

FIRE AND RESCUE INTERNATIONAL



Integrated fire, rescue, EMS and incident command technology

Volume 4 No 7

SAESI



The 31st SAESI Conference, Exhibition, Training Events and Challenges

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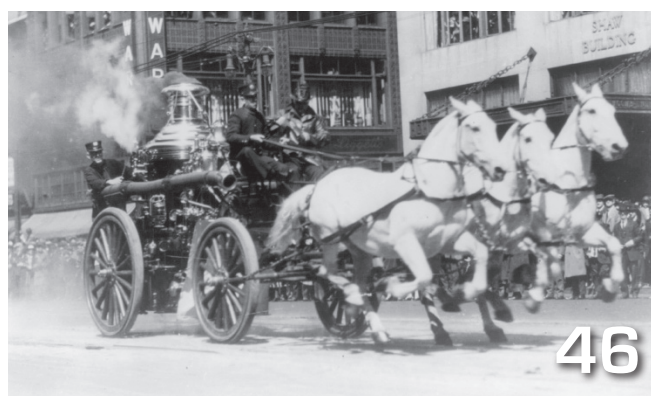
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Lee Raath-Brownie

Fire and Rescue International (FRI) proudly presents its 42nd edition. Enjoy the read!

SAESI News

From the SAESI president, Dino Padayachee, writes the presidential message and Riaan Janse van Vuuren provides an overview of the now implemented Memorandum of Incorporation (MOI). Cape North West Branch reviews their annual general meeting.

Women in the emergency services

The inaugural Women in Emergency Services Conference was held in Sandton, South Africa where the ladies in the industry shared their methods for success, tribulations and advice as inspiration for women entering and working the emergency services to excel in their respective roles.

JOIFF Industrial Fire and Explosion Hazard Management Africa Summit

Another inaugural conference saw the JOIFF Industrial Fire and Explosion Hazard Management Africa Summit held in Secunda with several JOIFF executives in attendance and international and local speakers providing an informative discussion platform.

Rescue roundup

Neville van Rensburg and Julius Fleischman offer part 2 of the series of articles on heavy vehicle extrications.

eThekwini Grinder Challenge 2017

The Grinder Challenge held in Durban afforded fire fighters from around the country an opportunity to show their mettle with winners Simiso Gumede and Simangele Mbanjwa taking gold. Congratulations!

SAESI 2017 Conference, Expo and Training Events

The 31st SAESI Conference, Expo and Training Events is taking place at NASREC, Johannesburg and we provide the conference and training programme and an overview of the exhibitors. Visit www.saesi2017.com for more details.

Structural fire fighting: Two plus one response

Colin Deiner shares the considerations relevant to structural fire fighting with emphasis on the two plus one response.

Fire service profile

We visited the Berufsfeuerwehr Mönchengladbach in Germany and provide insight into the capabilities, resources and response of a professional fire department in Europe. We also profile CFO Jörg Lampe, who has been its CFO for nearly 20 years.

Wildfire investigations

Dr Neels de Ronde looks at the intricacies and challenges faced by wildfire investigators investigation fire origin in firestorms.

Thank you to all our contributors for their continued support! Fire and Rescue International is your magazine. Read it, use it and share it!

Lee Raath-Brownie
Publisher

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This month's FRI Images winner!

Congratulations to

Michael Combrink for his photograph 'Qatar Emiri Air Force'' taken with a Nikon D 3200 and a Nikon D AF-S 18-55mm 1:3.5-5.6GII ED lens with a shutter speed of 1/1000 of a second, ISO 100 and an aperture 5.6 F-stop.

Michael Combrink wins this month's prize money of R2 000!

Photo description:
The Qatar Emiri Air Force Boeing C-17 Globemaster III with a Rosenbauer Panther CA-7 (R3) at OR Tambo International.

Well done!

Best rescue, fire or EMS photo wins R2 000!

Fire and Rescue International's (FRI) monthly photographic competition is open to all its readers and offers you the opportunity of submitting your digital images of fires, fire fighters, disasters, incidents, emergencies and rescues.

Rules

- All photographs submitted must be high resolution (minimum 1 meg) in jpeg format
- Allowed: cropping, curves, levels, colour saturation, contrast, brightness, sharpening but the faithful representation of a natural form, behaviour or phenomenon must be maintained
- Not allowed: cloning, merging/photo stitching, layering of two photos into one final frame, special effects digital filters
- Fire and Rescue International (FRI) reserves the right to publish (printed or digitally) submitted photographs with acknowledgement to the photographer
- Winners will be chosen on the merit of their photograph
- The judge's decision is final and no correspondence will be entered into afterwards



Entries must include:

- Name of photographer
- Contact details (not for publishing)
- Email (not for publishing)
- Name of photograph
- Brief description of photograph including type of incident
- Camera, lens and settings used

All entries must be emailed to:
lee@fireandrescue.co

>> ENTER NOW!



SAESI President's comment



Dino Padayachee

Greetings honourable members and well wishes to you and your family

For the first time in the history of SAESI, an independent auditor, the CEO and the treasurer of the institute have travelled across the country to all active branches for a financial review and audit on its branch activities and transactions in order to present a single inclusive SAESI company audited financial statement.

Once again, we have shown our commitment to our members in that the institute have sponsored the acquisition of personalised and SAESI branded tool belts for the extrication team from the Cape Peninsula Branch participating in the international competition taking place in Romania at the end of August. The tool belts are not only unique in its branding but in that it was custom made for the team.

Apart from the successful South African Qualifications Authority (SAQA) site visit to SAESI House, better known as head office, for the registration of SAESI as a professional body for the fire fighting and emergency sector, further engagements with Quality Council for Trades and Occupations (QCTO) and the Local Government Sector Education and Training Authority (LGSETA) have been as positive to the vision and objectives of the institute.

Through the support of the QCTO together with SAESI, we have identified an NQF 5 Fire and Emergency Sector Qualification in existence against which SAESI will attempt to re-align its legacy fire technology qualifications with the end objective of National

Qualifications Framework (NQF) aligned qualifications registered against which Higher Certificate, Diploma and Higher Diploma will be available.

The intent for the registration has been agreed upon with the LGSETA and are being finalised.

The final stages of the part qualifications of the NQF4 Occupational Certificate Fire Fighter is being finalised for submission.

All four sites identified as pilot for the role out as assessment centres identified for the NQF 4 Occupational Certificate Fire Fighter presentation namely Cape Town, Ekurhuleni, eThekweni and Kimberley have been visited by the LGSETA and SAQA delegates.

As Assessment Quality Partner (AQP) with the LGSETA, the first phase for the establishment of criteria and toolkit for the Recognition of Prior Learning (RPL)/ Credit Accumulation and Transfer (CAT) process to gain NQF recognition for Fire Technology Qualifications through assessment have been approved and granted.

Dino Padayachee, president, SAESI

Cape North West branch news



The Cape North West branch held its branch annual general meeting at Rhinemetel Denel Munition on Friday, 30 June 2017.

Nominations for the new branch committee were finalised and the following members were appointed:
Chairperson: Mr DI Semase
Vice chairperson: Mr A Appolos
Secretary: Mr TR Nkoliswa
Treasurer: Mr PM Mokhutswane
Councillor: Mr LA Dikane

Councillor: Mr BJ Nthutang
Councillor: Mr JS Chuma

The new branch executive members will serve from July 2017 and until June 2021. Thirteen fire stations are representative were in Cape North West Branch.

The chairperson, Ditaba Semase, provided feedback on his report to EXCO and also shared information from EXCO to the branch. The feedback included items such as

the new fire fighter qualification, the SAESI HQ road show, the phasing out of examinations and the revamped SAESI website. Qualified members with Higher Diploma and the Diploma were requested to RPL at Tshwane University of Technology (TUT) so that they can qualify for B-Tech Degree from TUT. SAESI is also planning to assist Tlokwe Training College to regain its accreditation. Additionally, IFSAC will be visiting South Africa during October 2017.



SAESI's Memorandum of Incorporation

By: Riaan Janse van Vuuren, chairman of SAESI's administration committee

In 2014, The Southern African Emergency Services Institute (SAESI) registered as a non-profit company (NPC). The reasons for registering as an NPC were based on the increased requirement for good governance and accountability, as stipulated in the King III report. After the registration as an NPC, the EXCO took a resolution to appoint the Corporate Governance Framework Research Institute to assist in the drafting of the Institute's Memorandum of Incorporation (MOI), which has become the governing document for the institute and its activities.

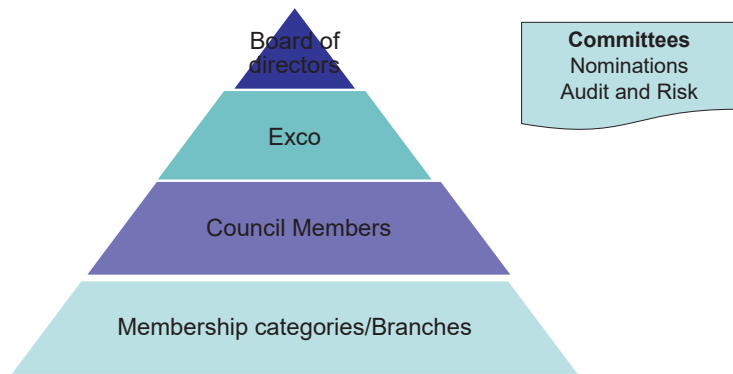
The MOI was adopted and implemented at the 2015 annual general meeting of SAESI, which was held in Kimberley.

Benefits of registering as a non-profit company are:

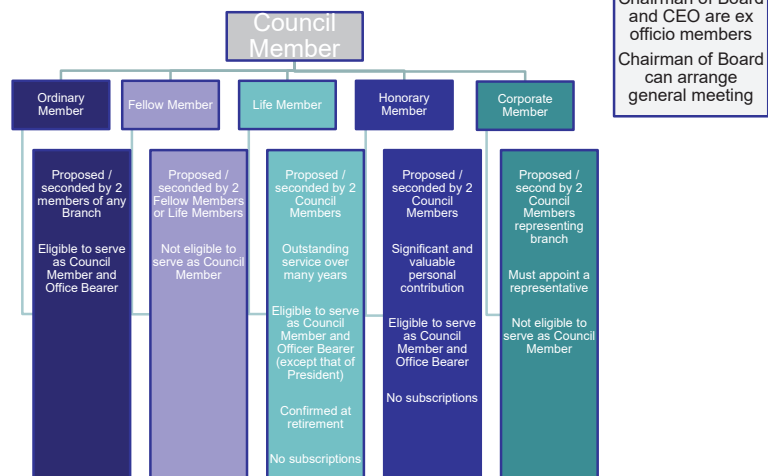
- Liabilities of the organisation's members and office bearers are limited, except in circumstances of gross negligence and fraud by members and office bearers.
- The assets of the organisation belong to and are registered in the name of the organisation and not that of its members and office bearers.
- The organisation has perpetual succession – it continues to exist even if its members and office bearers change.
- The organisation can sue, or be sued and enter into legal contracts in its own name.
- Enhanced reputation as organisation seen to be more credible; the organisation shows increased governance and compliance.

Members might ask whether the structure of SAESI will change and if it does change, what will the new structure look like? The only changes to the current structure of SAESI will be changes to comply with legislation, like the appointment of directors, the audit and risk committee and the nominations committee.

Proposed SAESI Structure



Member Categories



These appointments are statutory requirements.

Other changes which were proposed in the MOI align SAESI with principles of good governance and make the institute more transparent. The biggest change in this regard is the position of the vice-president elect, which will cease to exist. The positions of president and vice-president will also be eligible for election after a two-year term and the automatic progression from vice-president to president will no longer exist. The diagrams above give a layout of the proposed structure.

The process of elections and appointments of office bearers did

not change and all the members will have the opportunity to have their voice heard through the different branch structures. The branch structures will remain as they currently are. Station representatives and branch committees remain an important building block of the Institute. The above diagram indicates the current categories of membership that remain the same.

The only addition is the board of directors as a statutory body.

To download a copy of the SAESI Memorandum of Understanding, visit www.saesi.com.

Trailblazers share insights at inaugural Women in Emergency Services conference



The inaugural Women in Emergency Services conference held on 5 and 6 July 2017 in Sandton, situated in the province of Gauteng, explored the gender biases that have hindered women's progress in this historically male-dominated environment. Chaired by Lee Raath-Brownie, managing director of Fire and Rescue International, the conference featured presentations by women who have distinguished themselves as role models in the emergency services. They described their challenges and successes in the workplace and discussed strategies aimed at facilitating women's progress into leadership positions.

The conference kicked off with a presentation by Tamsyn Lesch from the Independent Counselling and Advisory Services, who addressed the issue of work/life balance. Women in emergency services often experience burnout, as they are constantly exposed to secondary trauma and are in 'care mode' both at work and home. "At work, ensure that you get the help you need after you've experienced trauma and at home, organise a division of labour," she advised.

Nonhlanhla Mkhwanazi, chief fire officer of KwaDukuza Emergency Services in KwaZulu-Natal, outlined her approach to career advancement. "Proving that you have leadership skills starts with becoming a trailblazer in your workplace," Mkhwanazi said. This, she believes, involves familiarising oneself with all the legislation governing the agency one serves, proactively developing one's competency in core functions and educating oneself on matters beyond one's job description, such as incident and command control. She reminded the delegates that women can increase their effectiveness through research and collaborative solution seeking rather than withholding support from one another as they vie for opportunities to be promoted. Mkhwanazi emphasised the importance of knowledge as a power base for career advancement, suggesting that women participate in forums that will provide them with extra knowledge and will provide a platform from which they can offer their input and prove their expertise.

For Amanda Mgobozi, senior fire officer at Engen Refinery in Durban,

logistical issues presented a challenge, for example, the fact that entrance requirements included measures of height and physical strength. Her advice to delegates was to excel at their training courses to prove they are capable of doing the job. Mgobozi was often assigned to the easier tasks, however, she insisted on doing her fair share of all the tasks to prove her eligibility for promotion.

As one of the first women to be accepted into the City of Cape Town Fire and Rescue Services in 1996, Arlene Wehr faced the stereotyped notion that women were not up to the task of fire fighting. Wehr had to be assertive and insist on being provided with what she needed, such as locks on ablution facilities and PPE in her size. During the course of her career she was transferred to various fire stations. "I made an effort to ensure that ablution facilities for women were built, which paved the way for women who worked at those stations after me," she said. As a means of progressing up the ranks, Wehr studied and trained extensively. Her hard work, initiative and determination to succeed saw ▶

A. ----- B.



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Women in the emergency services



From left: Kirsty Scully, Arlene Wehr, Nomathemba Mtshali, Jill Lithgow, CFO Nonhlanhla Mkhwanazi, Amelia Holland, Rene Oosthuizen and Amanda Ngobozi presented their strategies for success

- ▶ Wehr being promoted to senior fire officer in 2003. Over the nine years that followed, she earned further promotions and now has her sights set on becoming chief fire officer. Wehr is a member of the Women Empowerment Strategy Team for the City of Cape Town, which provides her with opportunities to help other women to advance in their careers.

Speaking on compassion fatigue, Karen van Zyl of The Anger and Stress Management Centre, advised delegates to learn to live with uncertainty, set boundaries and reframe problems as opportunities. "You need to accept that some stressors are beyond your control to change," she pointed out. Kirsty Scully of Core Wealth spoke about the principles of good financial planning. She urged the delegates to become financially independent, which includes maintaining an emergency fund of at least R10 000 and contributing towards a retirement fund.

Nonkululeko Mkhwanazi, associate attorney at Bowmans, presented the legislation designed to prevent workplace discrimination, harassment and bullying. This includes the Employment Equity Act and the Department of Labour's Code of Good Practice on the Handling of Sexual Harassment Cases in the Workplace. "Bullying, while not specifically mentioned in legislation, is not permitted because fair labour practices are a Constitutional right," Mkhwanazi said. She suggested that women report

unacceptable treatment and ensure that their employer has a workplace bullying policy in place.

Jill Lithgow, manager of ER24's education, training and development department discussed the fundamentals of successful leadership. She reminded the delegates that in order to be a good leader, one first needs to be a good follower, which involves respecting others' authority, being cooperative, communicating clearly, having integrity and being a team player. She recommended that those who wish to become leaders focus on developing their soft skills, become experts in their field, find mentors within their management structures and take on projects

outside of their job description. "Realise that being a leader will put you on the receiving end of criticism," she warned the women. She advised them to read up on how to deal effectively with criticism and turn it into an opportunity to improve.

Kate Moodley from Discovery Consulting Services emphasised the importance of maintaining a reputable personal brand, especially in the era of social media. "Create your image as a highly competent and decent individual," Moodley said.

Kay Vittee from Charisma Healthcare Solutions cited research findings showing that women's greatest barrier to success is not societal norms; rather, it is on the individual level, for example, a lack of self-confidence. Vittee overcame this by envisioning herself achieving her goals and tackling obstacles head-on.

Amelia Holland from LifeMed 911 pointed to knowledge and understanding of one's industry as vital bases of power and influence. Developing an understanding of the processes and terminology used for financial decision making helped her learn how to go about getting the funding she needed for her projects.

Stenden South Africa's Disaster Management School's René Oosthuizen, presented research findings showing that women are typically seen only as victims of disasters, meanwhile, their assistance during and after disasters often go unrecognised. "The empowerment of women is critical to building



Arlene Wehr, Tamsyn Lesch and Kate Moodley shared their expertise at the conference

disaster resilience because the role of women in their families and communities can be a vital source in preparedness, response and recovery phases," she added.

Nomathemba Mtshali, director of strategic support for the City of Johannesburg Emergency Management Services gave her insights into what the future holds for women in municipal emergency services. She described some of the benchmark programmes already implemented in the City of Johannesburg, including one that identifies and eliminates potential barriers to an inclusive and diverse workforce, as well as a programme that implements equal employment opportunity programs to meet gender ratio targets.

Megan Laird-Melidonis of NSRI's Hout Bay Station has found that women have to excel to earn promotions, whereas men only need to perform satisfactorily. She has noticed a change over the years, though. Laird-Melidonis named emotional intelligence and good communication skills as a woman's most powerful tools for career advancement.



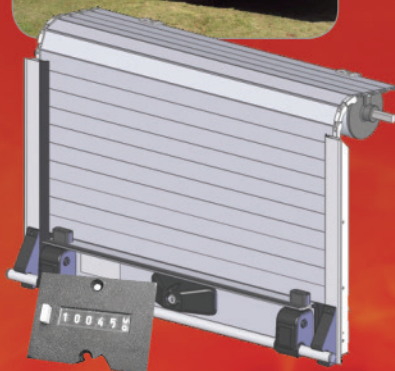
Natali Zarrabi and Megan Laird-Melidonis described the challenges and opportunities women serving in their agencies face

Natali Zarrabi, training manager of AirRescue Africa has found that most of the challenges that put women in the aeromedical environment to the test are physical in nature, such as carrying and loading medical equipment into aircraft. Zarrabi's passion, determination ability to find innovative solutions

when faced with challenges or limitations have facilitated her career advancement.

Delegates at the conference commented that the presentations had motivated them to increase their efforts to move forward in their careers. ▲

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JOIFF Industrial Fire and Explosion Hazard Management Africa Summit 2017

The JOIFF Industrial Fire and Explosion Hazard Management Africa Summit 2017 took place in Secunda

The JOIFF Industrial Fire and Explosion Hazard Management Africa Summit 2017 took place in Secunda, Mpumalanga, on 26 and 27 June 2017 under the very capable leadership of Pine Pienaar assisted by JOIFF executives, Paul Budgen and Zarto Williams. This was the first JOIFF conference on African soil and set a high standard for their future conferences planned for South Africa. Randy Fletcher, JOIFF chairman and BP Global response advisor: intelligence, security and crisis management provided an overview of JOIFF and also an analysis of the difference between training and competency development and its application in the industrial response arena.

A number of highly informative presentations followed over the two day summit including presentations

by Chief Tinus Pretorius of Sol Plaatje Municipality on the role of the Southern African Emergency Services Institute as the partner of the LG SETA in the assessment quality process, Nthai Monmye on the Fire Professions Council of South Africa, Kevin Westwood, technical director of JOIFF and BP Group fire advisor, who, together with Ronnie King OBE, secretary, All Party Parliamentary Fire Safety and Rescue Group in the UK, provided an overview of the infamous Milford Haven tank 11 incident and a number of other boil over incidents as well as an update on the Boilover Research Programme results conducted by the LASTFire group.

Other international speakers included Raymond Bras of United Fire Services in the Netherlands, who provided insight into recent major incidents

in the Rotterdam Port area, Gary McFadden of ERM Industrial Risk, who discussed major hazard installations and process involvement before and after incidents.

The National Disaster Management Centre's (NDMC) Moses Khangale provided the keynote address, which focused on framework for the provision of fire services by industrial, municipal and private fire services in South Africa followed by a number of local speakers, who included Marius Atterbury, Colin Deiner and Cobus Swart.

A demonstration of the capabilities of Sasol Secunda's Ferrara super pumper, high volume filter and truck-mounted Ambassador monitor supplied by Marcé Fire Fighting Technology provided an interesting peak into the response capabilities of Sasol Secunda's fire service.

Two Sasol Secunda employees, Sakkie Joubert and Gerald Engelbrecht received their JOIFF Diplomas at the event held at the Graceland Hotel, Spa and Casino. JOIFF Fellowships were also awarded to Randy Fletcher and Gerry Johnson.

The South African Petrochemical Fire Chiefs Committee held its meeting at the Sasol Club, coinciding with the summit.

The launch of a new company, Industrial Fire & Hazard Control, also coincided with the JOIFF summit.



JOIFF Fellowships were also awarded to Randy Fletcher and Gerry Johnson and Sasol Secunda's Sakkie Joubert and Gerald Engelbrecht received their JOIFF Diplomas



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eThekwini Grinder Challenge 2017



Ports Authority Durban and Richards Bay, Eden District Municipality, Overstrand Municipality, Sekhukhune Emergency Management services, City of Johannesburg Reservists, IFE and Airports Company South Africa (ACSA) King Shaka Airport participated in several arduous challenges.

Organised by eThekwini Fire and Rescue's training officer, Aghmat Steele, the event presented participants with five challenges in a circuit fashion, which include the twin hose drag over 60m, Kaiser Force hammer and foam drum shuttle run with three sets of two 20kgs foam drums carried over 24m, the tower where they carry a 20 litre foam drum up and down and hoist two coiled lengths of 63mm hose to the top. Following was the 105kg truck tyre drag that simulated a victim drag over 40m followed by the traditional stair climb of 21 storeys.

All challenges were performed in full bunker gear with self-contained breathing apparatus (SCBA) sets.

Sponsors included SGB Cape, AV Company, Tsogo Sun, MSA Safety, Fire and Rescue International, Hamilton Hydraulics Services, Inkunzi Fencing, Events World.

Congratulations to the winners and all the contestants!

25 and 26 August 2017 saw the eThekwini Grinder Challenge 2017 come to fruition at the Durban North Beach Amphitheatre on Durban's Golden

Mile beachfront. Spanning over two days, more than 130 fire fighters from eThekwini Fire and Rescue, Msunduzi Fire and Emergency Services, UMhlathuze Fire and Rescue, Transnet



Results

Overall winners

Overall Grinder Champion 2017:	Simiso Cyprian Gumede	eThekwini Fire	00:07:50
Overall Female Grinder Champion 2017:	Simangele Faith Mbanjwa	eThekwini Fire	00:11:54
Overall Runner Up 2017:	Emile Conrad	Eden District	00:07:01
Overall Master's Grinder Champion (over 40yrs):	Charles Bishop	TNPA Richards Bay	00:08:38

Team relay

Winners: Eden District Municipality 00:03:28

Male category winners

18 – 29:	Simiso Cyprian Gumede	eThekwini Fire	00:06:44
30 – 34:	Emile Conrad	Eden District	00:07:01
35 – 39:	Thabo Mgumbeza	eThekwini Fire	00:08:26
40 – 44:	Charles Bishop	TNPA Richards Bay	00:08:38
45 – 49:	Kumarasan (Adrian) Naicker	ACSA	00:14:59
50 and over:	Sathananthan Naidoo	IFE	00:19:58

Female category winners

18 – 29:	Precious Mpunguse	eThekwini Fire	00:12:03
30 – 34:	Simangele Faith Mbanjwa	eThekwini Fire	00:11:54
40 and over:	Grace Masango	eThekwini Fire	00:13:41





Heavy vehicle extrications PART 2

By Neville van Rensburg and Julius Fleischman,
World Rescue Organisation (WRO) assessors and members

Having a basic knowledge of heavy-truck types and their associated hazards is essential for rescuer safety and operational success



In South Africa, heavy commercial vehicles have become much bigger, more advanced and travel much faster than ever before. In order to be able to execute a good extrication, a good basic knowledge of trucks and their anatomy is essential.

Heavy commercial vehicle accidents present us with quite a different challenge and we need to stay abreast to meet this challenge. With many trucks on our roads and the increase of heavy vehicle accidents, it shows that in many of these accidents people are seriously injured or do not survive and compartment syndrome plays a vital role.

This is due to specific features of new technology as well as the size of the truck. The safety of the driver and the front seat passenger is the primary focus of cabin construction, safety for the occupants in the cabin. Manufacturers of heavy commercial vehicles are constructing the roof and pillars with different types of steel such as boron,



On accidents scenes, we must be sure if there are any hazardous materials (hazmat) involved

ultra high strength steel (UHHSS) and high strength low alloy steel (HSLA).

In order to successfully cut these pillars in a rescue operation, a cutter with sufficient power and the right blade design is essential. If you want to create space or push away parts of the cabin, you need to weaken the construction first by making appropriate relief cuts.

So! Performing heavy truck extrication is no different. During this series on

heavy truck extrication, we want to stress this fact: You can't take a small-vehicle approach to rescues involving heavy trucks. From staffing, staging and vehicle size to tools, tactics and construction, heavy truck extrication is considerably different than a tool job involving a car. It's also crucial to keep things as simple as possible so that the rescue fire fighter can make smart decisions and easily recall important information for these low-frequency rescue events.

With rescuer safety being our number one priority, it is critical that the cargo always be identified prior to approach and start of operations. Follow local, provincial and national rules for hazardous materials identification and mitigation. Basic rules such as approaching uphill/upwind, scanning the vehicle for placards, identifying the container type and simply asking the driver what's in the truck, are safe and effective practices.

Standard rescuer personal protective equipment includes helmet, eye protection, ear protection (as needed), steel-toe boots and work gloves. Flash-resistant clothing with the ability to protect the rescuer from blood-borne pathogens is recommended.

For patient safety, hard and/or soft protection should always be used to protect the patient. Hard protection could be a rigid material such as a paediatric backboard or a section of Plexiglas. This is typically placed between the patient and a rescue tool operating in close proximity to the patient. Soft protection is considered a flame-resistant extrication blanket to shield the patient from debris such as glass.

Other points to keep in mind during such a rescue operation include the following:

- The driver seat is mostly adjustable in a variety of ways but always remember that sometimes it can lower itself if the power is switched off. Make use of this knowledge if you want to create space, but also be aware of the possible risks.
- Electrical current; in many cabins you will find high voltage appliances (220 V).
- Independent suspension of the cabin; stabilise this before entry. Make sure the connection (hinges) between the cabin and chassis are not broken before you block the suspension of the cabin.
- Sleeper compartment (if existing); check if there was somebody sleeping when the accident occurred.
- The cabin size and height may require you use a working platform.

If you want to remove parts of the cabin, always remember the weight of those parts. The weight of a door for example is between 80 and 120kg.

It may be necessary to take some precautions before you remove these parts. In case of the door, you may need to secure it with a rope over the cabin to the other side before you start to remove it. In this way you can lower the door gently and controllably from the other side, after removal.

On accidents scenes, we must be sure if there are any hazardous materials (hazmat) involved. If so, special hazmat procedures should be followed. The 'fifth-wheel' attaches the truck tractor with the trailer. During the collision impact, this connection may have become pressure loaded. Avoid at all cost that this connection is uncoupled. This may lead to dangerous unexpected movements of one or both units. Also make sure that the weight of the load is not affecting your rescue plan; maybe the stability of the load needs extra attention.

Before you start a rescue operation, always check the stability of the combination 'truck and load'. If it is necessary to stabilise, this may require special equipment. Normal stability equipment, which is used in light goods vehicles (LGV) incidents, may not be suitable for these types of incidents due to the fact that they may not be strong enough. Low pressure lifting bags can provide some stability but the use of (hydraulic) shoring equipment with enough power and strength will provide the safest stability. The landing gear can

also be used to lower them to help with stabilisation of the truck's load.

Most trucks carry an amount of fuel with them. Tanks with up to 800 litres are not uncommon. Some trucks even have more than one tank connected with each other. Besides the possible risks when the cabin is on fire, one also needs to consider the environmental implications of leakage.

The current voltage in trucks is mostly 24 volt, created by two connected batteries. These batteries can be found in a variety of locations around the truck, eg at the left and right side of the chassis. To disconnect the power supply it is not always necessary to reach these batteries. Modern trucks are provided with an emergency switch. You will find it on the driver side, near the batteries location. In the early days, trucks were provided with leaf springs in all kinds of types and strengths that did not really affect the rescue operation.

Having a basic knowledge of heavy-truck types and their associated hazards is essential for rescuer safety and operational success.

We are all out here to work together for the same cause and conclusion, to safely save lives. As always, be safe out there and train to your best.

Sources: Fire Engineering, Fire link 



Heavy commercial vehicle accidents present us with quite a different challenge

29 Oct - 3 Nov 2017

Expo Centre NASREC, Johannesburg

CLIMATE CHANGE AND THE EMERGENCY SERVICES

The 31st SAESI Conference, Exhibition, Training Events and Challenges

CONFERENCE

EXHIBITION

TRAINING

CHALLENGES



**THE LARGEST EMERGENCY SERVICES
CONFERENCE AND EXHIBITION IN AFRICA**

The programme will include:

- Conference
- Exhibition
- Gala dinner
- Cocktail evening
- SAESI EXCO meeting
- Fire Fighter Challenge
- Vehicle extrication
- High angle rescue
- Emergency medical rescue
- Incident command system
- Badge swapping evening
- World record attempt
- Meet and greet
- And much more!!

Registrations and
exhibitor bookings
NOW OPEN online
saesi2017.com

Save the date!

Conference programme, exhibition layout and details on the training events and challenges will be released shortly

For more information contact the organiser

Lee Raath-Brownie at Fire and Rescue International

Tel: 011 452 3135 Cell: 082 371 0190 Email: lee@fireandrescue.co

Organiser

**FIRE AND RESCUE
INTERNATIONAL**

THE 31ST SAESI CONFERENCE, EXPO AND TRAINING EVENTS 2017



Themed, 'Climate change and the emergency services', The 31st SAESI Conference, Expo and Training Events 2017 will be held at the ExpoCentre, NASREC, situated in Johannesburg, South Africa from 29 October to 3 November 2017 and is endorsed by the Gauteng Province CoGTA and the National Disaster Management Centre (NDMC).

Conference and expo

The conference will be held from 1 to 3 November 2017 and will address issues pertaining to climate change and the impact thereof on the emergency services.

The impressive speaker line-up includes international and local presentations bolstering insight, research and practical know-how with hands-on discussions providing a great networking forum for debate.

International speaker

Alan Pellowe, 112 Solutions and consultant to the UN will discuss:

- The global problem of climate change affecting the fire profession
- Incident related issues faced within Africa and South Africa
- Early warning systems
- Risk-based fire fighter and rescue training
- Specialised equipment and the funding issues

Conference and expo

The ever popular SAESI Conference will be on 1 to 3 November 2017, supported by an industry expo. The plenaries offer an ideal opportunity for industry-specific networking and workshops. The topics are relevant and registration starts at 7h00 and the conference starts at 8h00.

The conference will be held from 1 to 3 November 2017 and will address issues pertaining to climate change and the impact thereof on the emergency services.

Wednesday, 1 November 2017

Registration starts at 7h00 and the conference starts at 8h20

- Necrology
- New SAESI President's inauguration
- Occupational certificate: Fire Fighting NQF 4: LG SETA, QCTO and SAQA
- Keynote address: Climate Change effects on the fire profession globally by Alan Pellowe, 112 Solutions, UK
- Minister of CoGTA address
- SAESI Long Service Awards
- Rosenbauer Service Excellence Award
- Rosenbauer Social Responsibility Awards

2 and 3 November 2017 will see industry-specific plenary session with registration starting at 7h00 and the conference starting at 8h20.

See programme on next page.



SAESI 2017 Plenary programme

		Thursday, 2 November 2017	
		Technical rescue the rhythm of rescue article	
8h30	Wildfire/urban interface Welcome: SAESI EXCO member	Welcome: SAESI EXCO member	ARFF Welcome: SAESI EXCO member
9h00	Forest and Veld fire Act: DAFF	Technical rescue, an international perspective and trends: Alan Pellowe	Aerodromes categorisation, audits and licensing requirements: Nomusa Mkhize, CAA
9h30	Wildfires in the urban interface ICS Challenges: Ian Schnetler, City of Cape Town	Trench rescue: Charles Mbaso, City of Tshwane Fire and Rescue	Importance of brand and reputation: Clive Naidoo, ORTIA
10h00	Pre-Season planning: Malcolm Procter	The rhythm of technical rescue: Colin Deiner, Western Cape Province	Training standards: Rudi Swanepoel
10h30	Wildfire courses and training: Braam du Preez, NIMU	Tea break	Tea break
11h00	Tea break	Combat Search and Rescue (CSAR): Peter van der Spuy, ER24	A pilot's perspective: David Chandler
11h30	FPA strategies and lessons learned: Stephen Devine, MUJFA	Beyond the rubble: Amed Bahm, Gift of the Givers	Fleet and equipment maintenance: Jo Niemann
12h00	Wildfire awareness toolkit: Etienne du Toit	Off road rescue: Ivor Rimmer	Search and rescue: Santjie White
12h30	Forensic wildfire investigations in the light of climate change: Rob Erasmus	Q and A	Q and A
13h00	Knysna case study: Colin Deiner, Western Cape Province	Close of conference: Viewing of exhibition, challenges	Close of conference: Viewing of exhibition, challenges
13h30	Q and A		
	Close of conference: Viewing of exhibition, challenges		
		Friday, 3 November 2017	
		Emergency Medical Service	
8h30	Fire safety Welcome: SAESI EXCO member	Welcome: SAESI EXCO member	Industrial fires workshop: André Tomlinson Welcome: SAESI EXCO member
9h00	Fire safety in South Africa: challenges: Dr Moses Kghangale, NDMC	Medical Command and Control: Theo Ligthelm	International incidents and trends
9h30	Fire safety: Moshema Mosia, FPASA	Paediatrics, retrieval and treatment of sick infants: Kayleigh Lachenicht	Tanks farm fires
10h00	Enforcement of fire safety on high-jacked buildings: Arthur Mqwa, City of JHB	Trauma systems in Africa: Dr Denis Allard, Netcare Christiaan Barnard Memorial Hospital	The importance of training in industrial fires
10h30	Pre-incident planning: Anthony Bruno, Midvaal Fire and Rescue	Latest developments in resuscitation: David Stanton, Resuscitation Council	Fixed systems vs response
11h00	Tea break	Tea break	Tea break
11h30	Fire service industry, where to from here: Tony Belanco, JASCO	Towards implementation of EMS within NH: Raveen Naidoo, Department of Health	Water supply and relay
12h00	JHB Safety kits: Synock Matobako, City of Johannesburg	Medic and scene safety: Dr Vernon Wessels, ER24	Emerging and future technology
12h30	Smoke alarm campaign: JJ Pretorius, Breede Valley Fire Department	Private ambulance service: Oliver Wright, SAPEASA	Q and A
13h00	Gauteng Province PIER Project update	Q and A	Close of conference: Viewing of exhibition, challenges
13h00	Close of conference: Viewing of exhibition, challenges	Close of conference: Viewing of exhibition, challenges	

Introducing the firefighting specialists!

Launched as a result of a real need for innovation and top quality products to enhance the ability to save lives and fight the uncontrollable with confidence.



COBRA Fire offers:

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- ✓ Compact CAFs units
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- ✓ FRC foam systems
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E. sales@cobrafire.co.za | W. www.cobrafire.co.za | 11 Steele Street, Steeledale

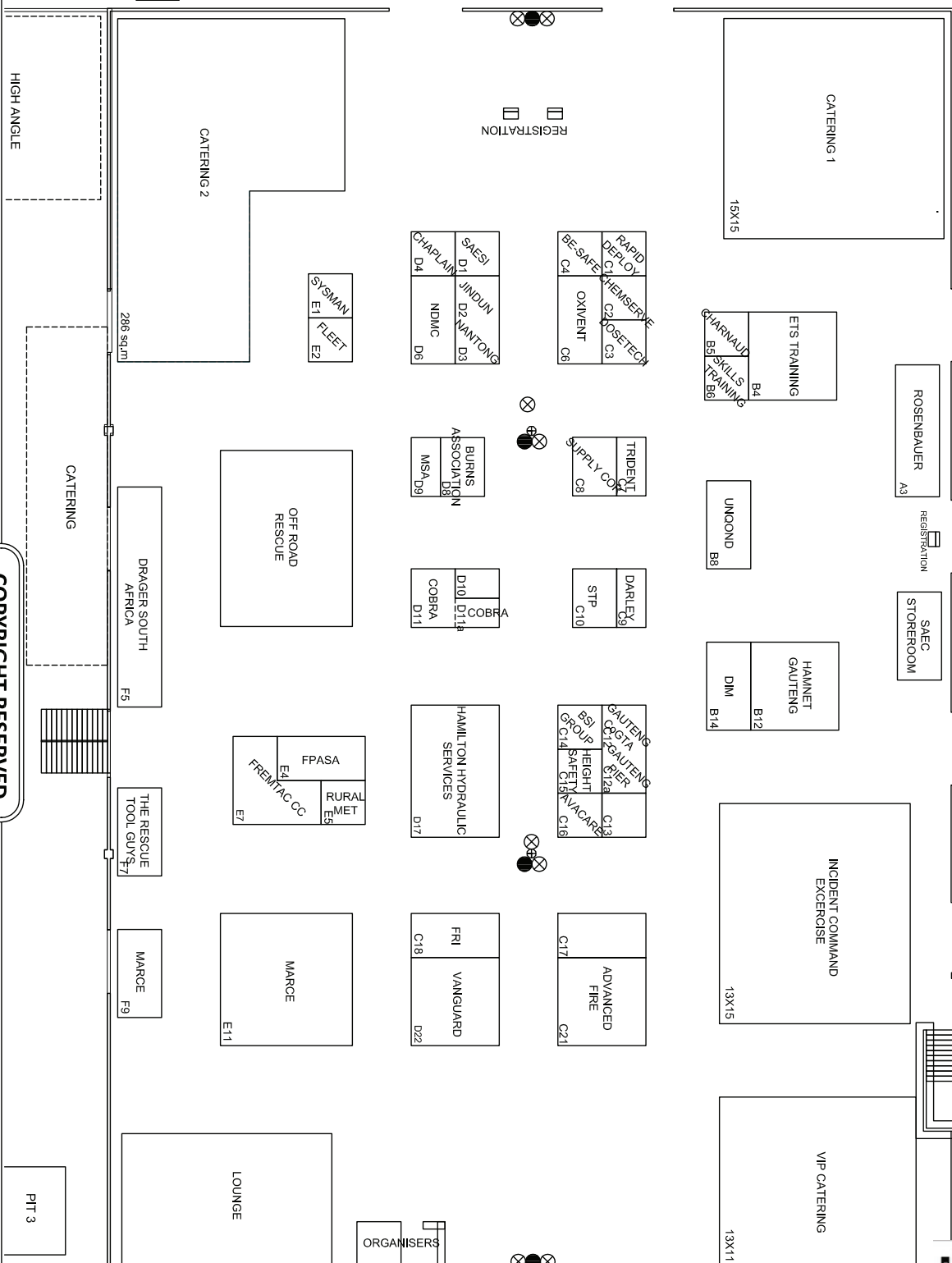


PARKING

OUTDOOR EXHIBITS

ORGANISER:
FIRE RESCUE INTERNATIONAL
SAESI 2017
CLIMATE CHANGE AND THE EMERGENCY SERVICES

ENTRANCE



HIGH ANGLE

COMPETITIONS



SHOW / STAND : Fire & Rescue - SAESI Expo
 SHOW DATES : 31 Oct - 3 Nov 2017 VENUUE : Expo Centre, Hall 7
 DRAWING TITLE : Layout

EXPO SOLUTIONS
 COPYRIGHT RESERVED

DRAWING / REV DATE : 27 October 2017
 DRAWING SCALE : NTS
 DESIGNER : Karen Robinson

NS

CATERING 2

286 sq.m

CATERING

DRAGER SOUTH AFRICA F5

THE RESCUE TOOL GUYS F7

MARCE F9

HIGH ANGLE

JUMP MAT

JUMP MAT

COMPETITION LOUNGE



PIT 1

PIT 2

PIT 3

HAT HOLDING AREA	
HA1	HA2
HA3	HA4

EC2	EC1
JUDGE OFFICE	

FIRE EXIT

FIRE EXIT

FIRE EXIT

FIRE EXIT

FIRE EXIT

FIRE EXIT

STORAGE

STORAGE

EXTRICATION PITS 1

EXTRICATION PITS 2

EXTRICATION PITS 3

EXTRICATION PITS 4

10x13

HOLDING AREA
EMS 3 EMS 2 EMS 1

JUDGE ADMIN

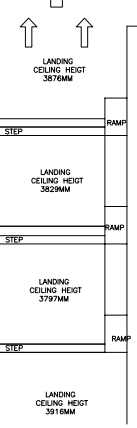


OFFICE 9

OFFICE 10

OFFICE 11

TOP VIEW



ORGANISER:
FIRE & RESCUE INTERNATIONAL
INTERNATIONAL

SHOW / STAND : Fire & Rescue - SAESI Expo

SHOW DATES : 31 Oct - 3 Nov 2017 VENUE : Expo Centre, Hall 8

DRAWING TITLE : Layout



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DRAWING SCALE : NTS

DESIGNER : Karen Robinson

JOHANNESBURG: PO BOX 957, Northriding, 2162. TEL: (011) 704-1953 | DURBAN: PO BOX 959, Hyper-Bj-The-Sea, 4053. TEL: (031) 304-2309 | CAPE TOWN: PO BOX 526, Paarden Eiland, 7420. TEL: (021) 510-5871

SAESI Expo 2017 exhibitor details

AJ Charnaud & Co (Pty) Ltd

Stand: B5

Contact person: Tsholofelo Mashuga

Tel: 011 794 6040

Email: tsholo@charnaud.co.za

AJ Charnaud & Company (Pty) Ltd. has, since its foundation, been at the forefront of the development and manufacturing of specialised personal protective clothing. With a complete head-to-foot range of certified products, supported by advanced professional and technical assistance, Charnaud is regarded as a leading global supplier of personal protective clothing for protection against flames, fire, radiant heat, molten metal splash, acid and the thermal effects of electric arc flash. Charnaud exports personal protective clothing worldwide to protect workers across five continents.



Cobra Fire

Stand: D11

Contact person: Trevor Obery

Tel: 011 568 0731

Cell: 079 520 1499

Email: trevor@cobrafire.co.za

Cobra Fire will be showcasing its compressed air foam system and a wide range of top quality fire and emergency equipment. This will include Safe Fleet lights and cameras, FoamPro Foam Proportioners, ROM doors and Elkhart Brass monitors and nozzles. Cobra Fire also custom manufactures rapid intervention vehicles, as well as civil and industrial fire fighting vehicles.



Avacare Health Devices (Pty) Ltd

Stand: C16

Contact person: Ashley Sutton

Tel: 021 842 0075

Cell: 061 479 9252

Email: ashley@avacareortho.com

Avacare Health Devices is the capital equipment and medical devices specialist company for the Avacare Health Group. The company is made up of experienced and specialised staff and utilising the vast network of the group, we are able to give the best possible technical and clinical support throughout the region. All our sales, marketing and technical teams are factory-trained and we strive to deliver a world-class service with market-related pricing.



Dräger South Africa (Pty) Ltd

Stand: F5

Contact person: Wimpie van Onselen

Tel: 011 059 4200

Cell: 082 465 2362

Email: wimpie.van-onselen@draeger.com

Dräger South Africa's key focus this year will be on our touchpoint system: pre-incident, incident, post-incident. Visit us at our stand and learn more about why your mission drives us. Meet our experts and discover what makes Dräger's safety and fire fighting solutions different. Expect live demonstrations, product information and much, much more, including the exciting mobile training gallery and our 'test your strength' competition.



Be Safe Paramedical

Stand: C4

Contact person: Chris Kros

Tel: 011 794 7476

Cell: 082 216 2242

Email: chris@be-safe.co.za

Description: Be Safe Paramedical has been a significant role player in the medical device industry for over 20 years. With branches in Cape Town, Johannesburg and Durban, we are perfectly positioned to offer our clients a broad range of high quality medical products from basic disposables to high-end capital items. Progress saves lives...™



Dynamic Incident Management (Pty) Ltd

Stand: B14

Contact person: Michelle Kleinhans

Tel: 078 272 9089

Cell: 078 272 9089

Email: michelle@dynamicincident.co.za

or info@dynamicincident.co.za

Dynamic Incident Management (Pty) Ltd is a training service provider with accreditation from the Local Government Sector Education and Training Authority (LGSETA). It specialises in integrated incident/event and fire management training for all types of industries. The importance of having trained, competent and prepared response capability, from first response to complex incident management teams, is vital for all agencies.



BSI Group South Africa

Stand: C14

Contact person: Ronel Liebenberg

Tel: 012 004 0164

Cell: 060 980 2319

Email: ronel.liebenberg@bsigroup.sa

The British Standards Institution (BSI) is an approved global certification and testing body. We have some of the widest testing and certification capabilities in the world, giving you confidence in your products and helping you gain access to global markets. For more information visit <https://www.bsigroup.com/en-ZA/>



Emergency Services Chaplaincy of Southern Africa

Stand: D4

Contact person: Rodney Berry

Cell: 060 808 0235

Email: info@escsa.org.za

The Emergency Services Chaplaincy of Southern Africa provides spiritual and emotional support and guidance to all emergency services and support services personnel. Chaplains provide ministerial support by bringing a short message and prayer at parades, events and shift changes. During times of major structural fires, chaplains support the emergency services personnel by providing them with refreshments. As a secondary role chaplains also provide support to personnel and victims at accidents and other traumatic scenes.



ETS Emergency Training Solutions (Pty) Ltd

Stand: B4

Contact person: Pinkie Matjeke

Tel: 016 363 0253

Cell: 072 980 2046

Email: pinkie@etsafrica.co.za

ETS Emergency Training Solutions is an accredited fire, hazardous materials and first aid training centre. We specialise in emergency response and safety training, as well as the provision of trained emergency response personnel. For more details visit our website on www.etsafrica.co.za.



Cell: 078 209 7349 and 073 294 4137

Email: eddieg@gpg.gov.za

A team from CoGTA will introduce visitors to the vital role the department plays in fire, rescue and disaster management in Gauteng. Educational materials and pamphlets will also be available.

Hamilton Hydraulic Services

Stand: D17

Contact person: Jim Hamilton

Tel: 011 828 1083

Cell: 082 893 1883

Email: hhshurst@netactive.co.za

Hamilton Hydraulics will be showing the latest technology in rescue tools from Lukas, both eDraulic and hose line. The new Strongarm forcible entry tool from Lukas for fire, police, special weapons and tactics (SWAT) and security departments will be on show, as well as a range of hydraulic lifting bags from Vetter.



Fire and Rescue International

Stand: C18

Contact person:

Lee Raath-Brownie

Tel: 011 452 3135

Cell: 082 371 6920

Email: lee@fireandrescue.co

Fire and Rescue International (FRI), official magazine of SAESI, is a monthly, technical magazine that has fire safety, suppression and management, technical rescue, emergency medicine and incident management as its core focus. Visit our stand, sign up for the free weekly FRI Newsletter and stand a chance to win an awesome prize!



Fire Protection Association of Southern Africa

Stand: E4

Contact person: Renay Sewpersad

and Christine van der Westhuizen

Tel: 011 397 1619

Cell: 079 940 7422

Email: college@fpasa.co.za

and johanv@fpasa.co.za

and library@fpasa.co.za

Fire Protection Association of Southern Africa provides professional fire education and training that is accredited by the Local Government Sector Education and Training Authority (LGSETA), the European Confederation of Fire Protection Associations, the Civil Aviation Authority, recognised by the Insurance Institute of South African and the UK-based Institute of Fire Engineers and meets ISO 9001 requirements. Our comprehensive range of courses includes specialised diploma programmes in fire prevention and advanced fire prevention.



Hamnet

Stand: B12

Contact person: Leon Lessing

and Glynn Chamberlain

Tel: 087 550 2482

Cell: 082 440 7733 and 072 119 0559

Hamnet provides and manages critical communications in emergencies and disaster situations. We can establish and maintain communications with and between agencies using radio technique, including digital modes. Hamnet operations are network independent. We get the message through no matter what!



Industrial Hazard and Fire Control

Stand: C21

Contact person: Lee Marques

Tel: 011 869 2142

Cell: 073 744 2553

Email: leem@advancedfst.co.za

Industrial Hazard and Fire Control supplies the most effective, tried and tested equipment and foams available on the world market. We also provide comprehensive site assessments, risk assessment and mitigation, emergency pre-planning, laboratory-based testing of foam, technical support, design services, onsite support, field testing, assembly services, service and maintenance of equipment and training.



Fremtac Fire and Rescue

Stand: E7

Contact person: Jimmy Croucamp

Tel: 082 412 6319

Cell: 082 412 6319

Email: jimmy.c@fremtac.com

FREMTAC Fire and Rescue's range of forcible entry tools, self-contained breathing apparatus, thermal imaging cameras, power tools, battery operated hydraulic rescue equipment and rope rescue equipment will be on display, along with its handmade leather shields for fire helmets.



Marcé Fire Fighting Technology

Stand: E11

Contact person: Leppy Seale

Tel: 012 742 9200

Cell: 076 106 5964

Email: leppy@marce.co.za

Marcé Fire Fighting Technology's range of solutions includes vehicles, equipment, components and refurbishments, as well as maintenance of fire stations. Its fire fighting vehicles, which are customised to suit clients' requirements and budgets, range from skid units to aircraft rescue and fire fighting (ARFF) vehicles. Marcé stocks the widest range of innovative emergency services equipment and components available in Africa. Its turnkey solutions include the construction of next-generation, environmentally-friendly, fully-equipped fire station solutions. Marcé also offers customised software solutions for a variety of applications, from asset and vehicle management to computer-aided dispatch.



Gauteng Department of Cooperative Governance and Traditional Affairs (CoGTA)

Stand: C12

Contact person: Eddy Golele

and Aletta Selepe

Tel: 011 355 5756



Modül Grup Mühendislik Elektronik Medikal İnş

Stand: C6

Contact person: Zeynel Abidin Delikan

Tel: Head office: +90 312 354 03 73

Cell: +90 531 259 55 79

Email: zeynel@modulmuhendislik.com.tr

Modul Grup Mühendislik Ltd is a manufacturer of emergency transport ventilators in Turkey. The company's products are manufactured in accordance with ISO 9001:2008, ISO 13485, ISO 14001 and OHSAS 18001 standards and are EC certified. The product range includes models suitable for neonatal, infant, child and adult usage and the ventilators are suitable for ambulance, emergency service and intensive care units. These high-performance ventilators with low power requirements are ideal for field hospitals and mobile hospitals.



MSA Africa

Stand: D9

Contact person: Carla Nelson

Tel: 011 610 2600

Cell: 082 880 1146

Email: orders@msafrica.co.za

MSA has been the world's leading manufacturer of high-quality safety products since 1914. Visitors to our stand will get a hands-on experience of our product offering, which ranges from advanced fire-fighting equipment such as self-contained breathing apparatuses to thermal imaging cameras, the new Altair 4XR portable gas detector and Latchway's fall protection equipment. MSA's latest products include a range of fire gear and helmets from newly-acquired company, Globe.



Nantong Sentian Fire Fighting Equipment Company Ltd

Stand: D3

Contact person: Weifeng Song

Tel: +86 051 383 630 902

Cell: +86 138 136 15 736

Email: peter@firehose.cn

Nantong Sentian Fire Fighting Equipment Company Ltd has more than 30 years of experience in the field of fire hose manufacturing. Based on strong research and development ability and advanced technology, we can customise all kinds of hoses for our customers. We can produce not only hoses but also circular loom and related supporting.



National Disaster Management Centre

Stand: D6

Contact person: Lloyd Phetlhu

Tel: 012 848 48 72

Cell: 082 874 5803

Email: Lloydp@ndmc.gov.za

Representatives from the National Disaster Management Centre will be on hand to explain and provide printed copies of the National Urban Search and Rescue Framework, the Fire Brigade Services Act number 99 of 1987, the International Search and Rescue Advisory Group guidelines and the draft White Paper on Fire Services.



RapidDeploy

Stand: C1

Contact person:

Jason Kampe

and Pumzile Papu



Tel: 021 204 6001

Cell: 076 753 7275

Email: jason.kampel@rapiddeploy.com and crystall.furneaux@rapiddeploy.com

RapidDeploy simplifies the complexity of emergency services dispatch, making a real and positive impact on your business. Through the use of advanced telematics, we create full electronic ecosystems that give you complete control of your system data from beginning to end. As world leaders in dispatch technology, we have the experience and expertise to deploy this technology effectively.

Rosenbauer South Africa (Pty) Ltd

Stand: A3

Contact person: Michael von der Heyde

Tel: 011 805 7912

Cell: 072 925 5959

Email: Michael.vdh@rosenbauer.com

Rosenbauer will display a new 4x4 major pumper as well as various fire fighting equipment, including portable pumps, protective clothing, the revolutionary Titan fire helmet, emergency lighting, submersible pumps, fire engine equipment and hydraulic tools.



Rural Metro Emergency Management Services (Pty) Ltd

Stand: E5

Contact person: Claudelle Davis

Tel: 033 345 0080

Cell: 079 510 5980

Email: claudelle@ruralmetrosa.com

Rural Metro Emergency Management Services is a leading provider of fire and rescue services, emergency dispatch services, and disaster management services and fire and rescue training.



Shanghai Jindun Special Vehicle Equipment Company Ltd

Stand: D2

Contact person: Hao Da

Tel: +86 212 092 91 19

Cell: +86 188 172 15 699

Email: howard@shjd.com

Shanghai Jindun Special Vehicle Equipment Company Ltd is a leading manufacturer of high-tech fire fighting vehicles. Founded in 1986, Shanghai Jindun is a prominent player in China's fire fighting industry and has become a world-class manufacturer of fire fighting vehicles.



SkillsTrain Distribution

Stand: E6

Contact person: Linda Botha

Tel: 011 467 2730 or 011 467 2633

Cell: 082 552 7742

Email: linda@skillstrain.co.za

SkillsTrain Distribution will be launching its new Examview paperless hybrid classroom for fire fighters and emergency medical responders. We'll also be launching our Simsushare educational programme and visitors will have a chance to try out the product for themselves. 173 new soft skills courses, now available on SkillsTrain's online learning management system, will be showcased. A wide range of newly-released textbooks from publishers worldwide will be on display, along with a variety of catalogues. We'll also have exciting giveaways.



Southern African Emergency Services Institute

Stand: D1

Contact person: Lulu Ferreira

Tel: 011 660 5672

Email: info@saesi.com

The Southern African Emergency Services Institute (SAESI) was officially formed on 2 March 1959 under the name, South African Fire Services Institute (SAFSI). The main goal of the then Institute was to provide fire fighting training to its members in Afrikaans. The Institute, now called the Southern African Emergency Services Institute, became a non-profit company in 2014. SAESI's vision is to be a professional emergency services organisation dedicated to the protection of life, property and the environment. Its mission is to constitute a member-driven professional organisation and to promote the safety of the community and the aspirations of its members through the promotion of all aspects of emergency services.



Trident Emergency Products

Stand: E7

Contact person: Alan Saulsbury

and Marius Koekemoer

Cell: 081 374 8534

Email: saulsburyalan@aol.com

Trident Emergency Products is guided by the age-old philosophy of uncompromised customer service. We strive to design, manufacture and sell innovative products and components that are easy to install and economically priced. These include AirPrime, a patented fire pump primer that uses air from the brake system, seven models of Titan's Underwriters Laboratories-listed class B foam pumps, Foamate's class A and B around-the-pump foam proportioners, Tru-Flo's slow-close valve control units, NextStep folding steps, the AirMax air-operated remote control intake relief valve, Equilizer venting units for hose caps and plugs and a full range of plumbing components, adaptors and swivels.



Super Group E-ONE

Stand: E2

Contact person: Wayne Taylor

Tel: 011 523 4300

Cell: 082 857 2353

Email: Wayne.taylor@fleetafrica.com

For 43 years E-one has been an industry leader in the engineering, manufacturing and delivery of fire engines worldwide. Every E-one fire apparatus is built from the ground up for performance and safety you can count on. We are unwavering in our commitment to produce a superior product that leads the industry in crew safety, rugged durability and performance.



Unqondo Projects

Stand: B8

Contact person: Chenel Hemraj

Tel: 011 795 1699/1899

Cell: 082 853 3167

Email: admin@unqondo.co.za

and r.hemraj@unqondo.co.za

Unqondo Projects has been actively involved in the fire fighting arena for the past 14 years. Their work areas include municipal fire brigades, petrochemical companies, refineries and all other fire risks areas. Their products are imported from all parts of the globe. Locally manufactured products include trailers, fire fighting vehicles and various customised products.



SupplyCor

Stand: C8

Contact person: Wayne Parsons

Tel: 011 792 2906

Cell: 083 267 6707

Email: wayne@supplycor.co.za

SupplyCor will be displaying its wide variety of high-quality uniforms, footwear and associated products.



Vanguard Fire and Safety

Stand: D22

Contact persons: Stuart Wood

and John Buchan

Tel: 041 451 2461 and 031 564 3200

Cell: 082 4929166 and 082 565 8200

Email: stuart@vanguardafrica.co.za

and john@vanguardafrica.co.za

Explore innovation with Vanguard Fire and Safety's range of superior quality water delivery solutions including the remarkably versatile Hemisphere transportable monitor. The Bullard UST helmet, featuring the new Retract visor system will be on display, along with a broad product lineup of internationally recognised, industry leading brands.



Sysman

Stand: E1

Contact person: Theo de Hart

Tel: 011 300 3300

Cell: 083 602 3083

Email: sales@sysman.co.za

Sysman specialises in the supply of turnkey "911" type command and control, computer-aided despatch, information management systems and communication solutions for the emergency services and disaster management centres. Visit our stand to find out how our products can transform your agency. For more information, visit www.sysman.co.za.



WS Darley and Company

Stand: C9

Contact person: Marius Koekemoer

Tel: 081 374 8534

Cell: 081 374 8534

Email: mariuskoekemoer@darley.com

WS Darley and Company is a fourth generation, family-owned business with headquarters in the United States. We manufacture fire pumps and offer the longest warranties in the industry. In addition to this, we offer a complete source of fire fighting equipment from our 300-page catalogue. Come and get a copy at our stand. Darley also manufactures a full range of water purification equipment for disaster relief.



The Rescue Tool Guys (Pty) Ltd

Stand: F7

Contact person: Johan Muller

Tel: 011 823 2481

Cell: 082 609 3438

Email: johan@trtg.co.za

The Rescue Tool Guys supplies a comprehensive range of hydraulic rescue equipment. We're also the first choice for servicing of and repairs to your existing equipment.



Structural fire fighting: Two plus one response

By Colin Deiner, chief director, disaster management and fire brigade services,
Western Cape Government



"When the ladders go up, the walls come down"

Two engines and one ladder. The standard first turn out to any structural fire. It should be common sense. But is it? A good friend of mine who worked in a neighbouring fire service some years back, made a point of responding his ladder truck on all structural fires to the great irritation of his rather 'traditional' chief and every time he was chastised about this practice, his retort was, "When the ladders go up, the walls come down".

This somewhat humorous story really goes to the heart of what I want to get across in this month's article. Could you imagine playing rugby against a full 15-man team if you only have 10 players

in your own team, yet we expect our fire crews to respond to fires without the adequate staffing levels to effectively deal with them? This is not only bad practice but it is also unsafe.

Remember, a fire doesn't respect or reputation, religion or race. It respects your skills and knowledge and how you use them to confront it.

I have frequently written about staffing levels and effective response in the past. This month, however, I want to focus on how it is all put together. What does each responding unit do, how do they complement each other. In the aviation industry there is a saying that any landing you walk away from was

a good landing. In the fire service any shift that everybody gets to go home at its end was a good shift. We need to ensure that through proper recruitment, training, equipment, standard operating procedures and incident command we give our fire fighters the maximum chance to do just that.

So how does a 2 + 1 response work?

Generally, your first engine will have the responsibility of the initial attack. This will include a rapid assessment, which will inform the strategy, either offensive or defensive mode, deploying an initial attack-line, secure a water source and protect exposures. They will only be able to perform a number

of support activities for the initial attack. This will include limited forcible entry (to provide entry for the hose team), positive pressure ventilation and possible search and rescue. Considering that you only have a crew of four on this engine, it will be ludicrous to expect them to do more than that.

The initial incident commander will most likely be the officer on this unit, which means that he/she will have to free themselves up to establish command and inform the next arriving units of the prevailing situation and their assignments. I have often advocated that the first arriving engine should always do a three-quarters drive-by ie drive past three sides of the structure and then place itself on a corner of the structure. This will allow the front of the structure to be used for siting the aerial device. The second arriving engine should always arrive after the aerial device and site itself in the most advantageous position for establishing a sustained water supply and providing an additional attack line(s). The second engine, therefore, has more time to spend on situational awareness.

We all know that the decisions made in the first few minutes after arrival will set the tone for the entire rest of the operation. This will generally be done by the first arriving officer.

If you have the incident commander responding in a command car and he/she arrives at the same time as the first-in engine, these decisions will be able to be made with more insight and be able to be carried through to the next arriving units with greater continuity. You notice that I didn't say 'with greater authority'. Simply explained, the decisions made by the first officer must have as much authority as if it were made by the fire chief. The first-in officer is the first incident commander and the incident will escalate from the decisions made at this point. It is therefore vital that the person assigned to command the first arriving unit, must be trained and qualified to make the necessary decisions that will positively influence the entire operation.

The common practice in most of our cities of having a senior officer respond from home after hours is probably the worst decision ever made. Release



The second arriving engine consider ventilation requirements

them from shuffling papers all day and use them for what they are employed for, fire command.

If we assume that the first arriving incident commander has done his/her rapid assessment, decided on a plan of action, communicated the plan and initiated fire fighting activities, the next arriving units should complement that strategy and not change it. A few minor tweaks might be necessary and this should not be a problem. The second unit is there to support the initial attack, not change it. This does not, however, mean that if this crew has noticed any changing conditions or picked up on something the first arriving incident commander has not seen, it should not be passed on.

The initial incident commander will stay in that position until such time as a formal transfer of command has taken place. Just because the chief has arrived on scene it does not mean that command has been transferred to him/her. Hopefully your department's command system will allow for a seamless transfer of command in which all operational

crews are clear on from whom to receive their orders. The old adage that the word CHAOS is merely an acronym for "Chief Has Arrived on Scene" need not necessarily always be true.

If your department employs a 2 + 1 response, your standard operating procedures (SOPs) will generally contain a list of functions that need to be carried out by the truck company and second arriving engine. These should not be seen as 'cast-in-stone' and it is important to rather see these functions as a list of options available to you. The second-arriving engine should facilitate or support the first-arriving engine by employing those activities, which will make the largest, immediate impact on the operation and that are needed to facilitate the initial strategy.

In most fire incidents, this will be in support of the deployment of the primary attack line. If the first arriving engine has entered the structure and engaged the fire without securing a sustained water supply, it should be your first priority. If they are struggling to control the fire with a single line, ►



Often we will be confronted with a complex operation requiring more and more varied resources

- ▶ you should prioritise getting a second line onto the fire.

The truck company function should be fairly confident that all their functions will be utilised and therefore their arrival should see the commencement of forcible entry, ventilation and laddering.

Considerations

A number of factors will inform the second arriving engine which activities to perform. These include the following:

- Has a sustained water supply been established?
- How many lines are you going to deploy. A standard deployment of three lines –front entry, rear entry and roof entry should always be your first consideration; you can then work from there.
- Entry challenges: Is forcible entry required? Are there sufficient egress routes?
- Roof construction: collapse possibility? Will it be necessary to apply Class A foam to the loft opening to prevent fire spread and a possible flashover in the roof?
- Rescue requirements: Any possibility of persons still in the structure and, if so, how many?
- Location of the fire: How easy will it be to access the fire? Can you see the fire? And, if so, can you apply water to the seat of the fire?
- Ventilation considerations? Is it possible for the hose teams to hydro ventilate or do openings have to be made? The same goes for positive pressure ventilation. Can

your truck company get to the roof to initiate vertical ventilation?

- Is it feasible to continue with the strategy initiated by the first arriving engine or should a rethink be done?
- Will you be required to take over command? If so, this will not necessarily have to unduly influence the decisions made at this stage.

Escalation

Up to this point I have outlined the initial response of 2 + 1. Often we will be confronted with a complex operation requiring more and more varied resources. We all recall the old first arriving engine radio call of "Make pumps many". How many you might need and how you will deploy them, should be made clear before you start calling for them. You must decide on your strategy and calculate what resources you need before deciding what to call for. Also decide on the positioning of a secondary staging area before calling for them. In an age where most cities have mutual aid agreements, I place you should not have a problem getting extra assistance.

Calling in these additional resources must be done in a calculated manner. Just calling extra resources could complicate your command system and quickly overwhelm your incident, something akin to General Custer calling for more Indians.

So, what should your second alarm standard response be? I would

recommend one additional engine and one additional ladder truck. We now have a 3 + 2 response. Your third arriving engine can then focus mainly on stretching additional lines while the second ladder truck can perform additional support functions. For example, if you have a heavily steel reinforced security challenge of windows above ground level, your entire first truck company will be tied up removing these barriers ie one cutter and one (or two) for the laddering. This will mean that the other support functions may be compromised. This is where your second truck company comes in. I will in a future article discuss the concept of 'riding positions' and the importance thereof.

A situation might dictate that all you need for additional support is another aerial apparatus. If that's all you need, call for only that. It is, however, important for me to have a pre-determined call out procedure with each arriving unit having no doubt as to what will be required of them upon arrival.

In closing, a word on incident command

Most of my day job currently is spent in the wildland fire fighting environment. I also spend a lot of time as chairperson of the National Incident Command Working Group (SAICS) in spreading the gospel of incident command to various organisations and people. At one such a discussion a fire chief of a town with only a single fire station mentioned that with his limited staff it would be impossible to implement an effective incident command system.

Soon thereafter we experienced a massive fire in one of our districts and a chief in a similar role had to assume the role of incident commander over more than one thousand fire fighters and eighty fire fighting vehicles. The chief in question had previously attended a range of our ICS courses and was able to do a fantastic job. This is a fine example of the flexibility of incident command and the level of thinking and planning that should go into a fire service when it is establishing its operational planning.

It is all about you pre-planning, pre-determining your attendance and working according to your plan. ▲

Berufsfeuerwehr Mönchengladbach, Germany



Berufsfeuerwehr Mönchengladbach at Station 2



Berufsfeuerwehr Mönchengladbach is the municipal fire service situated in Mönchengladbach, Germany. Fire and Rescue International visited the Berufsfeuerwehr Mönchengladbach and met up with Chief fire officer Jörg Lampe during a recent visit to Germany and was honoured to spend a day with him, visiting the fire stations in Mönchengladbach as well as head office/command centre, while the chief and some of the staff members provided an overview of the fire service.

Mönchengladbach, formerly known as München-Gladbach is a city in North Rhine-Westphalia, Germany and is located west of the Rhine River, halfway between Düsseldorf and the Dutch border. The original name of the city was Gladbach, which is still used in its name today. To distinguish the town from another town of the same name (the present Bergisch Gladbach), it took the name München-Gladbach in 1888. This spelling could mislead people to think that Gladbach was a borough of Munich and consequently the name was changed to Mönchen-Gladbach in 1950 and Mönchengladbach in 1960.

The origin of the town was an abbey founded in 974. It was named after the Gladbach, a narrow brook that mostly runs subterraneously today. The abbey and adjoining villages became a town in the 14th century. The town of Rheydt is located nearby and is incorporated into Mönchengladbach.

Since 2009, the territory of Mönchengladbach has comprised four (previously ten) boroughs, which are subdivided into 44 districts.

Berufsfeuerwehr

Mönchengladbach was established 1901. The fire service operates within the city limits of Mönchengladbach, which covers an area of 170km². In addition to this, the fire service is also responsible for the motorways A44, A46, A52 and A61 with a total of 120km in length. There are also 112km of railway lines within Mönchengladbach, which are also part of the fire services operational area.

Additionally, the fire service operates outside of the city limits in accordance with the concepts of the interior ministry of Northrhine-Westphalia. The ambulance and emergency doctors' services cover the same area as the fire service but extend into the council of Korschenbroich to the east as well as Jüchen towards the south.

In the year 2015 the city council of Mönchengladbach spent almost 30 million Euros on the fire and ambulance service.

The headquarters (Führungs- und Lagezentrum/FLZ) of Berufsfeuerwehr Mönchengladbach was built at its current ▶



- ▶ location in Rheydt in 2007. There are four stations of which three are fire and ambulance stations and one rescue/ ambulance station employing 323 professional fire fighters, 312 men and 11 women. A very important part of the fire service in Mönchengladbach is the volunteer force. There are 436 volunteer fire fighters, 29 of whom are women, serving from 20 volunteer stations throughout the city.

Mönchengladbach also has a youth fire brigade with 110 junior fire fighters, 10 whom are girls. The youth brigade fire fighters are aged between 10 and 18 years.

Brief recent history

Today's city of Mönchengladbach used to be two separate cities, the city of Mönchengladbach (North) and the city of Rheydt (South). Both cities had their own separate fire departments. Mönchengladbach's headquarters was located at its current Station 1 in Neuwerk whereas Rheydt's headquarters was based at Station 3 in Rheydt.

In 1976, shortly after the two cities were combined, the two fire services were merged into the Berufsfeuerwehr Mönchengladbach. The headquarters of the Berufsfeuerwehr Rheydt became Station 3 and the headquarters at Station 1 became the control centre for the new fire department.

The new headquarters (FLZ) was build next to Station 3 in 2007. In order to consolidate the specialist vehicles and the swap body system, the fire service constructed the

logistics centre next to Station 2 in 2008. In 2010 the control centre was moved from Station 1 into its new location on the top floor of the FLZ in Rheydt.

In 2016, Mönchengladbach City Council, as well as the fire service, began installing new sirens to warn the public in case of major civil emergencies or disasters.

The Berufsfeuerwehr Mönchengladbach has three professional fire and ambulance stations as well as a separate ambulance station within the city. The fire and emergency ambulance stations are manned by two groups of fire fighters and paramedics alternating in 24-hour shifts. Each group is run by an officer who captains the group when deployed. The non-emergency medical transports are deployed from Station 1. Station 2 features a logistics centre, which houses all of the specialist vehicles such as the hazmat components, the tanker and the swap body system.

The headquarters (FLZ) is located in the district of Rheydt, next to Station 3 and compromises 27 officers (22 silver and five gold), supported by 13 senior fire fighters as well as nine civilian employees. Within the FLZ there are nine departments namely management controlling, ambulance service, operations, control centre, emergency planning, engineering, preventive fire protection, human resources and administration. The Berufsfeuerwehr Mönchengladbach also has a chief of medicine as well as a psychological support team on staff.

The liaison between the fire service and the mayor's office is the "Dezernent", an elected official who liaises with the fire service and the city council.

Risk profile

Mönchengladbach is a city with around 270 000 people living there. The risk profile includes the usual scenarios that may be found in a city of this size including five hospitals, a mental health institute, a sleep clinic, several train stations, high rise flats, a number of small lakes and 120km of motorway.

High risk areas include four chemical plants, a military facility, the football stadium with a 54 000 capacity, the hockey stadium with a capacity of 9 000 as well as the airport. Mönchengladbach also features two main train stations; one in Rheydt and one in Gladbach. Another high-risk area would be the parts of the motorway (Autobahn) that feature no speed limit.

Station 2, which houses a mobile crane, tanker and a heavy rescue vehicle, was built close to the motorway A61 via which the other motorways can easily be accessed in order to deal with possible high speed car crashes.

Operations

The fire department has four specialist groups, namely SEG-Gefahrgut, the hazmat group; SEG Höhenrettung, which is a high-angle rescue group; SEG luK, which is the information and communication group and SEG

Rettungsdienst, the emergency medical service special response group, in order to deal with uncommon incidents.

There are also two emergency (soon three) doctors on 24-hour duty within the fire service.

Mönchengladbach is within range of three air ambulance (helicopter) services, which are based in Duisburg, Aachen and Cologne. Biological threats are not analysed by the fire service themselves but are sent to the respective Bio-Labs. It is the same case with animal borne infectious disease such as CJD, which are dealt with by the veterinary office.

The explosive ordinance disposal (Kampfmittelräumdienst) is run by the interior ministry of the state NRW.

The fire service tends to follow certain technical developments; a good example being the advent of modern car safety equipment. Car manufacturers will develop more advanced and safer methods of constructing cars, which results in the requirement for more powerful means to cut through these constructions when trying to rescue people out of cars involved in an accident. All of Mönchengladbach's fire engines are equipped with Weber Rescue extrication tools to handle this development. In addition the department has a heavy rescue vehicle featuring a more powerful set of hydraulic cutters at Station 2, which was deliberately built near two on-ramps to the motorway.

To stay up to date with modern equipment, the department replaces the four primary fire engines (HLF20) and the four turntable ladders (DLK23/12), which belong to the professional branch of the service, every five years. The equipment on these vehicles is completely replaced in the same cycle.

Ambulances get replaced in shorter intervals due to their higher usage. To be more economical, the ambulances get a new chassis when they are at half their lifetime instead of replacing the entire ambulance.

The engineering department also visits specialist exhibitions on a regular basis as well as staying in touch with the leading manufacturers of fire fighting equipment and medical products.

Generally an incident is responded to with a pumper, a ladder and an incident manager. An ambulance and a doctor would meet up with the fire and rescue team at the incident.

The control centre

The fire service operates an integrated control centre, which also features facilities for disaster management. The new control centre was opened at its current location on the top floor of the command centre in Rheydt in 2010. For forty years prior, the control centre was based at Station 1. The total cost of the new, modern control centre was 1,2 million Euros. While modernisation was one requirement, it also needed to increase in size due to the increased



number of responsibilities such as coordinating large scale incidents and catering for an increase in emergency calls.

The control centre is equipped with six control posts, which are used to receive emergency phone calls via the emergency services number 112, as well as the 19 222, which is used for requesting non-emergency medical transports. From the control posts, the control centre clerk can dispatch the necessary and available units while taking the phone call. There are seven control centre clerks on duty in a 24-hour shift, three of which are also the drivers and command assistants of the C- and B-service. The control centre clerks must be public servants with the fire service, have a paramedical qualification as well as several years of experience, both in the fire service and the ambulance service and have a group commander's qualification.

The incident management system is by the company Siemens. It has the alarm call centre system also by Siemens integrated into it. The automated fire alarm system is also directly connected to the control centre's main computer so that the control centre clerks can have all of the information they require available at their control posts. The control posts are equipped with several screens in order to provide an overview of currently deployed units, available resources as well as further information, like available beds/capacities in the local hospitals.

When an emergency call comes in, a clerk will take the call personally. While the caller states what their emergency is, the clerk enters the alarm prompt, the



- ▶ address of the incident and a short notice with further information. Each alarm prompt has a pre-defined set of resources allocated to it as defined in the department's alarm and dispatch order. When all information is entered, the corresponding station(s) get alerted, the individual fire fighters/paramedics/medics get the command prompt on their bleeps and the system automatically programmes the satnavs on each vehicle to be deployed with the address of the incident. Additionally, the clerk will make an announcement and the alarm printers, which are positioned at the entry of each vehicle bay, will print out all available information about the incident as well as a map overview of the location.

Further features of the control centre include:

MoWaS (modular warning system)
 This is a warning and information system for the public. It uses the local radio stations as well as the NINA app (emergency information and news) and a vehicle-based PA system to get important information to the public in case of emergencies.

Autarchic satellite communication system

The control centre is linked to other control and disaster management centres via autarchic satellite communication.

Multi-language system

While all of the control centre clerks are proficient in English, there are people who pass through or live in the city, who speak neither English nor German. To allow these people to call for help via 112, there is an algorithm with the most

common languages in place. Once the clerk identifies the caller's language, there is an on-screen questionnaire, with yes and no questions to figure out what the caller needs.

Siren warning system

The city of Mönchengladbach has recently reinstalled a siren warning system throughout the system. This is to ensure that every one within the city gets alerted to danger, should this be required. The siren network is accessed through the control centre.

Telephone resuscitation

In 2016, telephone resuscitation was introduced to Mönchengladbach's command centre. Should resuscitation be required, the clerk will guide the caller through the CPR procedure in order to give patients a better chance of survival until professional medical help arrives at the scene. This system has already been used several times and has been deemed a success.

In Germany, the maximum response times by the emergency services are fixed by legislation. The following are the response times for the city of Mönchengladbach. The time stated is the maximum allowable time between the caller phoning the alarm call centre (phone number 112) and the arrival of the emergency service at the scene of the incident.

- Fire service: 8 minutes for the base unit and 13 minutes for the first reinforcement
- EMS: 8 minutes (12 minutes for emergency doctors) 90 percent of the time

For the fire service the most common emergency scenarios include smaller fires (493 incidents in 2016), medium sized fires (52 incidents in 2016), technical assistance (2001 incidents in 2016) and assisting the emergency ambulance service.

Major incident

In 2004 there was a fire in a former textile factory. The fire was fought by 250 fire fighters over the course of 90 hours. The compacted cotton bales were difficult to access so that after a day it was decided to blow a hole through a concrete wall, in order to target the source of the fire more effectively.

Equipment

- Each of the three professional fire stations houses the following:
- 1x HLF20 fire engine, Rosenbauer on a Mercedes-Benz chassis
- 1x DLK 23/12 Metz turntable ladder on a Mercedes-Benz chassis
- 4x RTW Fahrtec emergency ambulances on a Mercedes-Benz chassis
- 1x MTF Ford Transit or Mercedes-Benz Sprinter transport vehicle

Station 1 specific

- 4x KTW VW Transporter T5 transport ambulances
- 1x iRTW Fahrtec intensive care ambulance on a Mercedes-Benz chassis

Station 2 specific

1x sRTW Fahrtec heavy emergency ambulance on a Mercedes-Benz chassis
 1x KEF Kfzbau Kevelaer small incident vehicle on a Mercedes-Benz chassis
 1x KW45 Liebherr mobile crane
 1x RW Rosenbauer heavy rescue vehicle on a Mercedes-Benz chassis
 1x TLF4000 Ziegler tanker on a Mercedes-Benz chassis
 1x CBRN ErkW Zeppelin hazmat Scout on a Fiat chassis
 2x DEKON_P EMPL Decontamination truck on MAN chassis
 1x ELW Baumeister und Trabant command vehicle (C-Service) on a VW Transporter T5 chassis

Swap body system at station 2

4x WLF Michels or Pütting swap body truck on MAN chassis
 13x roller containers for the swap body trucks for different purposes

Station 3 specific

1x ELW Baumeister und Trabant command vehicle (C-Service) on a VW Transporter T5 chassis
 1x ELW Binz command vehicle (B-Service) on a Mercedes-Benz chassis
 1x ELW Ford Kuga command vehicle (A-Service)

There are a large number of additional vehicles with the volunteer force. A selection of the more specialist vehicles residing with the volunteer force can be found here:

Volunteer Station Hardt

TLF 16/25 Metz tanker on a Mercedes-Benz chassis
 RW1 Wackenhut heavy rescue vehicle on a Mercedes-Benz Unimog chassis

Volunteer Station Wickrath

DLK 23/12 Metz turntable ladder on a Mercedes-Benz chassis

Volunteer Station Stadtmittle (City centre)

SW2000 Freytag hose laying vehicle on a MAN chassis
 GW Logistik Mercedes-Benz truck with a field kitchen trailer

Volunteer station Neuwerk

RW1 Wackenhut heavy rescue vehicle on a Mercedes-Benz Unimog chassis

Volunteer station Rheindahlen

GW Licht Mercedes-Benz Unimog lighting unit

Swap body system

The Berufsfeuerwehr Mönchengladbach runs a swap body system, which is deployed from station 2. This system encompasses four swap body trucks as well as 13 roller containers, which can be deployed via the swap body trucks. This efficient system enables the fire service to cater for a wide range of incidents without requiring a specialised vehicle for each of the incidents that are less common. The 13 roller containers (AB) are:

1x AB Atemschutz: Used to resupply pressure breathers and their equipment
 1x AB Rettungsdienst: Roll container with a large supply of medical equipment

1x AB MANV: Medical supplies for situations where there are a lot of patients

1x AB Dekon: HAZMAT container, deployable to provide a decontamination system

1x AB Bahn-Bau: Construction equipment as well as materials for railway incidents

1x AB Hochwasser: Roll container with a boat and materials to combat flooding

1x AB Einsatzleitung: Mobile command centre

2x AB Ladeboden: Loading platform utilised for transporting heavy goods

1x AB Mulde: Skip for transporting heavy materials/debris

1x AB Schlauch: Container with a large number of hoses and hose materials

1x AB SOLM: Carries additional CO₂, powder as well as foam concentrate

1x AB GSG: Hazmat container with chemical, biological, radiological and nuclear (CBRN) equipment

AutoPuls

To assist the EMS, Station 2 can deploy a vehicle with an AutoPuls, which is a non-invasive cardiac support pump that assists the medics and paramedics during resuscitation. This also enables a transport to hospital by ambulance while CPR, automated in this case, is in progress.

Workshops and maintenance

Mönchengladbach features a number of in-house workshops that repair and maintain the equipment of the fire service. These workshops are based at the fire stations:

Station 1

Fire extinguisher workshop
 Carpenters Workshop

Station 2

Medical equipment storage and workshop
 Respiratory protection storage and workshop

Station 3

Car repair workshop (for minor repairs)
 Radio and electronics workshop and storage
 Hose tower including a cleaning facility and hose workshop as well as storage

External repairs/maintenance

The fire service cooperates with NEW, Mönchengladbach's utility services, that operate a large fleet of vehicles and manages the maintenance and repair of the fire service vehicles within their facilities. Furthermore, the fire department has contracts with commercial vehicle dealerships that service and repair the ambulance fleet. They even offer a priority service where the fire service vehicles get prioritised over the civilian customers. The fire fighting vehicles are maintained by their respective manufacturers.

The apparatus are maintained according to the manufacturer's recommendations. The equipment and the vehicles in both the ambulance and in the fire service are checked every morning after station hand-over for their functionality. In addition to this, every Monday each fire ►

- ▶ station does a technical check-up on all of the equipment loaded onto their vehicles", added Chief Lampe.

Ultimate apparatus

We asked Chief Lampe what his dream apparatus would be to which he replied, "The 'dream apparatus' would be in the area of swift reconnaissance such as drone/helicopter surveillance of incidents. It is also a dream to have the control centre 'see' what is going on at the scene of an incident. This could also be done with the use of video surveillance."

Staff

The Berufsfeuerwehr of Mönchengladbach has a total staff complement of 330 people as well as 436 active volunteers. The fire stations naturally work 24 hours a day. There are four female fire fighters and four female paramedics on staff. The personnel numbers mentioned below account for the staffing during one day; the shift changes every morning at 07h00am. The staff is allocated as follows:

Station 1 (13+2+1+8)

12 people are on duty 24 hours a day on a two-shift rotation. Additionally there are two paramedics who man an ambulance for 10 hours during weekdays. Station 1 has one reservist (Verfüger) who can be called in to compensate for understaffing due to illness. The emergency doctor's car, manned by one paramedic and one emergency physician, for the north of Mönchengladbach, uses Station 1 as its home base.

The four transport ambulances run from Station 1 as well. They are manned by two ambulance people each, totalling eight more staff members.

Station 2 (18+2+2)

18 people are on duty 24 hours a day on a two-shift-rotation. Station 2 runs a daytime ambulance seven days a week. To compensate for understaffing due to illness, Station 2 has two reservists (Verfüger) standing by each day.

Station 3 and station 4 (13+2+1+2)

12 people are on duty 24 hours a day on a two-shift rotation. Additionally there are two paramedics who man an ambulance for 10 hours during weekdays. Station 3 has one reservist (Verfüger) who can be called in to compensate for understaffing due to illness. The emergency doctor's car, manned by one paramedic and one emergency physician, for the south of Mönchengladbach, uses Station 3 for its home base.

Station 4 is a subsidiary of Station 3. It was constructed in order to improve EMS cover for the south of the city. The ambulance at Station 4 is manned by two paramedics.

Command centre/headquarters (Führungs- und Lagezentrum)

The headquarters is located adjacent to Station 3. A total of 27 officers (22 silver and five gold), 13 senior fire fighters and nine civilian employees work in the headquarters. The officers will take charge of the A-, B- and 2 C-service

(command) vehicles in 24-hour shift. The three command vehicles deploy from the command centre during daytime. At night the A- and B-service remain at the command centre while the two C-Service redeploy to Station 2 and Station 3. C- and B-service command vehicles come with a command assistant (usually a control centre clerk) to support and drive the commander. The senior fire fighters, who support the officers in the command centre, also do regular 24-hour shifts at the three fire stations.

Control centre

The alarm call centre is located on the top floor of the command centre. The emergency calls are received here and processed by seven senior fire fighters (control centre clerks) who also work in 24-hour shifts on a two-shift-rotation.

The fire service and the (emergency) ambulance service get dispatched from the four stations. First response/small incident hazmat is done by the fire service themselves. For larger incidents the fire service's SEG Gefahrgut (hazmat group) gets alerted in their free time. Hazmat equipment is based at Station 2.

The emergency medicine service is run by the fire department; however, the emergency medics are hospital staff who are seconded to the fire station. The control centre is completely run by the fire service.

Recruitment policy

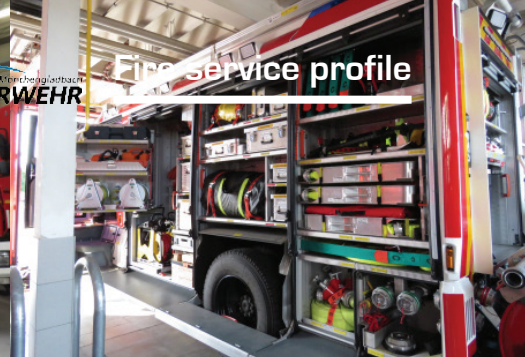
There are several components to the recruitment policy of the fire service Mönchengladbach. The service puts job adverts out in specialist journals as well as on its own webpage (www.feuerwehr-mg.de) and the city council's webpage.

There are also several events that the fire service utilises for its recruitment for example the Girls and boys day' and CHECK-IN, which are run by the council. Naturally a number of potential recruits come directly from the volunteers who also support the recruitment through their own means. Recruitment also occurs through sport events such as Toughest fire-Fighter Alive (TFA). In order to be taken on as a recruit there are several tests that candidates would have to pass before entering.

Training

Every employee who has a paramedical qualification is required by law to attend a one week 'Quality Assurance' course every year. This course is offered in-house by the fire service. In addition to this there are a number of 'annual must-have' classes, which have to be attended by every employee such as a road safety or occupational health and safety presentation.

The Berufsfeuerwehr Mönchengladbach has its own school based at the Gingter Strasse near Fire Station 2, which offers a variety of training courses. The school is part of the SINN:FAN education network, which is a collaboration between several councils and fire services in the region. Employees can sign up to several interesting courses at SINN:FAN free of charge.



- ▶ More advanced training courses such as the group commanders course can be attended through the IdF in Münster (Fire Service Institute, run by the state interior ministry). There are also other government-run institutes like the AKNZ (Academy for Crisis Management, Emergency Planning and Civil Protection) that offer diverse courses.

Each station offers its own daily training programme. There are also several large scale training exercises each year involving more than one station such as the PTZ-10 (patient transport platoon) or MANV (mass triage incidents).

For medical qualifications and training courses the KBS academy, formerly an inner city hospital, is open to city council employees as well as external students. Their courses range from simple first aid certificates up to Bachelor's degrees. KBS is run by 'Maria Hilf Clinics' in Mönchengladbach in cooperation with the local university and the Berufsfeuerwehr Mönchengladbach.

Fire safety

There are a number of safety awareness programmes. The PSU (psychological support) has been a very successful programme, which is offered to fire fighters, paramedics and medics to help deal with psychologically extreme situations in order to minimise or eliminate long term psychological trauma.

Many of the safety awareness aspects are being delivered through the day-to-day training on the fire stations themselves. An example is the previously mentioned road safety lessons.

Live-fire training exercises can be accessed through SINN:FAN. The Berufsfeuerwehr Mönchengladbach has its own solid-fuelled live-fire container and a team of instructors. The live-fire exercises help to prepare for real incidents and are an excellent way to teach about fire safety aspects.

One of the constant safety challenges are the fire incidents themselves, in particular the respiratory protection surveillance. Each group has one member, the fire engine driver, who looks after the squad, which is currently working under respiratory protection. The driver keeps an eye on the remaining air which each individual has left in his or her pressure breather and notes this down as well as their current location. In order to improve this further each pressure breather is equipped with a dead-man sensor, which sounds an alarm as soon as the sensor stops moving for a short period of time. The alarm would quickly alert the group members that there might be something wrong with one of their colleagues.

The fire service's preventive fire protection department works closely with architects, civil engineers as well as the planning office. Among other things the preventive fire protection department will have to sign off on construction plans for new buildings before they can be realised. It evaluates those plans in terms of their fire safety as well as the ability to tackle fires, should they arise, and the possibility for people to be evacuated from those building in case of emergency.

Statistics:

1. Population: 270 000 people
2. Size of area covered: 170 km²
3. Emergency calls (2016): 73 509 (which resulted in 45 500 deployments)
4. Incidents:

These are the statistics from the annual report 2016.

Fires

- a) Small fire (extinguisher): 295
- b) Small fire (hose/one station involved): 198
- c) Medium fire (at least two stations involved): 52
- d) Large fire (all three professional stations involved): 6
- e) People saved from fire: 47
- f) Fire deaths: 0
- g) False alarms: 1 245

Technical assistance/rescue

- a) Total number: 2 001
- b) Hazmat: 5
- c) Oil spills: 317
- d) Animal rescue: 137
- e) Regional assistance: 2

EMS/ambulance service

- a) Emergency ambulance (EMS): 26 803
- b) Non-emergency medical transport: 8 388
- c) Emergency doctors car: 7 150

Volunteer deployments

- a) Total: 525
- b) Manning the professional stations: 34
- c) Storm/water incidents: 25
- d) Technical assistance/rescue: 177 of which 14 were car crashes without the professional fire service
- e) Fires: 274

Preventive fire protection

- a) Fire watches (events): 308
- b) Inspected buildings: 331
- c) Position statements for the planning office: 313

Interagency involvement

There are several areas where the Berufsfeuerwehr Mönchengladbach and the neighbouring services interact. As mentioned before, the training is done in cooperation with a number of the regional fire services. This is true for the basic training for recruits as well as further training, for fully qualified fire fighters/paramedics.

In case of an incident that is too large to handle for a single department or so large that it would compromise too much of the fire department, "Überörtliche Hilfe" (regional assistance) may be requested. Regional assistance will usually require several of the neighbouring fire services to deploy a number of resources to assist, to ensure that their own as well as the affected service can still run other incidents/the ambulance service. There were two of these kinds of incidents in 2016.

As Mönchengladbach is close to the Dutch border, the possibility for international cooperation exists. Plans, especially defining areas of responsibility, for this case are in place.

The relationship with the police is very good and cooperative. Many incidents require both the police as well as the fire and ambulance service to be present. The

An inspiration for 20 years as CFO

Berufsfeuerwehr Mönchengladbach's chief fire officer, Jörg Lampe, has been its chief fire officer since 1998; an amazing 19 years heading up the fire service in this beautiful German city in North Rhine-Westphalia. During a recent visit to Germany, Fire and Rescue International was afforded the opportunity to interview Chief Lampe and share his experience and vision with our readers.

Career

"I started my career at the council of Munich in 1989. After two years of training and instruction, I changed jobs and joined the council of Essen. Two years later in 1992, I became deputy chief fire officer at the council of Mönchengladbach. I was appointed as chief fire officer in charge of Berufsfeuerwehr Mönchengladbach in 1998, nearly 20 years ago now," shared Chief Lampe.

Although he is a first generation fire service official, his grandfather and father were volunteers in the fire service with their main profession being the mining industry.

We asked Chief Lampe what made him become a fire fighter? "It's was my dream when I was young to become a fire fighter because I saw my father with his friends. I was inspired by the action and the technical scopes around the job. I like the intensive connection between all fire fighters in the team."

His motivation has been inspiration learned from his father. "I prefer the

lessons taught by my father namely humanity, honesty and fairness."

Mentors

We asked Chief Lampe who the mentors were that played an influential role in shaping his career. "I had found my private mentors at Aachen Fire Department. The CFO and his deputy had studied at RWTH Aachen and so I had found a direct connection to the job of a professional fire fighter," responded Chief Lampe.

Management style

Chief Lampe said that his management style was cooperative. "I think, it's like a cooperative management style. It is the best management style to encourage progress and allowing for growth," he added.

We asked Chief Lampe at which point in his career did he realise that his ambition was to become CFO, to which he replied. "This is a little bit difficult to reply. I was promoted by a few fire chiefs around. They know what I can do and what I was able to do. At one point I received an offer to take a job first as a deputy fire officer with the chance to get CFO five years later."

In answer to the question whether he misses the operational life, he responded, "Oh no, because I take a position as an officer on duty once a week and so that am I can see what our capabilities are or whether it is necessary to change the training situations, to do it as best practice."

We asked Chief Lampe what the biggest influence in assisting with



CFO Jörg Lampe

his mandate has been. "I think that is the proximity to the mayor of Mönchengladbach. I am involved in all details we need for being successful in saving lives in an emergency, fire, rescue, fire prevention and civil protection. So I am able to work with the support of the municipal council," said Chief Lampe.

His advice to fire fighters or future fire chiefs is, "It is necessary to find your own type of leadership, to motivate your fire fighters and be a partner to them. Look what is good and find the best words to change some behaviour. Be human in all what you do and accept the view of your employees."

"After 20 years of being a chief fire officer and approximately 35 years in the fire service profession, I can say TO BE FIRE FIGHTER IS THE BEST PROFESSION YOU CAN TAKE!" 🔥

police have their own control centre in the city which works independently from the fire service. The emergency calls (112) can be rerouted to the police control centre and the police emergency calls (110) can be rerouted to the fire service control centre should the need arise.

The chemical industry in Germany and Austria run the TUIS (Transport Accident Information and Assistance) system. This is a three-stage system, where the chemical cooperation sends out their own hazmat personnel to advise or assist local fire stations in case of large hazmat incidents.

In case of certain infectious diseases, the health department is informed. They may give advice or arrange for further measures.

Visiting Berufsfeuerwehr Mönchengladbach in Germany was quite an eye opener to the capabilities, resources and response of a professional fire department in Europe. Not only was the "German precision" very obvious, resulting in an exceptionally efficient and well-resourced fire brigade but also the support from the municipality and very evidently support from the public. 🔥

Exciting new developments in the field of multiple and mega-wildfire investigations: Reconstructing the unknown

By Dr Neels de Ronde

In South Africa, we have advanced far in the field of investigating the cause and origin of wildfire events. We have some well-qualified forensic and experienced professionals working in this field and, even if we exclude a few 'fly-by-night' investigators attempting to take short-cuts on the road to experience, there are also a few investigators with an excellent record in legal circles, providing some high quality professional services in this highly specialised field.

Presently, the typical investigations are mostly conducted in the field of 'cause and origin'. However, these investigations do have some restrictions, which have so far been difficult to bridge, apart from the long road to 'experienced professionals' levels, such as:

The 'disappearance of evidence' over time

This is normally when affected land owners simply wait too long before deciding on timely investigations, particularly in dynamic vegetation such as natural grasslands. Many property owners sometimes experience a 'rude awakening' when they receive summons, with at times shocking claims running at times into millions of Rands, particularly if years have expired before such wildfire events took place. In the resulting 'panic stations' situations, they then start falling around in the (for many) unknown world of wildfire investigation, searching for solutions to 'climb these mountains'.

Years ago I became involved in such an investigation of a grassland-based wildfire that occurred about ten years earlier, after this fire-site had experienced subsequently some more fires! Imagine what the poor defendant(s) then have to face! Throwing in the towel? Not necessarily anymore because today even such complicated historical events can to a great extent be reconstructed and our courts today have a better understanding for such problems and the linked technology, and how to meet such complicated cases.

The grey area of (lack of) evidence available from mega-wildfires, after such fires spread from the (mostly known) fire origin site

Once such fires spread uncontrollable until such time as to when such fires have been contained and properly extinguished, information about fire behaviour events are many times non-existing. The longer such fires spread,

the more complicated any investigation attempts become. Sometimes investigators suspect other fires having met and/or affected the main fire front and area burned over. In most cases fire fighters had their hands full to even make any meaningful observations during the fire spread and, in the case of any counter fire attempts, will never tell anyone about such fires, least of all investigators!



Mega-wildfire spreading in a mixture of even-age industrial plantations and dynamic montane grassland in the Mpumalanga Province

Extreme multiple wildfire storms

This is where a number of uncontrolled fires are known to have been experienced simultaneously; where the origins and causes of such fires on their own are many times unknown, let alone events are such fire(s) start(s). How does one determine which fires burned where and caused what damage?

Today such fire storm events are becoming more common for reasons I do not want to discuss in this writing and some can even remain uncontrolled for days and even weeks, the recent fires in the Western Cape are typical examples of this. Today we do not have to throw our hands in the air in despair, as reconstruction of such events is indeed possible with today's available technology, fuel model technology and fire simulation programs. This can be used to strengthen our knowledge base. Yes, in South Africa we have indeed advanced far in this field, many times beyond internationally-known levels.

It is impossible to use the wildfire-historical events directly for future fires as no two wildfires are equal; indeed, all are significantly different. However, historical events can assist in selecting methods to advantage elsewhere, where possible. Also remember that there might be some direct evidence available somewhere, so always collect this first. Such time/place observed/ mapped or photographic evidence can many times be used to advantage as time/place checks of fire spread events.



A multiple 'fire-storm' in progress. This was also the site where some fire fighters lost their lives

The cornerstone of using fire cause and origin investigations

The importance of this basic start of wildfire investigations can never be allowed to be reduced, as has been described by many authors. Indeed, this particular knowledge-base will be required for most if not all wildfire investigations. Even in the case of mega- and multiple- wildfire events, this is still where we all start the reconstruction process. Although, in the case of multiple fires, there could be a repeat of such investigations where other fires burned within the same macro- wildfire site.

During my career I have indeed developed some advanced methods for specific situations, such as:

- Chemical analyses of topsoil samples that can, for example, be used to determine from which field cooking fire a wildfire originated from (where more than one cooking fire are present).
- Tree stem scorch pattern with the application of fire behaviour prediction models. This is particularly useful where a wildfire spread through Acacia, Eucalyptus and/or Pinus plantations and fire spread reconstruction is required.
- Determining wildfire behaviour from aerial photographs or after-fire satellite images, making use of remote sensing, 2-D fire behaviour simulation techniques and relationships. It is particularly the colour-patterns observed on the latter that can even be used to identify wildfire spotting events and hot-spot evidence.
- Please refer to the 'de Ronde and Goldammer, 2005' publication, regarding the above for more information.

Note: It is particularly important that a thorough forensic investigation to the cause and origin of a wildfire event is conducted soonest after the day of the fire-start, particularly where the damage runs into millions of Rands and arson is suspected.

Fire reconstruction procedures

Determining burned over land and wildfire perimeters

This an important first step when investigating large and multiple wildfire events and this includes the collection of all related material, such as evidence, reports, photographs including aerial photographic material, weather data and more. Remember that you search for all material, which could maybe assist in the fire reconstruction process, to make sure nothing of importance is left out.

Suitable satellite images of the fire area before and after the fire(s) occurred can assure that fire perimeters are mapped as accurately as possible and that the original vegetation base (before and after the fire) can be identified, as well as the evidence of fire behaviour with the assistance of remote sensing. I strongly recommend the assistance from satellite/GIS experts here to ensure that the derived information from this material is correct.

This process is also important, not only to calculate areas-burned over accurately but also when researching which wildfire burned over which land, for accurate quantum calculations. There should be no doubt such satellite-based maps, perimeters and areas, are very important to ensure that this cannot give rise to disputes that can land in court and increase legal costs.

A basic fuel model base for South African vegetation/ fuels exists but was never published. However, some sets have been published, such as in Trollope et al, 2004 and in de Ronde and Goldammer, 2015. The problem is that for each wildfire investigation a new set of fuel models is required for such specific macro-sites involved. Subsequently, existing models can seldom be used as is but have to be adjusted or tuned-up for each and every new set required. Unfortunately, some training will be required to facilitate such development and technology-use. Unfortunately, there was no interest so far in financing such training (course of approximately four to five days), so that is where we stand today. Maybe some solution can be found for this vital shortcoming so that other investigators can assist me to provide continuity in South Africa or maybe may some international interest? I will be available to present such a course at short notice.

Apart from other uses of such specific fuel model sets such as fuel classification, fire hazard rating, etc for wildfire reconstruction processes, which can make use of this technology for the following purposes:

- 2-D fire behaviour simulation with BehavePlus (Andrews, 1986; Andrews and Chase, 1986; Andres and Bevins, ▶

Wildfire investigations

- ▶ 2000) during the initial period of wildfire spread.
- As above but then for specific 2-D purposes for fire behaviour tests, such as the calculation of maximum spotting distances and the effectiveness of firebreaks.
- 2-D fire simulation with BehavePlus to determine the effect(s) of topography and wind speed ranges, fuel classification for landscape-mapping purposes and 3-D fire spread simulation with FARSITE (Finney, 1996).

Developing fuel model sets for reconstruction purposes

Maybe some of the readers of this writing will still want to steer away from this vital tool in the wildfire reconstruction process because (i) they do not want to get involved in scientific stuff when it comes to wildfire investigation and (ii) some see modelling as a dirty word or unnecessary, for this investigation process. Still others do not trust this methodology.

This may be true for some more down-to-earth investigators but then such reconstruction processes are not like an easy walk in the park otherwise this would have been used by all many decades ago! Sorry my friends, I found this a vital tool as a base for the whole reconstruction process! The good news is that the basic methodology for fuel-modelling use has all been researched in South Africa over approximately 25 years and is available for users without complicated and time-consuming work. However, for some of these vital processes some basic knowledge of fuel and fire dynamics, as well as a basic knowledge of the use of computers for fire behaviour simulation, will be required. The book written by myself and Johann Goldammer will give you an insight, guidance and use of these processes as introduction (de Ronde and Goldammer, 2005).

Studying fuel conditions, dead fuel moisture contents and (for dynamic grasslands) the grassland curing status

This is contributing information, which might be required for this reconstruction process if applied correctly. This added information should be assessed as accurately as possible, as this can have a significant effect on expected/simulated fire behaviour. 100 percent curing can also significantly contribute to substantial increases in particularly the rate of fire spread, thus the rate at which wildfires grow over time.

Collect the most accurate and useful weather data

Wind data, particularly five-minute datasets, are most important for use in the reconstruction process but parameters such as air humidity, percentage cloud cover and percentage crown canopy closure per fuel class, might be required for the use with FARSITE for 3-D fire spread calculations.

Supportive tools such as satellite images with data such as MODIS, aerial photography and overhead camera pictures from spotters, etc could also be used if available.

The role of counter fire attempts and why these should be identified and their affects quantified

It should be understood that I am a strong supporter

of the use of counter fires, provided these are applied correctly and by experienced fire managers. The moral of the story is that I have unfortunately investigated a range of wildfires where counter fire had gone wrong, in some cases causing serious increases in wildfire damage, even doubling quantum and in some cases even causing human mortalities. As a result I cannot over-emphasise that when fire managers are not properly qualified to apply counter fires, my message basically is, if you are not sure if you do or not do the right thing, rather do not apply such fires at all!

Investigating whether counter fires were applied during any wildfire situation and their effects forms a vital part of the wildfire investigation process, as I mentioned earlier. The lack of training in fuel and fire dynamics, as well as counter fire application, is shocking in South Africa and indeed throughout the world and over the years I have identified only a few cases where counter fires were applied correctly, with fantastic beneficial result. Please let there be some discussions regarding this issue, as the lack of training is here costing the country dearly!



Typical spotting scenery of an extreme wildfire in progress in Mpumalanga, South Africa

Some final notes

There is a critical shortage in the training of proper counter fire application and in fact all the above-discussed, such as fuel modelling, computer-based wildfire simulation and reconstruction methods in South Africa, as well as at international level. In South Africa, we do have the know-how but unfortunately some of this rests only in my brains. Will I one day retire, knowing that this 'knowledge-base' will one day disappear with my final retirement? I sincerely hope not and that someone here or abroad can facilitate such training and tap my brain accordingly to provide the vital continuity required to finance such training. Anyone interested? I feel it is my duty to make this (final?) offer to the 'international fire and rescue' community.

Yes, I cannot provide such a comprehensive course or two on my own but the good news is that I can bargain on

Change is here to Stay

By Wayne Bailey

In emergency services, there are always going to be challenges. How you deal with them, is going to set you apart from others and cause your operations to run smoother. The first step is to:

Define the problem

If you take your car or truck into a garage to be repaired, the technician will do a diagnostic check via a computer using a plug found inside the car or under the hood. In real life, we don't have the ability to connect our co-worker to a computer. However, by talking about the issues at hand, you can dig down and find the real problem, not just the signs and symptoms.

Are there alternative ideas?

Instead of coming up with the first idea to the problem and implementing it, take time to write down several other solutions with the individual or even better yet, with peers and others affected by the issue. Don't take time to analyse each one, just write all ideas down first and then start at the top to come up with the best method to solve the challenge. It may work out that two or more ideas will be used.

Selecting the right solution

Most people that are efficient in solving will ask themselves a few questions. The first question could be:

- Will the alternative plan cause further challenges for others?
- Will the team accept the new way of doing business?
- Does it meet the goals and mission statement of the organisation?

Approval process

Most of the time, you will be asked to do a presentation to middle or senior management on the proposed change. Before you prepare your PowerPoint, make sure you have buy in from the troops. It could easily be a conversation while working out or on the way back from a run. It's important to get the buy in from the indirect leaders too; the ones that may not have a title such as captain. They are the ones that have the ability to lead without the rank under their name. If you take a few minutes, you will think of that person in your department. It may even be you.

Implementing the change

Change is difficult for most. I have a saying, "Change is here to stay." If you took the time to get the buy in from your peers and others, the resistance may not be too bad. Can you please 100 percent of the troops? Hardly ever. I promise, this method



Wayne Bailey

will make life a little easier for you and everyone involved.

Evaluation

Make sure you have an opportunity for feedback using oral communication or a survey to see if the new idea is working. No one wants to ride a dead horse, so make sure you know if the idea is working or not. If it's not working, pull the plug and do it quick. 🚫

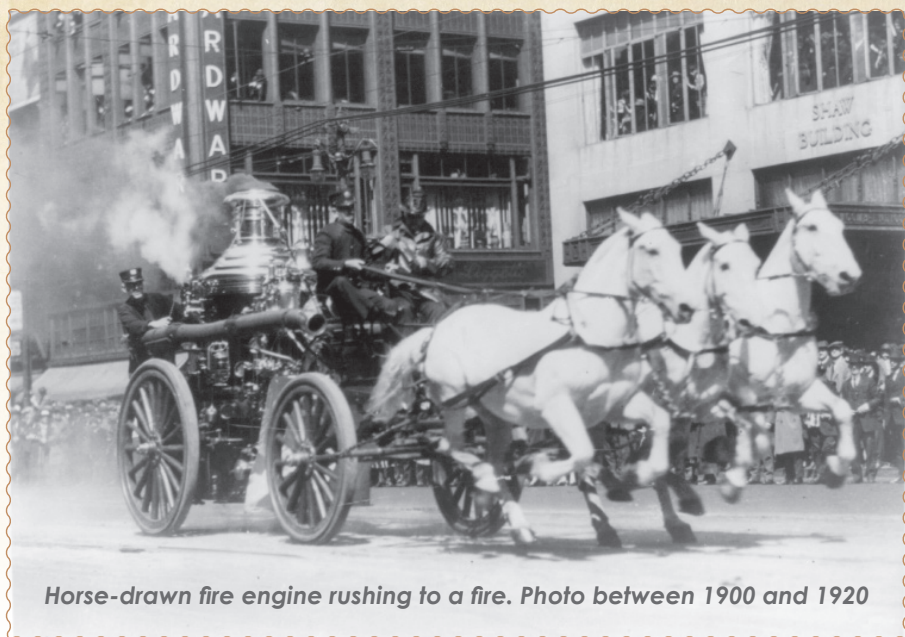


the input of a few experienced GIS, satellite and remote sensing experts and yes, on the practical side, the input from an experienced counter fire applier or two. The 'Wildfire Investigation' book we recently published (de Ronde and Goldammer, 2015) as well as other related publications can indeed form an important bases for such theoretical and practical training.

I know there is interest in these topics locally and at international level, particularly in southern Africa and in Europe. Someone just has to take the lead and provide the facilities, management and financial control to steer such a drive to fill this knowledge gap.

Photographs courtesy of Kishugu. 📷

A history of horses in the US fire service



Horse-drawn fire engine rushing to a fire. Photo between 1900 and 1920

The era of the fire horse lasted roughly fifty years stretching from the end of the Civil War until the end of 1915. More time and expense was incurred buying one fire horse than ten fire fighters.

In 1832, the New York Mutual Hook and Ladder Company No 1 volunteers purchased a horse to pull their engine. One of the reasons may have been due to a shortage of fire fighters caused by a yellow fever epidemic. The other stations were unsympathetic. One evening the anti-equine element crept into the stable, shaved the horse's mane and tail and painted a white stripe down the horse's back, embarrassing the company. To add insult to injury, the Oceanus volunteers beat the horse-drawn Mutuals to a fire.

As steam engines gained popularity they grew in size and weight. Fire fighters reluctantly accepted the need for horses. As Paul C Ditzel quotes, "A firehouse ain't no place for no stinkin' horse!" At first, horses were stabled near the stations. When the alarm sounded, it took valuable time to unlock the barn, fetch the steeds and harness them to the engine. Before long, the horses lived at the station and the reluctance to

accept them, was replaced by a deep affection for the noble animals.

The stalls were positioned behind or next to the rigs. In 1871, a quick hitch was developed. Two years later, Charles E Berry, a Massachusetts fire fighter, created a hanging harness with quick-locking hames. His invention was so popular, he left the fire department and sold his patented Berry Hames and Collars nationwide.

Not every horse could serve as a fire horse. The animals needed to be strong, swift, agile, obedient and fearless. At the scene, they needed to stand patiently while embers and flames surrounded them. They needed to remain calm while the fire fighters fought the blaze. This was the case in all weather conditions and in the midst of a multitude of distractions.

The fire departments carefully selected their horses. Veterinarians for the departments evaluated each animal. Both stallions and mares were eligible to serve.

In Detroit, weight requirements were issued for the animals. Those pulling hose wagons must weigh 1 100 pounds, to haul a steamer 1

400 pounds and to cart a hook and ladder 1 700 pounds. Stations also tried to create matched teams of two and three horses when possible.

Training

Fire horses required much stamina, strength, and natural ability. One expert of the time said it was usually a one-in-a-hundred selection. Their training took between one and two years.

Some cities had training stables but most provided on-the-job training. Detroit had a horse college. They claimed to be the only fire department that trained their horses by this method. Ditzel stated, "There was a fire station with apparatus, training stalls, hanging quick hitches, a feed room, a horse hospital and a 700-foot racetrack." Each horse received progress reports and report cards at the conclusion of their training. The horses that successfully completed their education, were placed in the city's fire stations. Departments added horse ambulances and horseshoeing wagons to their city's rigs. A horse might work at a station for four to ten years. In 1858, the Philadelphia Fairmount Engine Company gave their fire horses a vacation. This became a tradition in the Philadelphia fire department. This was long before fire fighters received vacations.

The Epizootic Fire

In the fall of 1872, a form of distemper called epizootic, spread among the horses. Within a period of twenty-four hours, 300 horses died in Buffalo. The epidemic spread rapidly to many cities. The cities relied heavily on horses for transportation and became paralysed. Fire became a major concern. It was late October 1872 in Boston. Out of a total of 75 to 90 horses, four had died and 22 were unfit for duty. Until the epidemic ended, fire fighters, with the aid of citizen volunteers, often found it necessary to drag the equipment to fires manually. On 9 November 1872, the Great Boston Fire burnt continuously for sixteen hours. It consumed 776 buildings, left 20 000 unemployed and

1 000 homeless. There were fourteen fatalities, including eleven fire fighters. A century later, John P Vahey, a Boston fire chief, wrote about this catastrophe and renamed it the Epizootic Fire, after the disease that felled so many horses.

It was a sad day at the fire station when a horse was declared unfit for duty. Many retired fire horses continued to work for the city in less strenuous positions. Some were put out to pasture. Occasionally the noble beasts were put up for public auction. The gallant steeds might be purchased by junk drivers and delivery men. At times, the fire horses would forget their new roles and charge down the streets hauling a wagon after hearing a fire gong.

Just like the Dalmatians, the fire horses also faded with the use of motorised fire apparatus.

In 1923, on a Monday morning in Chicago on 6 February, Fire alarm box 846 at State and Chicago Avenue

was pulled at 12h40pm. With the horses scrubbed and groomed, the old steamer rolled out of the swinging doors at Fire Engine 11 for the last time. Buck, Beauty, Dan and Teddy galloped out of the fire station at 10 E Hubbard Street with their coach and the fire fighters riding on the engine. Their Dalmatian escort led them to a false alarm. It was their last response.

The alarm was pulled at a box at Chicago Avenue and State Street as part of a planned event to mark the retirement of the horse drawn engines and fire fighting equipment in the City of Chicago. It was the first department in the United States with more than 500 000 residences to serve, to become completely motorised.

The Detroit Fire Department acquired the first motorised fire engine in the world, a Packard. Objections by fire fighters and Detroiters over the replacement of their beloved horses continued for years. The horse, it was argued, was much more reliable.

Motorised vehicles started with difficulty and broke down frequently.

The firemen joked about the ridiculous purchase, nicknaming it the "Hustle Buggy."

Over the years, some 500 horses served the Detroit Fire Department, with an average working life of four or five years. Pounding hard city pavement at high speeds took a heavy toll on the animals. Always, after dousing a blaze, the fire fighters cared first for their hard-working horses.

Inevitably, the reign of the horse ended as engineering improved on automobiles.

References:

Ditzel, Paul C, Fire Engines, Firefighters: the Men, Equipment, and Machines, from Colonial Days to the Present. New York: Crown, 1976.

Smith, Dennis. Dennis Smith's History of Firefighting in America: 300 years. New York: Dial, 1978. ▲



Los Angeles Fire Department Walter S Moore Engine Co No 4 Circa 1888



Two firemen sit on a horse-drawn fire ladder wagon as a boy walks by admiring the horses



Saskatoon Fire Department, Canada 1880s



Detroit Fire Ladder Company

2017

July

5 – 7 July 2017

Women in Emergency Services Conference

At the inaugural Women in Emergency Services Conference, a multitude of inventive working strategies and development tools will be explored and discussed to encourage women working and willing to join the sector
Venue: Park Inn, Sandton, Johannesburg
For more information visit: www.amc-intsa.com

23 – 28 July 2017

52nd Annual GSSA Congress

Advancing rangeland ecology and pasture management in Africa incorporating the eighth research skills workshop and a policy and practice workshop
Venue: Wits Rural Facility, Mpumalanga
Contact: Freyni du Toit on 049 842 4335

26 – 28 July 2017

KwaZulu-Natal Industrial Technology Exhibition

KZN Industrial Technology 2017 is a trade event targeted at the industrial industries in the KwaZulu-Natal region
Venue: Durban Exhibition Centre, KwaZulu-Natal
For more information visit: www.iafc.org

26 – 29 July 2017

IAFC Annual Conference and Expo 2017

The IAFC represents the world's leading experts in the first responder community
Venue: Charlotte Convention Centre, Charlotte, USA
For more information visit: www.iafc.org

August

25 – 26 August 2017

Grinder Challenge 2017

Fire fighter competition with categories such as age, gender and relay team.
Venue: Durban, KwaZulu-Natal
Contact: Aghmat Steele, eThekweni Fire Brigade
Email: aghmat.steele@durban.gov.za
Tel: 031 311 5922

30 August – 3 September 2017

World Rescue Challenge (WRC) 2017

The WRC sees world class rescue and trauma teams compete annually in an event designed to challenge emergency service personnel
Venue: Targu Mures, Transylvania, Romania

For more information visit:
www.wrescue.org/World-Challenges/World-Rescue-Challenge-2017-Romania/2017

September

20 – 21 September 2017

The Emergency Services Show 2017

The Emergency Services Show is a two day event being held at the National Exhibition Centre (NEC) in Birmingham, United Kingdom

Venue: Birmingham, United Kingdom
For more information visit:
www.emergencyuk.com

21 – 22 September 2017

16th International Water Mist Conference

The International Water Mist Association is the first association of its kind dedicated exclusively to water mist fire fighting and related technologies

Venue: Barceló Aran Mantegna, Italy
For more information visit:
<http://www.iwma.net/home/>

25 – 26 September 2017

ICDEM 2017 – 19th International Conference on Disaster and Emergency Medicine

The ICDEM 2017: 19th International Conference on Disaster and Emergency Medicine aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results about all aspects of disaster and emergency medicine

Venue: London, United Kingdom
For more information visit:
waset.org/conference/2017/09/london/ICDEM

27 – 28 September 2017

Disaster Management Institute of Southern Africa (DMISA) Annual Conference

Disaster Management Institute of Southern Africa (DMISA) annual conference

Venue: Coega Vulindlela Accommodation and Conference Centre, Port Elizabeth

Contact: Karin Muller
Tel: 011 822 1634
Email: Karin@disaster.co.za

26 – 30 September 2017

ISFSI 2017 Instructor Development Conference

The Instructor Development Conference provides educational sessions for instructor development

Venue: Fort Collins, Colorado
For more information visit:
www.isfsi.org/links/instructorconference/

October

2 – 5 October 2017

6th EMSSA International Conference 2017

Hosted by Emergency Medicine Society of South Africa and Emergency Care Society of South Africa

Venue: Sun City Resort, North-West Province
For more information visit:
www.emssa2017.co.za/

17 – 18 October 2017

Aerial Firefighting Europe 2017

The essential fire fighting aerospace forum

Venue: Nimes, France
For more information visit:
www.tangentlink.com/event/aerial-firefighting-europe-2017

29 October – 3 November 2017

SAESI Conference and Expo 2017

This year's theme is "Climate change and the emergency services" and will address issues pertaining to climate change and the impact thereof on the emergency services. The impressive speaker line up will feature international and local presentations providing a great networking forum for debate.

Venue: NASREC, Johannesburg
Contact: Lee Raath-Brownie
Tel: 011 452 3135
Cell: 082 371 0190
Email: lee@fireandrescue.co

For more information visit:
www.saesi2017.com



29 Oct - 3 Nov 2017

Expo Centre NASREC, Johannesburg

The largest emergency services conference and exhibition in Africa

CONFERENCE

EXHIBITION

TRAINING

CHALLENGES

For more information contact Lee Raath-Brownie at Tel: 011 452 3135 Cell: 082 371 0190 Email: lee@fireandrescue.co

I'm a paramedic. But nobody taught me how...

I'm a paramedic but nobody taught me how to sit an 86 year old gentleman down to tell him his wife of 65 years has died in her sleep. Nobody taught me how to watch as the desire for life leaves his eyes the moment I break the earth shattering news that would change his life forever.

Nobody taught me how to accept a torrent of abuse from a complete stranger, just because they have been drinking all day and want a lift home.

Nobody taught me how to reason with the aggressive patient I've just met, overdosed but needing my help to breathe.

Nobody taught me how to talk to someone so depressed that they have just slit their own wrists, panicked and called for help. Nobody taught me how to respond when they turned to me and said, "I can't even get suicide right".

Nobody taught me how to bite my tongue when I went two hours over my finish time for someone who'd been 'generally unwell' for 24 hours.

Nobody taught me how to accept that I would miss out on things other people take for granted; birthdays, Christmas day, meals at normal times of the day, sleep.

Nobody taught me how to hold hands with a dying person as they take their last breath, how to hold back the tears because it's not my grief.

Nobody taught me how to keep a straight face whilst a young man explains exactly what happened to the end of his Hoover.

Nobody taught me how to act when a patient pulls a knife on me.

Being a paramedic is so much more than swooping in and saving lives; it's about dealing with the most unique, challenging experiences and just going home at the end of the shift, being asked 'how was your day' and replying 'fine thanks'.

Being a paramedic is about constantly giving a bit of yourself to every patient, because although it's our fifth patient of the day and we can't remember their name, it's their first ambulance, their loved one, their experience.

It's about the bits that nobody taught me how...

It's about providing pain relief and reassurance to a 90 year old lady who's fallen and hurt her hip, and despite all the pain she turns and says, "Thank you, how are you?".

It's about a hug that you give someone on Christmas Day because they haven't spoken to anyone for days, they have no relatives or companions but you've brightened up their day.

It's about climbing in the car next to someone and saying, 'Don't worry, we'll have you out of here in just a moment'

It's about everything that we do that the media doesn't publicise.

It's about knowing the fact that we couldn't attend to the dying man because we were dealing with a drunk... who then assaulted one of us.

I'm a paramedic but nobody taught me how...

With credit to Julia Cornah

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**HYDRANT, VALVES,
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The above ground hydrant is easy to access and service if needed. The valve system allows for use as a traditional ground hydrant monitor or boost the pressure and flows by adding lines from an apparatus. Foam can even be added to the system from the truck, eliminating the need to store and transport foam totes.

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