarm batteries. Many stations also used their noticeboards to spread the word.

During the campaign, stations were urged to get creative with a ‘Change Your Clock’ Facebook photo competition. By the end of daylight saving, 392 Muswellbrook’s Lego fire boat composition gained 682 likes to win a \$100 cook up and Proctor & Gamble product hamper for the station.

The total reach of the social media component of the campaign (including Facebook and Twitter) was approximately 330,000 people, with nearly 14,000 people actively engaging by sharing or commenting on the messages.

#### Seniors Week

FRNSW also promoted the Change Your Clock campaign and Smoke Alarm and

Battery Replacement (SABRE) program at the annual Premier’s Seniors Week Gala Concerts in Sydney in March. At the popular FRNSW stand, firefighters distributed 5,000 Duracell batteries and reminded seniors, who are the highest fire fatality risk group in NSW, of the importance of working smoke alarms. The Change Your Clock TV commercial was also screened inside the Qantas Credit Union Arena, reaching 30,000 seniors over two days.

#### RSL Partnership

A number of metro and regional stations maximised the ongoing partnership between FRNSW and the RSL and Services Clubs Association of NSW by attending activities at their local clubs.

For 280 Dubbo it was a whole-of-station effort with all four platoons attending bingo sessions at Dubbo RSL to talk about fire safety. At 293 Finley, Captain John Hand contacted the Finley Returned Soldiers Club and was given access to seniors exercise classes and bingo sessions. He said club members were very grateful for this service, with FRNSW enjoying an excellent reputation in the town.

401 Narromine attended the annual Seniors Week lunch at Narromine United Services Memorial Club gaining a host of new SABRE customers and a write up in the *Narromine News & Trangie Advocate*.

“In a small community such as Narromine word spreads quickly resulting in 70 SABRE visits this year,” said Captain Ewen Jones.

RSL & Services Clubs Association Chief Executive Officer Garrie Gibson said clubs appreciate the support and involvement of FRNSW to help promote awareness and ultimately save lives.

“The best way for FRNSW crews to promote fire safety is to visit clubs at busy times to meet members, discuss fire safety and hand out batteries,” said Mr Gibson. “Being present in the club and talking directly with patrons is the most powerful way to influence people’s attitudes and behaviour.” **END**

#### CHANGE YOUR CLOCK CAMPAIGN STATISTICS (1 MARCH – 1 MAY)

- 2,235 SABRE activities
- 120 fire safety presentations to seniors groups
- 182 community risk activities involving seniors
- 70+ smoke alarm battery media articles
- 330,000 total reach on social media



# PRODUCT SAFETY NEWS

## E-cigarettes

In December 2014, FRNSW attended an incident at Port Macquarie Base Hospital. A patient who was receiving oxygen therapy suffered burns to his hands and arms while using an electronic cigarette. This was the first identified and reported e-cigarette fire incident in Australia; other cases have been reported overseas.

E-cigarettes are battery-powered devices that heat liquid (also called e-liquid) into an aerosol which is inhaled into the lungs. Inhaling the aerosol (known as 'vaping') in oxygen-rich environments creates a potential fire risk. FRNSW is likely to encounter further incidents involving e-cigarettes due to their increasing use.

FRNSW compiled a report outlining its fire safety concerns and sent this to the Civil Aviation Safety Authority, the industry safety regulator, who in turn tabled it at an aircraft safety forum. E-cigarettes is a topical issue in the airline industry, and FRNSW's research will help to inform development of guidelines for commercial airlines. FRNSW also passed its report on to other Australian fire services via an AFAC Working Group.

Faults when recharging these devices or using them in hazardous atmospheres are two common causes for fires involving e-cigarettes. Visit the NSW Health website for information about e-cigarettes, and contact FRNSW's Fire Investigation and Research Unit on possible fire risk with these products.

## Lunchbox cookers

NSW Fair Trading have ordered that all 'lunchbox cookers' (i.e. camp-style portable gas stoves with enclosed butane cylinders) must be withdrawn from sale within NSW. FRNSW has responded recently to several incidents involving these types of cookers, including explosions in Merrylands and Doonside unit blocks in March and April respectively.

Firefighters should familiarise themselves with information on the NSW Fair Trading website about these types of cookers. It describes test results which show that the cookers' shut-off valves, known as overpressure devices, malfunction and don't comply with Australian Standards. NSW Fair Trading warns that the cookers can become overheated and explode, posing serious safety risks.

These units are cheap and previously were widely available across NSW, selling for between \$15 and \$30. It is likely that many units are still being used by the public. Firefighters approached for advice should refer people to the NSW Fair Trading website which advises anyone with such a device to immediately stop using it, and to dispose of it appropriately through community waste or recycling centres. Consumers with proof of purchase should return the product to the retailer as soon as possible and seek a full refund. **END**



SO Robin Weckert talks to the media at the Winter Fire Safety launch

# KEEP LOOKING WHEN COOKING

FIRE & RESCUE NSW RESPONDS TO APPROXIMATELY **4500** RESIDENTIAL FIRES EACH YEAR. HALF OF THESE FIRES START IN THE KITCHEN, MOSTLY DUE TO UNATTENDED COOKING.

ELECTRICAL APPLIANCES AN FAULTS CAUSE ALMOST 40% OF HOME FIRES.

WHEN YOU'RE ASLEEP, YOU WON'T SMELL THE SMOKE.

VIEW VIDEO AT [fire.nsw.gov.au/frnews](http://fire.nsw.gov.au/frnews)

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NSW Fire & Rescue NSW

FIRE SAFETY & PREVENTION IN THE HOME

Help us, help you be home fire safe

Winter is upon us and for firefighters this represents the busiest time of year for fires in the home. The 2015 FRNSW Winter Fire Safety Campaign will run throughout June, July and August with the aim of reducing incidents and injuries by increasing awareness.

**T**his year's campaign focuses on kitchen fires caused by unattended cooking with the theme 'keep looking when cooking'. Of the 4,254 residential fires attended in NSW last year, approximately 47% started in the kitchen with unattended cooking the most likely ignition factor.

Of the recorded kitchen fires, data suggest these fires contributed to 46% of fire related injuries. Community Safety Coordinator, Station Officer Jeremy Cohen said one reason for this high injury statistic is people trying to tackle the fire themselves in an unsafe manner.

"When people return to find their cooking alight, they try to move pots/pans causing themselves injury. Another cause of injury is loose clothing catching alight. This conclusion is supported with health injury data."

The campaign was launched by the Emergency Services Minister David Elliott and Acting Deputy Commissioner Mark Brown at CSIRO in North Ryde on 25 May. The launch included a kitchen burn to demonstrate the risks associated with unattended cooking and to highlight to the media just how quickly a fire can take hold.

"This year the main message is 'keep looking when cooking' but we should also remind the public to maintain a working smoke alarm and in case of a fire, get out, stay out and call Triple Zero," said SO Cohen.

Firefighters are encouraged to actively work with the local community to help them be home fire safe. Use the media template and talking points to promote the campaign in the local area, post the campaign message 'Keep looking when cooking' on your station noticeboard, use the kitchen fat fire

**Of the recorded kitchen fires, data suggest these fires contributed to 46% of fire related injuries.**

simulator at community events and capitalise on the RSL and Services Clubs partnership to meet members of the community at club events.

For more information see the Winter Fire Safety toolkit on the intranet (Operational → Community Safety → Winter Fire Safety Campaign). **END**

# ERNSW COMMEMORATES THE ANZAC CENTENARY







The face of ANZAC Day: Sid Handsaker (pictured, middle) served with 451 Spitfire Squadron and was deployed to England and Germany to provide flying protection for bombers attacking German submarine bases in March 1944. Sid's son-in-law, 320 Hamilton SO Barry Cleary, and grandson, 462 Mayfield West SF Ben Cleary, are continuing the tradition of serving and protecting at FRNSW.


**VIEW VIDEO AT**  
[fire.nsw.gov.au/frnews](http://fire.nsw.gov.au/frnews)  
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ANZAC Day commemorates the landings of the Australian and New Zealand Army Corps (ANZAC) on the shores of Gallipoli in Turkey in 1915 during World War I. A total of 319 NSW Fire Brigades personnel fought in World War I. Of these, 30 were killed; one was awarded the Military Cross; two were awarded the Distinguished Service Order; and four were awarded the Distinguished Conduct Medal.

In this ANZAC Centenary year, FRNSW honours the many men and women in the Australian Defence Forces who have served, and continue to serve, in the Australian Defence Forces in our country and all around the world. FRNSW especially gives thanks to those who made the ultimate sacrifice.

On Saturday 25 April this year, FRNSW firefighters and other staff again participated in ANZAC Day services and commemorative events across the State.

In Sydney, the day started with FRNSW's traditional ANZAC Day Remembrance Service at City of Sydney Fire Station to remember and honour those who have served and died for their country in times of conflict. In his ANZAC Day oration, Commissioner Greg Mullins summed up the ANZAC legacy: "Despite the terrible toll, many people believed then, and now, that Gallipoli forged for the first time a national consciousness – a feeling of being a proud Australian. Although the ANZACs were just ordinary folk like you and me, they began to epitomise to many people at the time some of the best characteristics of

**Although the ANZACs were just ordinary folk like you and me, they began to epitomise the best characteristics of the legendary Australian bushman**

the legendary Australian bushman: unbreakable bonds of mateship, fortitude and endurance in hardship, individualism, scant regard for authority and humour in adversity."

After the Remembrance Service, FRNSW's contingent and band then participated in the main Sydney ANZAC march. The FRNSW contingent was made up of serving and retired officers, firefighters and other staff who are ex-services personnel or current serving members of the Reserve Forces. It included five members who saw active service in World War 2; one of these was

musician Vince Sedgwick who turned 90 this year and is still a serving member of the FRNSW Band. This year the FRNSW contingent was also joined by the New Zealand Fire Service Deputy National Commander Paul McGill and several New Zealand firefighters and senior officers as part of the commemoration of the ANZAC tradition.

Commissioner Greg Mullins and Mr McGill also attended the Dawn Service where they laid wreaths at the Cenotaph in Martin Place. After the march, Assistant Commissioner Rob McNeil represented FRNSW at a special ANZAC Day Commemoration Service at the War Memorial in Hyde Park.

Commissioner Mullins spoke for all FRNSW staff when he paid tribute to the ANZAC spirit in his oration: "Today we salute the ANZACs who have inspired past generations of Australians with their deeds and sacrifice. They have built a cathedral in our minds – one that we can visit each ANZAC day to commemorate their sacrifice and honour our dead."

Lest we forget. **END**

# 'LOW BLOWS' BATTER NSW, WREAKING HAVOC



Firefighters secure damage to Captain Cook Towers at Brighton Le Sands. Image credit SF Craig Vaughan

From 20 April through to early May, FRNSW and other emergency services experienced one of their busiest periods as severe east coast lows caused widespread devastation over extensive areas of the State.

## 20 APR ONWARD

Areas worst hit were the Central Coast, Newcastle and the Lower Hunter

The intense low pressure system, described as a 'once in a decade' storm, brought damaging winds and heavy rainfall over a wide area. The storm was particularly heavy in the Hunter region and Central Coast. A line of storms impacted Dungog, Maitland and Newcastle on Monday evening with more than 300mm of rain falling in some areas and winds gusts of up to 135kmh recorded.

282 Dungog responded to the small township of Stroud at 0418 hours on Tuesday and rescued a number of people marooned by floodwaters on the roofs of their homes and in a football grandstand. 377 Minmi and 254 Cessnock (Bravo Pumper) were sent to backfill at Dungog, and were soon engaged in rescues there together with retained firefighters from 282 who had stayed in town. The Dungog appliances tried to return but were initially cut off by floodwater – the tanker was able to make its way back. Firefighters stopped to assist many residents, and sadly, located three deceased persons.

FRNSW's Rapid Damage Assessment Task Force saw a lot of action while in Dungog. Consisting of 44 FRNSW staff (USAR, hazmat and incident management and logistics personnel) plus two Ambulance paramedics, it was deployed midweek to assess the structural safety of buildings as well as identifying risks like asbestos and other hazardous materials. By Friday 24 April, the Task Force had completed 232 damage assessments in Dungog, then moved on to Stroud and Paterson.

The damage and disruption caused by the storm was enormous. Ausgrid reported that more than 200,000 homes and businesses across their network had lost power, with many remaining without electricity for days until power supplies were restored. FRNSW worked with the utilities to try to improve their response arrangements in order to release appliances caught up at "wires down" incidents, as this once again was a major drain on resources. Tragically a fourth person died in a flood-related incident in Maitland, where firefighters helped to rescue four people from floodwaters. All transport networks in the affected areas – road, rail, bus and ferry – were severely impacted, with numerous cancellations, delays and road closures. Many schools and TAFEs were also closed for safety reasons.

The storm and its after-effects led to one of the busiest weeks in FRNSW's history. Between 1800 hrs on Monday 20 April and 0600 hrs on Thursday 23 April, FRNSW Communication Centres received 7,107 Triple Zero calls reporting emergencies, and made 18,626 calls in and out to coordinate responses.

During this period, FRNSW firefighters were kept busy responding to 3,042 storm-related incidents. These included powerlines down, roofs damaged or blown off, fallen trees and flooding as well as 327 fires, 195 rescues, 86 hazardous material incidents, 59 medical assists and 921 AFAs. On a couple of occasions, FRNSW ran out of available appliances and calls had to be prioritised.

FRNSW maintained seven Strike Teams (28 appliances and crews) in the field in Metro North to assist NSWSES volunteers and local stations dealing with the massive storm damage. The Strike Teams provided much-needed extra resources to help over-stretched local crews.

Throughout the week, dozens of FRNSW staff were also involved in coordinating resources in various locations and roles. This included in the Major Incident Control Centre at Alexandria, as Liaison Officers at the State Emergency Operations Centre, at the NSWSES Operations Centre in Wollongong, in Incident Management Teams, at the Newcastle Forward Command Centre and in the Operational Logistics section.

In the aftermath of the storms FRNSW also deployed rapid damage assessment personnel to the Central Coast. The team included USAR Category 2 officers and hazmat technicians. On 2 May the team completed 599 rapid damage assessments in 28 different suburbs on the Central Coast, including Wyong, Nora Head, Killarney Vale, Kanwall and Waldalba. They found 15 buildings that were damaged and uninhabitable, and a further 131 buildings that, while still habitable, were damaged or affected.

In response to the storm's widespread impact, the NSW Government declared 12 natural disaster areas where special assistance packages were made available to assist residents and businesses with recovery and rebuilding. **END**



Firefighters encounter ankle deep hail at Petersham. Image credit FF Hugh Lloyd


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## 25 APR

Location: Sydney metropolitan area, with western Sydney hardest hit

**S**hortly before 1600 hours on Saturday 25 April, several storm cells passed over south-eastern NSW resulting in heavy rain and hail falling throughout Greater Sydney and surrounding areas, leading to fire and major building collapses in the Huntingwood area.

97 Huntingwood, initially responding to an automatic fire alarm at a nearby warehouse, was soon confronted with an escalating situation. Heavy rain and hail falling on the roofs of large industrial buildings in the Huntingwood area caused several structures to collapse under the weight. A building totalling 17,000 square metres had completely collapsed.

A fire had also broken out at the rear of one of the collapsed buildings on Huntingwood Drive. Firefighters fought the fire which was impacting on LPG gas cylinders and machinery, working hard to stop the blaze spreading through the damaged building. Crews faced the worst possible conditions in which to fight this fire with heavy hail, rain and lightning and the electricity company unable to cut power to the structure. The fire was contained and eventually extinguished, but not before the incident was upgraded to a 5th Alarm.

Due to concerns about the potential for serious injury and spread of fires to other buildings, additional FRNSW crews, including specialised rescue, hazmat and USAR operators, were sent to the Huntingwood area to assess damage to the many collapsed buildings. Overall, the response equated to a 10th Alarm, together with USAR and a Rapid Damage Assessment Task Force, which had just returned from Dungog. An over-arching incident management team was established at 97 Station and the Commissioner attended to oversee coordination.

Meanwhile, the rest of the metropolitan area was also battered with heavy rain and hail, keeping firefighters very busy throughout Sydney and surrounding areas. FRNSW personnel worked alongside their emergency service colleagues throughout the afternoon and into the evening, responding to multiple calls related to storm damage, car accidents, electrical fires, flood rescues and flooding. The high tempo continued into the evening with significant damage sustained to FRNSW's Major Incident Control Centre at Alexandria, which had to be relocated due to serious flooding.

**END**

## 1 2 MAY

Location: North-eastern NSW

**A**n east coast low formed near the southeast Queensland coast during Friday 1 May and moved south overnight into northern NSW. The low dumped heavy rain with some areas recording as much as 220 or 236mm of rain over a 48-hour period, leading to flooding in many areas.

In anticipation of heavy storm impacts, FRNSW deployed a Task Force from Sydney to Coffs Harbour which included three Strike Teams with rapid damage assessment, flood rescue and chainsaw capability. Additional senior officers were deployed to Coffs Harbour and Goonellabah to act as IMT and liaison as required.

For the 48 hours to 0800 hrs May 2, FRNSW resources responded to a range of incidents including 30 rescues and 27 storm-related incidents.

Swiftwater rescue personnel responded to a number of incidents involving cars swept into creeks. They 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); a snake entering another house due to rising floodwater; and a person bitten by a spider in Nimbin.

The low slowly weakened as it moved south, allowing Strike Teams and other additional deployed resources to be stood down. **END**

# 7,107

**TRIPLE ZERO CALLS**

# 3,042

**STORM RELATED INCIDENTS**

# 599

**RAPID DAMAGE ASSESSMENTS**



# LIVES SAVED, LIVES LOST: DUNGOG'S DESPERATE DAY



SF Dragan Bilbija and FF Sam Parkhouse conducting rapid damage assessments in Dungog

**Story by Retained Firefighter  
Matthew Thompson**

**Lives saved ...**

When floodwaters hit Dungog hard and high on the morning of 21 April, leaving three people dead, businesses wrecked, four houses totally gone and many others uninhabitable, most of the local retained firefighters and both of 282's appliances were cut off from the town.

Everyone who was rostered on overnight had responded to a pre-dawn call-out in Stroud, about 30 kilometres away, where, using 282's rescue pumper and 4WD tanker, firefighters scrambled to pluck several people and numerous pets (including a husky) from grave danger as floodwaters raged.

Driving through water that at times washed over the windscreens and wading in human chains through chest-deep water, firefighters scrambled to save desperate people, hauling them out where possible and other times swinging a ladder onto balconies to bring terrified residents onto the trucks and to safety. Stroud could easily have suffered a tragedy to match or exceed Dungog's had the 282 crew not been there to assist the NSW Rural Fire Service and NSWSES.

**... and lives lost**

When they went to drive back to Dungog, the crews found the connecting road impassable.

Meanwhile in Dungog itself, where Minmi 377 had arrived to standby, the visiting crew soon found itself in a chaotic situation as daylight brought a rise in floodwaters that even elderly locals had not seen before.

Due to work commitments, my wife and I were not rostered on that night nor that day, but when another call-out sounded that morning, we went to the station to see what was happening. We knew there had been heavy rain overnight but had no idea how bad things were until that drive to the station. En route we saw the town's tennis courts had been destroyed, the artificial grass torn up and heaped by the water.

After connecting with Minmi 377 (Cessnock 254 were soon in town also), Retained Firefighter Renae Thompson and I found ourselves jumping a fence with a local policeman and forcing entry to a house. The neighbours had called up about it out of concern for the resident.

Alas, wading waist-deep through the house we could see the water had reached almost to the ceiling. We saved a dog but found a deceased person inside.

Tragically it was not the last body I'd see that day. **END**

# STATIONS SHARE THEIR STORIES ON FACEBOOK

The Facebook pages of various fire stations reflected the intense activity by FRNSW and other emergency services as severe storm activity impacted many communities.



## Seven Hills Fire Station

26 April at 09:24

FRNSW crews attended a major operation in Huntingwood after yesterday's freak hail storm. Seven Hills Fire Station was one of many FRNSW crews on scene assisting with a number of incidents in the Huntingwood area ranging from building fires, major structural collapses, a high expansion foam fire suppression system activation, HAZMAT incidents and numerous automatic fire alarms.

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## Newtown Fire Station

27 April at 16:25

Some more scenes from the Anzac Day hail storm ... Parramatta Rd was blocked at the intersection of the aptly named Flood St and had a car with a young family floating in it. The final photo is of the Newtown Crew rescuing the family from the floating car.



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## Raymond Terrace Fire Station

30 April at 12:13

The last couple of weeks have been quite busy, with several calls in 36 hrs: calls for flooding, assist the public, & helping the SES with tree removal in Raymond Terrace & Medowie. Strike teams from North Coast & Sydney assembled at our station ... As well as the storm related calls we still have been responding to the normal everyday calls: AFAs assisting Ambulance & a couple of house fires ... We all have seen some challenging times with no power & phones. Our thoughts go out the Dungog and Maitland areas they suffered substantial damage.

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## Blacktown Fire Station

26 April at 19:21

A few photos from the massive storm that hit Western Sydney on Anzac Day afternoon. Both Pump 63 and Heavy Rescue 63 responded to major structural collapses which came through as regular fire alarm code calls. This, along with the fact the areas were basically uninhabited due to it being a public holiday, reinforce the fact these incidents, on any other day may have been a significant disaster.



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## Minmi Fire Station

27 April at 18:41

Last week the crew of 377 Minmi experienced their busiest period since the 2007 June storm. We responded to many calls ranging from trees down to alarms operating, car accidents and many more. On Tuesday the 21st a crew of 4 were sent with the pump to assist the town of Dungog in what was one of the worst hit areas in the state, the crew worked for a day and a half assisting the town with whatever was required and even being stranded in Dungog overnight.

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## Morisset Fire Station

30 April at 23:06

With the recent super storm we had last week on Monday night the 20th April ... Morisset attended approx 80-90 callouts to a variety of storm related incidents.

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# Crews battle

## DANGEROUS FACTORY FIRE EXTINGUISHED

**SMITHFIELD**  
Mona Vale firefighters were among hundreds who battled one of the most intense fires seen in Sydney for years when a car-wrecking yard at Smithfield caught fire on Saturday.

Emergency services were called to Metal Top Recyclers on Woodpark Rd just after 9.30am. They were

in the engine of one vehicle. Firefighters extinguished the fire while paramedics transported one of the drivers.

More firefighters arrived on the scene and used high-pressure water to bring the fire under control. The fire was extinguished and the unit ventilated.

**FAIRLIGHT**  
An automatic fire alarm alerted firefighters to a potential fire in a unit block in Hilltop Cres at Fairlight at noon on Thursday.

Firefighters arrived at the unit to find cracking had been left unattended on the stove-top and had caught alight.

The fire was extinguished after firefighters removed the items from the stove-top and the unit was ventilated.

**MANLY VALE**  
Parts of Pittwater Rd near the intersection of Kaurwell Rd at Manly Vale were closed following a crash involving three cars that occurred shortly before 11pm on Friday.

Manly firefighters were called to the accident following reports that one driver remained trapped inside the wreckage of their car.

**FIRE & RESCUE**

**MEET YOUR COMMUNITY THROUGH THE MEDIA**



Northern Beaches Senior Firefighters Sam Wall and Chris McNeill have become experts in maximising their region's exposure through print and digital media. But why and how do they do it?

### Get your story in print

Dee Why SF Sam Wall joined FRNSW 10 years ago. He successfully worked with the Mosman Daily when he was stationed at 53 Neutral Bay and now runs a weekly column at The Manly Daily alongside Narrabeen SF Chris McNeill.

"There were plenty of times when it seemed like other agencies were reporting on house fires and MVAs with people trapped – things that are our core business. I think it's fair to say that all fire agencies are proud of the service they provide to the community and the professional way in which they conduct themselves; I thought it was important that we had the chance to represent ourselves.

After transferring to 69 Dee Why, I had several stories published in The Manly Daily so I approached them about having a weekly column. I talked with SF McNeill about assistance with the project. We discussed the logistics of formulating and running the column with FRNSW's Media team and then organised a meeting with the journalist who was all for the idea.

After reviewing incidents on BOSS, there might be a common theme of kitchen fires, for example. We then submit these stories along with some fire safety advice. In addition we submit media releases for

public safety campaigns such as Change Your Clock or Winter Fire Safety.

The feedback from the community is quite rewarding. I've had members of the public say that they had no idea we attended so many different incidents. We may take it as part of our working day, but I think it's great that the community knows more about what we do and who we are and that we're ready to help when they need it. The Manly Daily says our column is one of the most widely read and popular sections.

### Facebook allow locals to 'tag' their friends and family to let them know about the event

If you want to engage with your local media, get in contact with the Media Officers in the Media and Communications Unit (MCU) and have a look at the intranet toolkit (Organisation Wide → Communication → Media). MCU can help you make initial contact and give you valuable insight into how print media works, writing techniques and ideas to

engage them. The Firefighter for a Day exercise (which MCU can help organise) is also a great way to get to know your local reporters."

### Connect on Facebook

Narrabeen SF Chris McNeill joined FRNSW in 2003 and started Narrabeen Station's Facebook page in 2012. He's also been successful in gaining coverage in the North Shore Times and runs The Manly Daily column alongside SF Wall.

"I started the Facebook page after I returned from a kindy visit in Collaroy where the pump crew delivered a talk. I realised our local community had very limited knowledge of the extra work we do. I decided that social media would be a great way to interact with our local community due to its ability to engage people within seconds of publishing information. It also allows community members to share information with locals or family and friends who are out of the area, interstate or overseas.

Stories on school visits, unique and interesting incidents and Santa runs are always well received. We also post information on Open Days, Winter Fire Safety, SABRE and so on depending on what FRNSW is publishing on the corporate website.

# THE PUBLIC ASK FIRIES THEIR TOP QUESTIONS



At the end of the recent highly-popular Channel Ten series *Firies*, FRNSW Facebook and Twitter followers were asked to submit questions they wanted to ask firefighters for a chance to win an 'Ask The Firies' prize pack. The top five questions submitted by viewers were then put to Pymont firefighters and their answers were filmed and posted online. The questions sent in included, "Why did you choose to become a firefighter, and what does your job as a firefighter mean to you?" and "What kind of training do you do to get ready for your job as a firefighter, and how do you maintain your level of fitness?"

**"What kind of training do you do to get ready for your job as a firefighter, and how do you maintain your level of fitness?"**

By 29 April, the video had received 2,151 views, 88% from within Australia and 12% from overseas. It had also attracted 84 likes from the Facebook link to the video. Visit FRNSW's YouTube channel to view the video (<http://bit.ly/1DJ2pAB>).

**END**



SF Sam Wall (centre) conducts Firefighter for a Day at Dee Why. Image courtesy The Manly Daily



SF Chris McNeill with FF Dean Hollander and Toby who was rescued after his arm became stuck in a pool filter. Toby's story was one of SF McNeill's first Facebook posts. Image courtesy The Manly Daily

The most popular stories are human interest articles. One such article was of the actions taken by a firefighter at a major MVA. The story was posted in conjunction with information on Trauma Teddies and was reposted over 300 times and viewed by over 50,000 people.

Narrabeen Station has seen an increase in the number of people attending Open Day over the last three years. Some of the increase can be put down to social media as the posts on Facebook allow locals to 'tag' their friends and family to let them know about the event.

If you are going to use social media, make sure that you know the basics like setting up the correct profile and using appropriate pictures etc. Talk to people who have done it before – they have already made mistakes and worked out how to overcome them so can help you avoid any of the traps in posting content or pictures. Finally, make sure you talk to the Media Team before you post anything for the first time." **END**



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# ABC TV'S REDESIGN MY BRAIN PROGRAM



From left: Insp John McDonough with Todd Sampson and the production crew



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TV personality Todd Sampson was recently put through his paces at FRNSW's Londonderry testing facility. Todd was being filmed for the second series of the ABC's *Redesign My Brain* program, which explores the science of brain plasticity. The episode featuring Todd went to air in June 2015.

**T**odd's resilience was tested in this second series. The experience of being a firefighter for a day aimed to test his decision-making ability in very stressful and scary situations. And what could be more frightening for someone with claustrophobia than to spend a day in breathing apparatus in the dark and smoke-filled training cells at Londonderry?

After training in the USA with a Harvard University Professor to help him overcome his fears so he could make good decisions, Todd was given a few hours of training in fire behaviour, hose tactics, breathing apparatus, and search and rescue tactics. Then, with the help of Inspector John McDonough and the Firefighting Operational Training Team, it was time to extinguish his first fire at flashover in one of the T-cells and test his knowledge of gas cooling as well as search and rescue tactics.

Todd's day as a firefighter culminated in the large volume cell where he had to make decisions as the first arriving officer. These included deciding where to direct the crews, what to do when he came across a casualty, and whether to focus on finding the fire or victims. He also had to manage the air supplies for himself and other firefighters.

It was a challenging exercise for both Todd and his trusty film crew who were beside him at every turn. "The first scenario was OK, the second one was a bit scarier, and the third one was the scariest of all because I was in charge," Todd said.

"Some of the best decision-makers in the world are firefighters. So I've come to learn firsthand how they do it, how they make their decisions, how they stop getting overly emotional in dangerous situations, and how they have learned to survive in extreme environments.

"The best way to learn it is to do it."

Inspector John McDonough said: "This episode will go a long way to educate the public in what we do. I think the public has always accepted that there is a physical element to our work."

However, as Todd found out, there is even more going on mentally as we apply knowledge and experience to quickly make difficult decisions during hazardous and stressful situations."

Said Todd, "I think the biggest impression I've had is how firefighters have the ability to be non-emotional in incredibly emotional situations and how they have to make these decisions at lightning speed and don't really have a lot of information to make these decisions. So it's confirmed all the good things I love about firefighters, and I hope everyone enjoys the show." **END**





SO Brett Johnson's video profile reached 86,000 people on Facebook. Inset Silverwater SF Nicole Henness

## The 2015 Permanent Firefighter Recruitment campaign was launched in April with a particular emphasis on attracting more women to the ranks.

**T**he campaign was aimed at intelligent, fit and healthy men and women from all walks of life and backgrounds who could have what it takes to become a permanent firefighter.

However, with women making up just 4.25% of full-time firefighters, Commissioner Greg Mullins is unapologetic in saying FRNSW needs to reach out to more women.

"Research shows that many women have probably never considered FRNSW as a career choice. Although the first women joined the ranks 30 years ago, relatively few apply during our campaigns compared to constantly high numbers of men."

In response to those who claimed this approach makes it 'easier' for women to get in to FRNSW, Commissioner Mullins is unequivocal.

**Women make up just 4.25% of full-time firefighters**

"Let me be clear with our approach; there are no quotas or targets, and the entry requirements for all applicants are the same – for everybody."

During the campaign, FRNSW partnered with Women and Firefighting Australasia to offer Physical Aptitude Test (PAT) preparation sessions. A new

Fire Fit guide, created by Health & Safety's exercise physiologists, was also published to help both men and women train specifically for the tasks involved in firefighting.

A series of five video profiles, produced by Assistant Director Media and Communications Unit Andrew Parsons, were released on social media to give candidates a better idea of what to expect on the job, and reached more than 309,000 potential new firefighters.

Applications were open from 4 to 18 May, with candidates required to complete an online application and undergo a series of tests based on the capabilities and values of FRNSW. These include cognitive ability, work safety, work reliability, emotional intelligence and physical aptitude.

Candidates who successfully progressed through the online testing and PAT are now at the interview stage. The final list of candidates will be determined in July, with the first intake of new recruits commencing their 13-week training course at the State Training College in August. **END**

### ON SHIFT AT 19 SILVERWATER

Silverwater Station Officer Jeff Boyd has been at FRNSW for 21 years. His current crew includes three female firefighters (one relieving).

"My background – working in factories and then coming to firefighting – is in male-dominated industries. Going through 18 or 19 years of male domination with the odd woman here and there, and then finding myself with three women on the shift was a steep learning curve. But the women I've got have just fitted in. Once you put the uniform on and jump in the truck, I don't care who you are. If you've got your backside on that seat, you're a firefighter. And I expect you to be a firefighter. One of the main things as an SO is to make sure my crew all come home safe. I can be very harsh on my crew; and if they don't measure up, I tell them in no uncertain terms. Your competency affects me and everyone around you. You've got to be able to do the job. They [the female firefighters] know their job, they're good furies. And I think most people I know would take my word for it."



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**GOING THE EXTRA MILE:  
A RETAINED  
RECRUITMENT  
SUCCESS STORY  
IN RW3**

Hillston RetFF Jasvir Singh with his wife Narinda

Hillston is a sleepy little town on the Lachlan River more than an hour west of Griffith, NSW, with a population of around 1,000.

Its fire station is filled with character and history. Its Captain, Mick Brettschneider, is tried and true, with decades of service and a crew he cannot speak highly enough of. But, as is typical of many of our regional communities, FRNSW struggles to maintain a sufficient retained firefighting force to protect the area. Captains and Inspectors across the State can tell you what a burden it can be to find prospective firefighters in regional areas from an ever diminishing, ageing pool of residents. Many prospective candidates are already overcommitted due to the demands of country living.

Recently in Hillston, the recruitment of retained firefighters has turned around. They have upped their staffing levels by one quarter, due to a group of dedicated FRNSW firefighters recognising potential worth pursuing and then pooling their time and expertise to coach and encourage new applicants through the process. In Regional West 3, Zone Commander Andy Cozens, Duty Commanders Rick Jones and Andrew

Ticehurst, Captain Mick Brettschneider and Senior Instructor Country Tony Hatch will all tell you, it is worth going the extra mile.

Jasvir Singh has lived in Hillston for the past seven years and works as forklift driver and manager at a potato and garlic farm. His wife Narinda is a nurse's assistant. Captain Mick Brettschneider says, "You are generally doing interviews with people before they even know they are being interviewed, just talking to them, [finding out] have they got any spare time to be involved in the brigade ... For Jasvir we organised a get-together and he was really interested in becoming part of it." The Captain was confident that Jasvir could be a great firey. He was mechanically gifted, good with people in his job and in the prime of physical fitness, as well, he had a real desire to give back to the town that had taken him in.

That is where the recruitment challenge for RW3 really began. At Jasvir's Phase One training in Deniliquin, SIC Tony Hatch could see

communication may be an impediment but he did not give up on him. That night, he rang Duty Commander Rick Jones. The class situation was full of spoken and written fire theory and FRNSW jargon. That part was likely to stump Jasvir who had limited English at the time, unless he could get some extra help. He checked with the Captain and the three of them agreed to persist with the process. They worked out a strategy to send Jasvir's wife Narinda to Deniliquin. Her English was much better and she could act as a translator. But that would only get them so far. "As soon as he saw it, he could do it", SIC Hatch explained. So, DC Rick Jones also went to Deniliquin to work individually with Jasvir and Narinda, allowing SF Hatch to progress the rest of the class and giving Jasvir the attention he would need to get him through.

After Phase One was completed, RW3 was on the front foot. They pre-empted any difficulties with Phase Two for Jasvir by establishing a course of tutoring sponsored by the Zone. Some nights, SF Hatch would visit Jasvir and Narinda in



## INDIGENOUS STUDENTS LEARN ABOUT FIREFIGHTING ROLES

Twelve students recently completed a pilot program to help Aboriginal and Torres Strait Islander people apply to become firefighters. The program was run as part of FRNSW's Indigenous Employment Strategy.

**T**he collaboration between TAFE South Western Sydney Institute and FRNSW saw indigenous students of all ages and backgrounds attend classes at Macquarie Fields TAFE, local fire stations and the FRNSW State Training College at Alexandria. Students were also mentored by Aboriginal firefighters from within FRNSW ranks.

"Thousands of people apply to be firefighters every year and rightly, it's not easy to get in, but it's important the fire service represents the community it serves," Commissioner Mullins said. "The information and experience these graduates have gained will help them with the application process. Completing the course doesn't guarantee them a position, but it has given them a unique insight into the job and the process."

During the course, the students learnt about the role of firefighters, PPE, BA and hazmat, USAR, bushfires, FIRU,

**'Thousands of people apply to be firefighters every year and rightly, it's not easy to get in, but it's important the fire service represents the community it serves'**

K9 and ComSafe. They also took part in a mock PAT, and gained an insight into aerial appliances at St Andrews Fire Station and rescue operations at Liverpool Fire Station. The graduating students attained a Certificate III in Fitness, as well as developing basic firefighting and job application skills. **END**

Hillston and work through any content that could be challenging. When Jasvir returned for Phase Two, he blitzed it.

By this time, having translated for Jasvir, Narinda was so competent with the skills that SF Hatch suggested she might as well join up too. So she did. Narinda is currently looking forward to completing her own training.

Captain Mick Brettschneider couldn't be more pleased to have not one but two new retained firefighters to call on. We already have one other husband and wife as Retained Firefighters, he says, "they are used to looking after each other, which is what we all do as a team. As well, the Indian community is growing in Hillston and now we can reach out through Jasvir and Narinda to offer them fire safety advice in their own language."

Jasvir says one of his friends also wants to join FRNSW, when his visa comes through.

This case study is a clear example of FRNSW's ongoing commitment in working closely with new and emerging Culturally and Linguistically Diverse (CALD) communities under our Multicultural Policies and Services Plan.

**END**



## FRNSW CELEBRATES DIVERSITY IN THE 2015 MARDI GRAS

From Fair Day to the Mardi Gras Parade, FRNSW marked a decade of diversity.

**O**n Sunday 22 February, FRNSW firefighters joined the tens of thousands of people visiting Fair Day at Victoria Park – the biggest community event of the Mardi Gras Festival.

A fortnight later on Saturday 7 March, 100 FRNSW firefighters, administration/trades staff, CFU volunteers, friends and family showed FRNSW's commitment to inclusiveness and diversity by participating in Sydney's 37th annual Mardi Gras Parade for the tenth year running.

FRNSW's contingent wore multi-coloured 'celebrating diversity' t-shirts as they danced their way up Oxford Street to the tune of Pat Benatar's song, 'All Fired Up'.

Like the broader community, FRNSW is an organisation that represents a broad range of lifestyles, cultures and beliefs. Its participation in Mardi Gras was an important celebration of diversity in the workplace that reinforced a message of acceptance to all its staff. To quote the slogans on Newtown and Maitland fire

station community noticeboards: "Fires don't discriminate and neither do we".

Ian Cargill, a member of the public, posted on FRNSW's Facebook site: "Great to see inclusiveness like this. A mate of mine was part of FRNSW's first time involvement with Mardi Gras. We often see equal opportunity employment ads. Here it is in action." **END**

## CELEBRATING INTERNATIONAL WOMEN'S DAY IN 2015

International Women's Day in 2015 was especially significant as FRNSW celebrated 30 years of women serving as firefighters within its ranks. To mark this event, newly-appointed Australian Federal Police Deputy Commissioner Leanne Close APM was invited to speak at City of Sydney Fire Station on Wednesday 11 March.



AFP Deputy Commissioner Leanne Close

**M**s Close joined the Australian Federal Police in 1986 and initially worked on investigations into major and general frauds and serious drug importations. She has held key positions in the AFP College in Canberra and in ACT Policing, and subsequently several AFP National Manager positions in protection, human resources and aviation.

After being welcomed by Commissioner Mullins, Deputy Commissioner Close then shared some of her experiences in the AFP and gave her thoughts on this year's International Women's Day theme: Make It Happen.

Ms Close's talk was preceded by a FRNSW Women's Employment and Development Workshop. The workshop brought together more female firefighters and other women in the organisation to

discuss the current barriers and issues impacting women in FRNSW.

Following an opening address by Deputy Chief Executive Rosemary Milkins, FRNSW's first female Station Officer, SO Sally Foote, talked about her experiences in the brigade since joining in 1989. She was followed by Queensland Fire and Emergency Services' highest ranking female officer, Inspector Michelle Young, who urged women to embrace being "one of the team", rather than trying to be "one of the boys" and to reach out to other women in the service. Qualified Firefighter Aimee Vasallo also presented about the development of a new Women's Liaison Officer role and female support network to complement FRNSW's existing support programs. Speakers were followed by lively group discussions on a range of key questions. **END**



The graduates, who are aged from their 20s to their 40s, came from all over the State. They left behind a range of careers, from cabinet making to landscape gardening, forklift driving, IT and serving in the Royal Australian Air Force.

### Two classes celebrate at combined graduation

On Friday 17 April, 20 former retained firefighters and 19 new recruits graduated to become permanent firefighters at the FRNSW State Training College at Alexandria. Minister for Emergency Services David Elliott joined FRNSW Commissioner Greg Mullins in congratulating the new firefighters as they joined one of the world's most trusted professions.

The 19 recruits from class 1/2015 graduated after an intensive 13-week course. The class included George Lloyd, who joins his identical twin brother in FRNSW's ranks. George is stationed at City of Sydney while his brother Hugh is at Ashfield. Russell Stirton was selected to receive the Commissioner's Recruit Merit Award for his efforts.

The 20 recruits from class 3/2015 – formerly retained firefighters – graduated after an intensive 6-week bridging course. This was the second of the two 'retained to permanent' recruit classes. Matthew Smith was also selected to receive the Commissioner's Recruit Merit Award. **END**

## GRADUATING RECRUITS SWELL FRNSW'S RANKS

### Recruits swap retained for permanent

On 3 March, a class of former retained firefighters graduated to become permanent firefighters at the FRNSW State Training College at Alexandria. The 20 graduates were selected from within FRNSW's retained ranks after an additional 40 permanent firefighter positions were funded last November.

A special 'retained to permanent' recruitment campaign was run late last

year, with this being the first full class of former retained firefighters to graduate. Each graduate participated in a modified 6-week training course to build on their existing skills and knowledge. The course included advanced training in firefighting, road crash rescue, working safely at heights, community risk management, fire technology and hazardous materials management.



# FRNSW DEPLOYS TO HELP ITS STRICKEN PACIFIC NEIGHBOUR

## 'MONSTER STORM' HITS

"A monster storm" – Vanuatu President Baldwin Lonsdale

On Thursday 12 March 2015, the Pacific nation of Vanuatu was bracing for the arrival of Tropical Cyclone Pam. Evacuation alerts were issued as the cyclone intensified to a maximum Category Five, with winds of 280 kph, heavy rain, flash flooding, landslides and huge seas predicted. The storm was expected to severely impact on low-lying areas of the nation's 65 inhabited islands, particularly those situated in the south.

The cyclone hit with brutal force on Friday night, 13 March 2015, obliterating entire villages and leaving many thousands of people homeless. In the devastated capital of Port Vila, it was estimated 90% of homes were damaged, and the smaller island communities suffered massive destruction. **END**

## FRNSW DEPLOYMENT

On Saturday 14 March, the Australian Government requested that two senior FRNSW USAR Reconnaissance Officers undertake damage assessments in Port Vila.

Superintendent Dave Lewis and Inspector Greg Houston from the on-call NSW Task Force 1 (AUS 2) were subsequently deployed to work with the Department of Foreign Affairs and Trade (DFAT), Emergency Management Australia (EMA) and the Vanuatu Government National Disaster Management Office (NDMO) in Vanuatu.

In addition, FRNSW Superintendent Warwick Kidd was seconded to head a United Nations Disaster Assessment and Coordination team of 25 disaster specialists assisting the NDMO.

Following the damage assessment, TF/AUS 2 was tasked to deploy a medium USAR capability to Vanuatu. The mission was to assist with recovery operations of major infrastructure, in particular the old Port Vila Central Hospital which had been severely damaged, as well as a number of schools and health facilities around the main island of Efate.

### The cache – what's in the box?

Reconnaissance information provided by Superintendent Lewis and Inspector Houston enabled Logistics staff at Ingleburn to reconfigure the cache equipment for the operations in Vanuatu.

A large amount of heavy USAR equipment was removed to free up weight and volume for the modified cache inventory. These changes and documentation were completed in a massive overnight operation with Logistics staff procuring resources such as additional water, chainsaw kits, height safety packs, 240 volt and battery power tools and roofing screws/fasteners. Because the Task Force needed to be self-sufficient for up to 14 days, the cache included more than 6,000 items ranging from ration packs, water, bolt cutters to radios, tents, Kombi tools and generators.

On Tuesday 17 March, the Task Force headed by Team Leader Chief Superintendent Greg Wild assembled at Ingleburn at 7.30am. The team comprised 45 FRNSW experts in rescue, hazmat, disaster relief and incident management, six Ambulance Service NSW paramedics, one NSW Police Force officer, an EMA liaison officer, two doctors and two engineers. Within four hours they had completed the comprehensive pre-mobilisation process – including passport, vaccination and medical checks, uniform issue, equipment issue and dangerous

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goods checks. The team and cache departed from Richmond RAAF base in two Hercules C130 aircraft. The first plane carried 14 personnel and half the cache as well as the President of Vanuatu and his staff (who had been in Japan when the cyclone struck). The second carried the remainder of the task force and cache. Around 23 tonnes were transported on nine aircraft pallets.

#### Port Vila – a major disaster

“It was evident that a major disaster had occurred,” said Task Force Leader Wild when the team arrived at Port Vila. “Roads were severely damaged and trees and debris littered the streets. Much of the infrastructure was damaged or had failed. Power poles were down with powerlines strewn across the roads. Most commercial buildings had roof damage and nearly all the lightweight buildings were destroyed and uninhabitable.”

After a first night sleeping on the floor of a warehouse, the Task Force set up a Base of Operations (BoO) at the municipal sports stadium where command, logistics, mess, medical, hygiene and rehab facilities were constructed and satellite communications established. The town water was tested for contamination and water filtration commenced.

Communication between teams and the BoO was via hand-held radios using standard 500 series channels with repeater units placed at a number of local secure areas including the grounds of the Australian High Commission and on the roof of the local fire station.

#### Safety first

“The safety of the team members was of the highest priority,” said Task Force Leader Wild. “Some Task Force practices had to be altered due to local conditions but I believe these changes were managed very well. Risk assessments were completed and monitored for everything from planning road convoys to roof and chainsaw operations,” he said. “There were no serious injuries during field operations which is a credit to team members and the importance they placed on watching out for each other.”

The medical team monitored fatigue and heat stress in team members as well as field hygiene. After 24 hours of extensive water quality testing, the team was cleared to use the local water supply. Due to the extreme heat and humidity, the average water consumption was calculated to be 8.3 litres per person per day.

#### Day by day

Operations were restricted to daylight hours during the deployment.

The team began work around 7am each day and returned to base by dinner time where equipment was prepared for the following day’s tasks. Each afternoon the team was greeted with very welcome cans of icy cold soft drink which was a welcome change to the bottled water and ration pack foods.

WiFi access via the Task Force’s satellite communications systems allowed team members to communicate with families back at home.

## A maternity hospital was repaired so that support services could be restored to mothers and babies

#### First things first: Port Vila Central Hospital

The old hospital buildings housing the children’s medical and surgical wards had been badly damaged and rendered uninhabitable but the new hospital wing, built to cyclone standards, remained largely intact. Patients and staff had relocated into the new wing which was now dangerously overcrowded and the Accident and Emergency reception was unable to work effectively.

The Task Force assessed the damage and got to work. The list of repairs included neutralising and removing hazardous materials (including large sheets of broken asbestos boards), repairing the roof, replacing ceiling tiles, carrying out electrical repairs, removing debris, and replacing windows. Within two days the team had performed enough work to enable the old hospital wings to reopen.

A maternity hospital was also repaired so that support services could be restored to mothers and babies.

**Back to school for the kids**

Throughout the week, the team focussed on repairing schools within the Port Vila area. Despite arduous conditions, the Task Force managed to return six schools to a safe state. "It was critical to repair infrastructure quickly so that thousands of children could return to school and begin to resume a semblance of normal life," said Task Force Leader Wild.

**The worksheet**

- Vila Central School: Tree removal, roof repair, ceiling repair and asbestos remediation as well as debris removal
- Vila East School: Roof replacement, window repair, tree removal, sports resource repair
- Vila North School: Roof repair, debris removal and tree cutting
- Pango French School: Roof repair, wall repair and debris removal
- Pango Central School: Roof repair, debris removal
- Ecole School: Tree removal, roof repair, numerous structural repairs, debris removal, and repairs to a shrine

While working at Vila East School, the team received a visit from Australia's Foreign Minister, the Honourable Julie Bishop MP. Ms Bishop was overwhelmed by the amount of work the Task Force had been able to accomplish and said she was pleased to see so many Australians working with the local people and helping with the recovery effort.

"The people of Vanuatu are getting on with the job of cleaning up and the long road to recovery," she said. "I was

delighted to see so many Australians on the ground...rebuilding houses and putting schools back together. Australia is making a considerable difference but it will be a long-term recovery effort that will be required."

Ms Bishop thanked the team members for their commitment and said that the entire Australian nation was proud of their efforts. Task Force Leader Wild provided the Foreign Minister with a brief overview of the team's achievements in Vanuatu and also some background to USAR in Australia.

**Next on the list**

Assessment teams (rescue, medical and engineers) circumnavigated Efate

**While working at Vila East School, the team received a visit from Australia's Foreign Minister, the Honourable Julie Bishop MP**

Island to inspect infrastructure damage. Teams also travelled by banana boats to assess and repair schools and medical facilities on nearby northern islands.

Due to the nature of the transport, the teams had to pack lightly and displayed great ingenuity in adapting

equipment for specific tasks. Ladders were constructed from onsite timber supplies; and at one worksite, the crew used a jack out of the hire vehicle to lift an entire wall back into position.

"This innovation and resourcefulness was demonstrated time and again throughout the deployment," said Task Force Leader Wild. "The locals were amazed by the achievements of the Task Force teams and their ability to constantly adapt and overcome."

**The happiest place on earth**

Vanuatu well and truly lived up to its reputation as "the happiest place on earth", according to Task Force Leader Wild. "I am amazed by the communities' happiness, resolve and positive attitude," he said. "Despite the incredible hardships, locals were always smiling and saying 'hello'. Whether playing an impromptu netball game or giving a lesson on how to use a hammer, each member of the Task Force thoroughly enjoyed engaging with the local population – especially the children."

The football association scheduled three soccer games during the second half of the deployment. In what is believed to be a world first, the BoO was split in half so that players and officials could access the pitch from the grandstand. There were nearly as many spectators outside the ground as there were inside. Vantage points were sought on nearby buildings, trees and roads so Task Force team members reached into their own pockets and paid for a number of less fortunate locals to enter the ground. **END**



Foreign Minister Julie Bishop thanks members of the Task Force at Port Vila East Public School



Task Force removing damaged limbs from trees at Port Vila Public School





Team photo while taking a well-earned break at Ecole School in Port Vila



Rebuilding classrooms at Pango Central School outside Port Vila

## HOMeward BOUND AFTER MISSION ACCOMPLISHED

### Homeward bound

After ten days, field operations ceased, and on Thursday 26 March, the demobilisation process began. Rehab tents were packed up and cache contents stowed into cases. A small logistics team remained in the country for an additional four days to clean and prepare the cache items for Australian quarantine inspection. The Task Force was moved to a partly-functioning hotel where preparations were made for a 4:30am departure to the airport.

On Friday 27 March, and amid much fanfare, the team flew into Sydney at 11:30am. They were greeted by FRNSW Commissioner Greg Mullins and a large contingent of agency heads, government representatives and a large media component.

Commissioner Mullins said that he was extremely proud of the dedicated

and highly skilled team. "Each member of the team has gone above and beyond in helping the people of Vanuatu who have suffered great loss as a result of the devastating cyclone."

Task Force Leader Wild also praised the work of the team. "The passion, skills and professionalism displayed on a daily basis was exceptional," he said. "As well as USAR knowledge, the team used skills in chainsaw operations, roof repair, building, carpentry and electrical work. Because of the fast recovery operations, we felt we were able to make a difference to the people of Vanuatu."

"The deployment was conducted in great spirit," he said. "We are extremely grateful to have been able to help those much less fortunate than ourselves. Those achievements and memories will remain with us forever."

**END**

# BURNS UNIT BENEFITS FROM A COOL HALF MILLION



Heading out of Gundagai on the 185km trek to Goulburn on day two. Image credit Scott Austin

In 2006, Station Officer Scott Hanley and Qualified Firefighter Mark Edis hatched a plan to cycle from Wagga Wagga to Sydney (some 400kms) in just four days to raise money for the Burns Unit at Westmead Children's Hospital. This was despite the former never having ridden a bike "further than my house to the shops".

**F**ast forward 10 years and the now infamous 400in4 charity ride has raised a total of \$450,000, with more than \$100,000 coming from the March 2015 event alone.

Cycling in an event like this not only takes its toll on the body, but also on family life with those involved dedicating months of their time into pre-event planning and preparation.

Despite this, everyone emphatically agrees that riding into Westmead Hospital on the last day more than makes up for it. And then, once the sore legs have eased and the money has been counted, comes the best day of all – the presentation of the cheque to Westmead Children's Hospital.

In May, Commissioner Greg Mullins joined the riders at Westmead as they presented a cheque for \$101,372 to the Burns Unit's Dr John Harvey.

Commissioner Mullins said he was in awe of the riders and the incredible feat of completing the 10th annual ride.

"Not only does the 400in4 sum up so much of what FRNSW is about, it also clearly highlights our affinity with the Burns Unit. As firefighters, we sometimes see badly burnt children but due to the nature of the job we lose track of them. What we do have is the reassurance that when they arrive at the Burns Unit, they are looked after by a team of absolute miracle workers."

#### Donations at work

The Burns Unit brings together a range of different specialties and disciplines with doctors dedicated to minimising the trauma and anxiety for both children and their parents. It is work that Dr Harvey says simply can't be done without FRNSW's support.

"Thank you to FRNSW and the 400in4 for allowing us to provide what I am

absolutely certain is world's best practice. Funds from the 400in4 have made a significant contribution to the unit's theatre and laser therapy treatment."

Event treasurer, social media promoter and rider Senior Firefighter Brett Carle said funds raised by the 400in4 are used every day to improve every child's experience in the Burns Unit.

"Over the years we have built an operating theatre and bought a laser which helps with physical and emotional recovery by minimising scarring. The Burns Unit is one of the only paediatric units in Australia with a laser to treat scars which is something we are very proud to have achieved."

The treatment is considered to be at the forefront of international laser technology with Westmead's Burns Unit recently asked to evaluate a proposed laser project at The Hospital for Sick Children in Toronto, Canada. **END**



Commissioner Greg Mullins greets Karl Madderom and the cycling crew at Liverpool Fire Station on day four



400in4 representatives and major sponsors present the 2015 cheque to the Burns Unit at Westmead Children's Hospital



The 400in4 organisers with major sponsors the Fortnum Foundation (from left: SO Scott Hanley, SF Brett Carle, Marg Miles, SO Brett Butler, Anna Uremovic and SO Scott Henderson). Image credit Mark Zworestine

## 2015 SADDLE SOUNDBITES

*"This year we had some amazing glue that bonded us together. That glue came in the form of the one and only Karl Madderom. Karl, who is in his early 40s, is the longest serving patient of the Burns Unit. Karl's biggest single ride prior to ours was 55kms ... Every time we got to the bottom of a hill, seamlessly, organically and without direction or order, there would be a rider on either side of Karl with a hand on his back pushing him up the hill. It may be to some who didn't witness it a minor act, but when the Garmin is telling you it's 39 degrees, you've got a headwind and you're pushing through whatever stage of 185kms with B-Doubles only a breath away, it's a big deal. It's a selfless act, a sacrifice to ensure we all get there. That we make it together. The cohesion and camaraderie of the 400in4 Class of 2015 will stay with me for a long time."*

### Senior Firefighter Brett Carle

*"My personal highlight would have to be day two when we rode for a total of 185kms ... It was a pretty emotional day for me. There were moments when we were riding, hurtling down the road at 55kms per hour, that tears would come to my eyes because I couldn't believe what I was doing. When I got to 150kms I realised I was going to make it. I was going to grind away and 'not get out'. But of course this was only possible with the help of the other riders ... The finish line in Goulburn that night was really special too. Everyone clapped each other, shook hands and hugged. It is a day I will never forget for as long as I live."*

### Karl Madderom

*"I have had a concern for quite some time that the bubble may burst especially considering we take predominantly the same route each year. Then the ride takes place and NSW blows us away with its generosity and support. There are so many worthy and necessary charities out there, but I think the fact that the 400in4 continues to grow is a sure sign of the high regard that the community holds for us as firefighters ... I think the entire crew, from the riders to the support team to the partners and families and also the sponsors, should be incredibly proud of what we have achieved this year and the nine previous years. At the end of the day, we are just firies doing something extra to try and help with very limited experience in this sort of thing."*

### Station Officer Scott Hanley



## FRNSW GOES INTO BAT FOR SOUTHERN HIGHLAND YOUTH

On 15 April, in collaboration with the Bradman Foundation, the NSW Police Force, Ambulance Service of NSW, FRNSW, NSWRFs and NSWSES swapped their uniforms for cricket whites to raise funds for the Southern Highlands Youth Hub in Bowral.

**T**he Hub provides programs and activities for teens aged between 12 and 18 years in the Wingecarribee Shire. The cricket match, which is sponsored by the Fire Brigades Credit Union, aims to identify with Sir Donald Bradman's vision "to engage, inspire and educate" youth in the community. For more information about this annual interagency sporting fundraiser, visit [www.facebook.com/triplezerochallenge](http://www.facebook.com/triplezerochallenge).

### Match report by Inspector Brendan Cox

The challenge was played under an 18-over a side format, with five runs deducted for every wicket taken. The FRNSW team was made up of a mixture of retained and permanent firefighters who set out to take the title off NSW Police, the inaugural tournament winners. A mixture of accurate bowling and enthusiastic fielding by FRNSW

allowed its team to limit the strong Police batting line-up to 65 runs after claiming 11 wickets. A solid batting display from all pairs in the FRNSW line-up allowed their team to compile 96 runs. FRNSW was leading the competition until a storm struck the local area, causing the match to be abandoned with no winner declared.

Special mention goes to Firefighters Martin and Richards who both received awards from former international cricketer, the great Lenny Pascoe, who was the special guest on the day. Firefighter Cottingham from 234 Stn Bowral also performed brilliantly in the field cutting off many runs with his diving efforts.

All services had a range of interesting community engagement material available on the day, with the NSW Police Porsche being a particular feature. FRNSW is now more determined than ever to take the title next year. **END**





**FIREFIGHTERS' BRAVERY RECOGNISED FOR SERVICE AT HOME AND ABROAD**

Firefighters and members of the public who risked their lives to help others during the Christchurch earthquake, Samoan tsunami and 2013 bushfires were recognised on Sunday 3 May, ahead of St Florian's Day, or International Firefighters' Day. The commendations were presented by Emergency Services Minister David Elliott and FRNSW Commissioner Greg Mullins at a special ceremony at Penrith Panthers.

**A**ustralian Humanitarian Overseas Service Medals were presented to 64 FRNSW firefighters who provided urban search and rescue support in the wake of the Christchurch earthquake, and also to four firefighters who provided logistical support in Samoa after the 2009 tsunami. This medal is an Australian Government award which honours Australians performing emergency humanitarian service in dangerous overseas environments.

Commendations for courageous and meritorious action were also presented to 64 FRNSW firefighters and staff who risked their lives to save others during the October 2013 bushfires; and to eight others, including four members of the public, for their brave actions at other fires and emergencies.

Commissioner Mullins said he was honoured to present Australian Humanitarian Overseas Service Medals to the firefighters who spent nearly two weeks searching the rubble for victims after the 2011 Christchurch earthquake.

He also praised the firefighters who bravely battled extreme fire conditions and risked their lives to save others during the October 2013 bushfires. "During what was the most destructive bushfire we have seen, many of these firefighters put themselves at great peril as the fire storm swirled around them to rescue stranded residents caught out by the fast-moving blaze," said Commissioner Mullins.

"We have also recognised the courage of firefighters and members of the public for their actions at several other fires and emergencies in recent times including a house fire at Mount Druitt in October 2014 and a motorcycle accident at Mangrove Mountain in July 2014.

For a full list of recipients, see the intranet story posted 4 May 2015.

**END**



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# A GRATEFUL PUBLIC SAYS THANKS

## Firefighters thanked for saving house

FRNSW received the following heartfelt letter from a St Peters resident who almost lost her home to a house fire in March. A candle in her laundry caused a fire which quickly escalated. Fire crews from 26 Mascot and 29 Arncliffe stations responded and extinguished the blaze. The woman was so thankful that she also donated \$500 to the Burns Unit at The Children's Hospital, Westmead on behalf of the firefighters.

*It is with the utmost gratitude, respect and admiration that we give you this thank you note from the bottom of our hearts. We express our huge appreciation to the firefighters who were on duty on Sunday, 8th March at 11.30pm for saving our home and potentially my life and others too. You are true heroes and it takes an amazing person to put their own lives at risk every day in order to help others ... This was the scariest, most horrendous experience for me and I basically owe my life to you all. Keep up your amazing work and thank you again.*



**Linda Leiva**  
3 May at 13:42

Thanks so much to the Lakemba firefighters who after a very busy morning had stopped to get some lunch & still found the time and energy to talk to my daughters and show them the pumper. From the girls in Clemton Park with the Frozen Elsa dolls (hope you found them for your daughters!)

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## Melinda Phillips

*Firstly, I would like to express my sincere appreciation to all firefighters who are so dedicated to their job. You guys respond to countless calls for all types of needs and when people see you we feel comforted and safe. You are in such a selfless profession and I hope you feel the rewards in helping so many. The morning of the Rozelle explosion will, like for many others, stay with me forever. The immediate relief we felt once you arrived is impossible to describe. I live a few doors down from the site and walk past it everyday and the constant reminder is heartbreaking and devastating. This motivated me into finally saying thank you and hope you can pass on my gratitude to the other responders as there were so many firefighters involved.*



**Anne Perry**  
22 May at 18:14

Thank you for rescuing my neighbour and her children after a tree fell across their car on the way home from school. Great job, minimum fuss, maximum effect ... You guys are awesome!

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# FAREWELL AND THANKS TO THOSE RETIRING

## Retirements

Name	Fire station	Date retired
SF N Diven	Hamilton	16-Jan-15
SO D Blanche	Hamlyn Terrace	13-Jan-15
SF M Ruscoe	Training College	19-Dec-14
SO M Murray	Drummoyne	12-Dec-14
SF P Hennessy	Queanbeyan	05-Jan-15
QF G Stevenson	Albury Central	19-Dec-14
DCapt S Campbell	Mortdale	14-Nov-14
RetF M Bretag	Yenda	30-Nov-14
RetF T Winchester	Cessnock	19-Dec-14
RetF K Snowdon	Wauchope	31-Dec-14
RetF K Danaher	Lithgow	31-Dec-14
Insp G O'Regan	RN3 Zone Office	23-Jan-15
RetF G Byrne	Woolgoolga	09-Jan-15
SF D Simms	BA & Hazmat Training	13-Feb-15
SF G Dossett	Avalon	16-Feb-15
SF D Connerton	Schofields	20-Feb-15
RetF B Stuart	Molong	22-Jan-15
Capt W Simmons AFSM	Byron Bay	31-Jan-15
SO G Williams	Menai	27-Feb-15
SF H Battaerd	Bulli	06-Mar-15
DCapt T Robinson	Moama	24-Oct-14
RetF B J Love	Lockhart	05-Nov-14
Capt V R Pearson	Jerilderie	14-Nov-14
RetF R Egan	Wentworth	06-Feb-15
Capt A Van Hoeck AFSM	Bellingen	15-Feb-15
RetF G Wetsbury	Batemans Bay	27-Feb-15
DCapt S Waite	New Lambton	01-Mar-15
Capt P Dwyer	Wagga Wagga	29-Aug-14
RetF J Easey	Quirindi	19-Dec-14
RetF R Dunncliff	Warialda	30-Jan-15
Capt G Gibbons	Kelso	28-Feb-15
RetF C Wilson	Turvey Park	03-Mar-15
RetF B Edgar	Camden	17-Mar-15
Supt W Roberts	Batemans Bay Zone Office	20-Mar-15
SO P Mangioni	Randwick	13-Mar-15
SO C Courtney	Manly	20-Mar-15
SF P Minahan	Silverwater	20-Mar-15
SO T Schofield	Broken Hill	05-Apr-15
SO J O'Dwyer	Turvey Park	3 April 2015
SF T Barnett	Newcastle Command	30 Mar-2015
QF S Earl	Penrith	03-Apr-15
DCapt R Dellar	Werris Creek	27-Feb-15
RetF A Brown	Lithgow	27-Mar-15
RetF D Elliott	Byron Bay	27-Mar-15
SF D Russell	Macquarie Fields	10-Apr-15
Capt P Mangan	Coonabarabran	06-Mar-15
RetF H Fisher	Mudgee	10-Apr-15
RetF P Green	Dubbo	13-Apr-15

# VALE: WITH GRATITUDE FOR SERVICE TO THE PEOPLE OF NSW

## Deaths

Name	Date deceased
Retired SO Kevin McBrien	Feb-15
Retired Assistant Commissioner Noel Newson AFSM	Feb-15
Retired Capt Des Wright	Feb-15
Retired RetF Justin Parkinson	Mar-15
Retired Capt Barry McDean	Feb-15
Retired SO Brian Collins	Feb-15
Retired Capt Brian Warren	Feb-15
Retired VF Richard Dye	26-Feb-15
Retired Capt Donald Lee	04-Mar-15
Retired VF Robert Thomas	08-Mar-15
Retired FF William Farquharson	Mar-15
Retired RetF Clifford Field	21-Mar-15
Retired SO Lew Phillips	Apr-15
Retired S/F William Peter Burge	12-Apr-15

## ASSISTANT COMMISSIONER NOEL NEWSON AFSM (RETIRED)



Earlier this year retired Assistant Commissioner Noel Newson passed away after a long illness at the age of 75. Noel joined the NSWFB 57 years ago in 1958 as a 'volunteer' (retained firefighter) in Wollongong, and joined as a permanent firefighter in February 1961. He was promoted to the rank of Regional Commander (later called Assistant Commissioner) in 1991. He retired in 1998 after an outstanding career that saw him serve in Sydney, the Illawarra, Tamworth, Fire Safety, Region South, Region South West, and Head Office. In 1997 he was part of the Incident Management Team at the Thredbo landslide, and took charge of many major fires over the years. Many serving and retired members attended Noel's funeral at Milton where Commissioner Mullins delivered the eulogy. **END**

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## SEND IN YOUR STORIES AND PHOTOS

Fire & Rescue News is the internal news magazine of Fire & Rescue NSW (FRNSW). FRNSW Media & Communications Unit (MCU) wants to publicise the incidents your crew attended, and the achievements of your unit.

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Send any high-resolution photos (larger than 1,000KB) to: [frnews@fire.nsw.gov.au](mailto:frnews@fire.nsw.gov.au)

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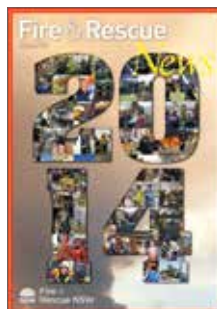
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# COOKING FIRES



The leading cause of home fires in NSW is leaving cooking unattended.

**FACT** – Almost half of all house fires start in the kitchen.

**✘ Never leave cooking unattended.** Stay in the kitchen while cooking and turn off the stove before you leave.

**✘ Don't put anything metallic in the microwave and always double-check the timer.**

**✘ Avoid cooking under the influence of alcohol or drugs.**

**✔ There are many dangerous substances in the kitchen.** Flammable materials such as aerosols, cleaning agents and cooking oils should be stored away from heat.

**✔ Keep matches out of reach of children.**

**✔ Keep your oven, rangehood and grill clean and in good working order.** A build-up of grease and fat can ignite in a fire.

**✔ Turn pot handles inwards.**

**✘ Keep loose clothing, fabrics, tea towels, curtains and flammable items away from the stove.**



Children need constant supervision to protect them from the dangers of fires, burns and scalds.

