

# FIRE AND RESCUE INTERNATIONAL

Integrated fire, rescue, EMS and incident command technology

Volume 6 No 3



## SPECIAL FOCUS: INDUSTRIAL AND WAREHOUSE FIRES

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# FIRE AND RESCUE INTERNATIONAL

Integrated fire, rescue, EMS and incident command technology

Volume 6 No 3

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# Comment

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**We are proud to present our 56th edition of Fire and Rescue International (FRI), which provides our emergency services with interesting technical articles and useful and practical information. Enjoy the read!**

**News: Vehicle handover**

We feature the new E-One aerial ladders deployed at City of Tshwane Emergency Services.



Lee Raath-Brownie

**Industrial fires**

The industrial fire focus features a technical article on warehouse fires by technical expert, Colin Deiner, who discusses the operational strategies during warehouse fires such as working in tandem with fixed fire suppression systems or in situations where they are not present, sufficient bulk water supply, ventilation and forcible entry tactics, offensive operations, exterior operations and strategic considerations for the incident commander. We also feature an article on the urban-industrial interface: where industrial fires meet communities.

**Fire service leadership**

In this edition, Etienne du Toit discusses the differences between management and leadership and the importance of building and sustaining a culture that deliberately pursues and stimulates collaboration.

**Training**

The City of Cape Town Fire and Rescue Service Fire Training Academy received its IFSAC accreditation towards the end of 2021 and Frederik Munnik shares their journey to this achievement.

**Incident Command System (ICS)**

Michelle Kleinhans of Dynamic Incident Management discusses the importance of an effective incident management team during emergency situations.

**Wildfires**

US Forest Services' Chief Tim Murphy discusses incident response safety in Command Corner and provides a hands-on checklist and we continue with Chapter 6 from Dr Neels de Ronde's book, 'The Garden Route in flames', sharing the importance of optimum use made of prescribed burning application in the Garden Route region.

**Emergency Medical Services**

We feature the new Rocket HEMS Bell 222 medical aviation simulator, which is a first in the world.

**Your story**

We continue with our "Your story" articles, paying tribute to the people in service, sharing their backgrounds, experiences and achievements, telling your story. In this issue, we profile Willie Olivier of the City of Cape Town Fire and Rescue Service, who passed on 9 September 2021. This is the first of the 'Your story' articles that we are doing posthumously.

**Mental health, self-defence and fitness for first responders**

In the article on mental health, we look at burnout in the workplace and the physical, emotional and behavioural symptoms. Morné Mommsen discusses the strategies for protecting yourself in the article on self-defence and Fire Rescue Fitness' Aaron "Zam" Zamzow shares a pandemic proof workout option for first responders.

We thank all our contributors, advertisers and readers for their continued support! Fire and Rescue International is your magazine. Read it, use it and share it!

**Lee Raath-Brownie**  
**Publisher**



## Congratulations

Brendan Bromfield for his photograph 'Quality's Pik & Pak fire in Pinetown' taken with a Nikon D800, lens Nikon 70-210mm F4-5.6 D, ISO 5000, aperture: F5.3, shutter speed 1/15 seconds and focal length 190mm.

**Well done!**

**Brendan Bromfield wins this months prize money of R2000!**

**Photo description:**

Fire fighters were battling a massive fire that broke out in a shopping centre in Pinetown, Durban.



**This month's FRI Images winner!**

## Best rescue, fire or EMS photo wins R2 000!

Fire and Rescue International's (FRI) bi 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 1meg) 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](mailto:lee@fireandrescue.co)



**>> ENTER NOW!**

# City of Tshwane strengthens Emergency Services department with state-of-the-art aerial fire fighting ladders, the first in Africa



The City of Tshwane has invested in three state-of-the-art E-One aerial fire fighting ladders from Fleet Africa on a full maintenance lease; one

E-One Type 1 aerial ladder and two E-One Quint aerial ladders. The apparatus were handed over at an event held in October 2021 at Tshwane House in Pretoria.



**The E-One Type 1 and two E-One Quint aerial ladders were handed over at an event held Tshwane House in Pretoria**

## An E-One Type 1 aerial ladder

The E-One Type 1 aerial ladder has a 41,75m all-welded aluminium fully enclosed tilt cab and body main frame aerial ladder built on Cyclone II chassis, with the capacity to reach up to 13 storeys high. The four-door cab meets and exceeds ECE R-29 crashworthiness standard and offers seating for six responders ie a driver and five crew, with three-point seatbelts installed for all crew members including five breathing apparatus (BA) seats.

The appliance also has ground ladder storage at the rear with one 3m folding attic ladder, two 4,8m roof ladders, one 7,3m two-section and one 10,6m three-section ladder. There is also a pike pole storage with six pike poles located to side of ladder storage ▶



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The turntable platform is mounted at the rear and there is a secondary operator's position at the tip of the aerial ladder.

**Two E-One Quint aerial ladders**  
The two E-One Quint aerial ladders have a reach of 33,53m and are also built on Cyclone II chassis. The all-welded aluminium fully enclosed tilt cabs have four doors and seating for a driver plus five crew with standard safety features such as roll cage cab. The cab has front and side airbags with three-point seatbelts installed for all crew members including five BA seats.



The E-One Quints have a 6 000l/min at 1 034 kPa single-stage pump, a 3 786l/min 102mm waterway to monitor discharge (pinned at 26,5m level) and double 38mm cross-lay with 50mm plumbing. There are two 65mm side discharges with BSS couplings on both sides.

The Quint aerial ladders have a 1 800-litre polypropylene water tank, a 113-litre foam tank, a 101mm rear waterway inlet and an automatic relief valve is installed in the aerial waterway.



There is ground ladder storage at the rear with NFPA ladders and pike pole storage with six pike poles located to side of the ladder storage.

Additionally, the ladders have point cameras to have a clear view from the ground on what is happening inside a building.

Alderman Randall Williams, executive mayor of Tshwane, said, "Last night, I joined MMC Karen Meyer and the City of Tshwane Emergency Services leadership team and department to unveil their new, state-of-the-art, aerial fire fighting ladder appliances. These trucks are the first of their kind to be deployed to an African city and will significantly enhance the capabilities of Tshwane's Emergency Services department. These vehicles are truly impressive and will support the department in their mission to protect the lives of residents, their properties and infrastructure across the city." ▲

- ▶ and a Little Giant 5m ladder mounted on the left side compartment top.

The E-One Type 1 aerial ladder has a 6 626l/min at 1 034 kPa single-stage pump, a 3 786l/min 102mm waterway to monitor discharge (pinned at 33.5m

level), double 38mm cross-lay with 50mm plumbing and two 65mm side discharges with BSS couplings on each side. The ladder has a 1 100-litre polypropylene water tank, a 113-litre foam tank and an electronic foam proportioning system.

# The Institution of Fire Engineers (IFE) unveils future global strategy

The Institution of Fire Engineers (IFE) has undertaken a comprehensive review of its communications and activities to improve its services and qualifications for members and strengthen its global influence in the two key areas of competence and sustainability.

With over 100 years of history, the professional membership body enables those in the fire sector to increase their knowledge, professional recognition and understanding of fire through a global discourse. It is instrumental in shaping a future world that is safer from fire.

Chief executive of the IFE, Steve Hamm explained, "The fire safety landscape in which our members operate is changing at a faster pace than at any time since the foundation of the organisation in 1918. This is both exciting and challenging and we have had valuable input from members, volunteers, staff and stakeholders in shaping our future direction."

Hamm added, "Across the board our members' roles and responsibilities are evolving, influenced by advances in technologies and materials, external factors such as climate change and learnings from major incidents such as Grenfell. These are all influencing new regulations and standards, new ways of working and highlighting the importance of knowledge and information sharing to evolve our skills and capabilities worldwide."

"To support its future strategy, the IFE has expanded its team to include technical director Peter Wilkinson to lead on the IFE's technical collaborations, special interest groups and input into consultations. The new position of relationships

manager has also been created and Gill Haynes has taken on this role to lead on developing support for the organisation's international network of branches and extensive cohort of volunteers."

"As part of its plans to enhance competency, the IFE has introduced a new suite of qualifications inspired by global industry needs and feedback from members and examiners. There are plans to build on the success of these by bringing in at least two new qualifications for 2022. The final selections are yet to be made but urban search and rescue and fire risk assessment are currently being explored."

"The IFE is also building closer relationships with higher education and university establishments to broaden the depth and diversity of skills and competency across both technical and social disciplines. This work will create clear competency frameworks centred on membership, professional registrations, knowledge sharing and accessible career development pathways for all."

"The shift to virtual learning and events during 2022 will continue. This will widen access to CPD and other events to members around the world, increasing their ability to knowledge share and learn from each other."

"Aligned with these plans, are the IFE's initiatives to address sustainability, from adapting to the challenges driven by climate change to building resilience in the profession. Future practice will be informed by smart cities, connectivity and big data alongside advances in building materials, fuels, transport, energy storage, water and waste management, together with the technologies that



**Chief executive of the Institution of Fire Engineers, Steve Hamm**



fire professionals can use to predict, manage, monitor and deal with fire risk and fires."

Steve concluded, "Sustainability is an area where we feel the true value of our global community will come to the fore and we will be looking at ways to expand our branch network and CPD opportunities to share ideas and expertise that can inform best practice, spark fresh research and deliver advances in our professional capabilities and understanding."

"This will be a transformational year for our organisation, one in which we will build upon feedback from members around the world to strengthen our leadership, our communications, our responsiveness and our relevance to fast changing global fire safety and competency needs to ensure our members continue to thrive as trusted professionals." ▲

# The urban-industrial interface: where industrial fires meet communities



**Local authorities are faced with one or more of these petrochemical, oil and gas (POG) incidents**

**F**ire has no geographical, political or ideological borders. After all, a fuel tanker burning in New York City burns the same as a fuel tanker in Msukaligwa. The strategies, tactics, equipment and materials required to control the event are exactly the same. Successful extinguishment and containment will be dictated by knowledge, resources and preparation.

Many of our local authorities in South Africa might be faced with one or more of these petrochemical, oil and gas (POG) events that could exist within their jurisdiction:

- Single storage tank fires
- Multiple storage tank fires
- Spill fires

- Gas and manifold fires
- Boiling liquid expanding vapour explosion (BLEVE)
- Runaway polymerisation
- Dust explosions
- Marine fires
- Road transport fires
- Dike fires
- Process fires
- Gas and vapour releases

These incidents manifest themselves in any of number of ways, most of them highly destructive. Some of these incidents are static, ie they stay where they are; however, for the most, they rapidly expand in magnitude as well as expose other risks in the event's immediate proximity.

Effectively combating these emergencies demands an intimate knowledge of what triggers them, how they manifest and grow. Only once this is understood can the methodology and resources required to manage these events be truly appreciated.

POG fires can be broken down into three basic groups:

## Fires at depth

These events are largely confined to storage tanks where the fuel can be pre-heated for a long period before extinguishment commences. These incidents are technically difficult to control and are heavy on resources that need to be on site before a meaningful attack can be launched. It should be noted that tank fires involving crude oil may produce several dangerous phenomena in the form of boilover, slop-over and froth-over.

## Thin film fires

Thin film fires are as a rule much easier to control than tank and three-dimensional (3-D) fires. They do, though, have the potential to rapidly expand (running spill fires) or, if static, expose other risks that can result in collateral damage including BLEVEs, structural collapse or failure of pipelines.

## Pressure-fed (3-D) fires

Pressure-fed (3-D) fires involve fires where the fuel is fed under pressure. The fuels can be liquid or gas (liquid or gas phase). Managing these fires is best achieved by cutting off the fuel supply and allowing the residual fuel to burn off. However, if this cannot be achieved the means must be provided to knock the pressure-fed flame down and then rapidly perform leak sealing. Note that in instances where pressure-fed liquids are involved it is imperative that the spill component of the fire first needs to be controlled using foam before any consideration can be given to managing the pressure fed flame.



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Industrial Fire &  
Hazard Control

# Warehouse fires: strategies and tactics

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



The concept of warehousing has seen a massive change over in recent years. The rise in the need for online ordering and 'just-in-time' delivery has seen a rapid increase in the number and size of warehousing and the frequency of activities within these structures. It has furthermore led to a more

diverse variety of products, with different physical properties, being stored and processed.

Depending on the type of construction, contents of the warehouse and the fixed fire protection, warehouse fires will generally be quickly detected and easily

- The elements required to successfully manage these POG emergencies can be listed as:
  1. Effective resources
  2. Proven methodologies
  3. Effective plans and procedures
  4. The correct training and competencies

Having stated that, we are reminded of the constant budget restraints under which our local authorities are required to operate, train and respond. In most instances, the resources and training required to effectively mitigate POG incidents in the urban-industrial interface, is highly specialised and expensive. Being aware of this, Industrial Fire and Hazard Control is

well positioned to partner with our local and provincial authorities to provide a response capability to assist when an urban-industrial interface (POG) incident occurs. Industrial Fire and Hazard Control deals effectively with all four points noted above and brings specialised knowledge and expertise to bear when faced with these unique challenges.

One of the most unique features of Industrial Fire and Hazard Control is our very close working relationship with Williams Fire and Hazard Control, who has successfully responded to more than 250 land and marine based flammable liquid fires around the world. These

responses, each one individually, allows the company to build a level of expertise that is unmatched in the industry and it is this level of experience, coupled with a solid in-house knowledge base that allows Industrial Fire and Hazard Control to offer a partnership with our local and provincial authorities that is totally unique when planning for the Urban-Industrial interface incidents.

Should you require more information, please do not hesitate to reach out Zarto Williams on 061 158 6941/Zarto@industrialfire.co.za or Trevor Fiford on 082 651 2580 / trevor@industrialfire.co.za or visit [www.industrialfire.co.za](http://www.industrialfire.co.za). ▲

dealt with. There is also a responsibility on the first responding fire department to be aware of the warehouse structures in their coverage area and what products are stored in those occupancies. This will help them to develop an understanding of the types of incidents they can anticipate and develop effective incident action plans.

The type of product stored in the warehouse space will in all probability have the biggest impact on the potential firespread and weight of response. Fires in structures containing flammable products such as tyres, paper and plastic products and solvents will have the potential to spread rapidly and will require a multi-alarm response.

A fire in an occupancy where pressure containers or flammable liquids could carry a risk of explosion and an increased fire spread caused by projectiles crashing into unaffected areas of a warehouse space and igniting unburned products. In addition to this a further risk exists when the racking becomes compromised and the risk of collapse presents itself. This could impact on fire fighting operations in several ways. Despite the risk of it collapsing on fire fighters inside the building it could also prevent direct application of water or foam onto the burning product or cut off any escape routes.

A large fire inside a metal truss construction will weaken the structure to a point where it will weaken and collapse onto the fire area thereby impeding any elevated water streams that may have been set up outside.

### Working with fixed fire suppression

Fire suppression systems are legally required for different classes of warehouses. These systems are generally designed to control fires in specific areas not to extinguish them. It will still be necessary for the fire department to do the final fire extinguishing and making the building safe. It is therefore important for the responding fire service to understand the working of the fire suppression system and how to work with it.

When responding to a fire where the suppression system (usually a sprinkler system) is in operation, the first responders should ensure that the water supplies to the system are operating effectively and that the fire pumps are operating properly. Valves supplying the system should be kept fully open until the incident commander determines that it is safe to turn it off.

In a situation where two or more suppression systems are operating simultaneously, the incident commander should ensure that all sector commanders are so positioned as to be able to monitor the operation in their sectors and to report the effect of the system on that part of the operation. It is important for fire services to have prior knowledge of the building and the systems installed there. Even if the building is sprinklered, improper design or changes in storage

**Aerial devices and ladders should be given priority of positioning and be so placed that they can be most used to their fullest potential**



may hinder sprinkler protection for the material stored, rendering the system ineffective. I have in numerous previous articles in this magazine advocated the importance of pre-planning for high risk premises in station areas. Loading your crews up and paying a visit to the warehouses in your station coverage area will familiarise them with the layout of the warehouse space, its construction and let them get to know the staff who they might have to communicate with if they ever have to respond to a fire on that site.

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**A very important consideration when dealing with a fire containing toxic chemicals is the control of the fire water run-off**

- Working in tandem with fixed fire suppression systems or in situations where they are not present, will require the stretching and advancing of hoselines to various locations in the warehouse. It is important to ensure that the reach of your lines have sufficient reach for this. It may also be necessary to pace monitors in strategic positions to enable the cooling down of exposed structural members to prevent them from collapsing due to high heat exposure.

Several recent fires in different parts of the country have been severely compromised due to a lack of sufficient water supply. In a large warehouse fire, it is a fact that large volumes of water will have to be flowed in order to control and extinguish it.

Although the provision of adequate water pressure seems to be a challenge for many municipalities right now, it is simply not acceptable to lose a structure due to the lack of pressure in your fire hydrants. Fire services must work with their water departments to ensure that any challenges in high risk areas are quickly identified and rapidly dealt with.

Easier said than done? I know.

Consider the impact that the loss of jobs and revenue due to a major warehouse fire will have on a city/town and it then becomes clear that the maintenance of water supplies is so critical. If you are, however,

confronted by a weak or non-existent water supply, be prepared to establish a water supply sector with shuttle runs or large-diameter hose relays. You might even need to scale back tactics to match the available water supply. This will invariably compromise the operation and could be an extremely difficult decision to take.

#### Ventilation and forcible entry

Early ventilation of a large structure will assist in providing visibility and limiting smoke damage to goods stored within the structure. The volume of air movement required inside a large warehouse space will be considerable and it might be advisable to consider deploying your positive-pressure ventilation (PPV) blowers. Remember that PPV will only be useful if deployed in conjunction with a coordinated interior attack. Due to the large volume of air you will need to move, you will probably have to set up blowers at several entrances and identify several openings for the smoke to vent out of. In these situations, you will want to ensure that while you are introducing high volumes of air into the structure, you are also sealing off the opening to prevent any smoke coming back at your crews positioned there or using that opening for entry into the building. Placing a larger blower directly at the entrance will achieve the first objective ie high air volume. Position a second, smaller blower slightly back but directly behind the larger blower to create the 'cone' around the opening.

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**In a large warehouse fire, large volumes of water will have to be flowed in order to control and extinguish it**

- ▶ Accessing the roof and reaching natural ventilation openings should also be an initial strategy. However, the location of the fire and the condition of the roof area where you are going to place your ventilation crews, should be carefully evaluated before committing ventilation crews to the roof.

Fires involving metal roofs can affect the roofing material and insulation and can burn and smoulder underneath this material, potentially involving the entire roof. You might consider doing a trench cut along the roof structure to prevent the fire from spreading. The trench cut or 'strip ventilation', is a long narrow ventilation hole that acts as a firebreak on the roof of a structure that is being attacked by fire. This tactic is used when confronted with a concealed fire that is difficult to reach or a fire that has a stronghold on the attic or cockloft space of a long, narrow building. The main focus of this defensive tactic is to cut off fire extension to an area of the building that has not been involved in fire. This must, however, be done with great caution and ensuring the area being trenched does not compromise the structural integrity of the building.

The first step in performing a trench cut is to create a large vent hole over the fire, which will allow heat and smoke to exit the structure. This should also provide the ventilation crew enough time to complete the trench cut. Often this is overlooked due to the ventilation crew looking for a safe enough position to start the trench cut. The officer responsible for the ventilation must have a good knowledge of the roof construction. This will allow your crews to bring the right blades for the saws and other necessary tools to open the trench. Also check for sagging or blistering in parts of the roof. Be sure to identify any areas that are weakened and failing. You may have to adapt your tactics due to roof conditions.

During a working fire in a warehouse it might be necessary to create any number of openings at certain

points. In the high security environment modern fire services operate in, it will be important that, during your pre-planning walkthrough, fire fighters take note of the locking mechanisms and other security systems of the doors and windows. This will inform the types of forcible entry tools that will be needed to force openings in the event of the building being locked and secured.

Firewalls and fire doors are a key building feature that may prove to be invaluable in a fire fighting operation. They are normally rated for between one and three hours of fire exposure. Fire fighters must know where they are located and ensure that they haven't been compromised.

### Offensive operations

Interior offensive operations can only be started after a good size-up has been completed. Probably the most important factor in starting an interior attack will be the starting position of the attack teams. You will want to provide them the most favourable tactical advantage possible. It might be a good idea to deploy a rapid intervention team to locate the fire and carry out any rescues that can be safely achieved. They can report their findings to the incident commander who can then decide on the best path in ingress for the attack teams.

Interior crews must be supported by a good ventilation strategy and forcible entry crews throughout their advance as accessing the seat of the fire may require teams to move deep into the building, beyond the limit of the fire fighters' self-contained breathing apparatus (SCBAs). Building layout and heavy smoke conditions may prove disorienting and that can complicate egress from the building and can cause even the most experienced fire fighter to become disoriented. Ventilation should be ongoing and forcible entry teams should continuously be aware of the progress of the attack teams. It would be advisable to create several escape routes for the attack teams as the progress through the structure towards their objective. This is especially important where building is heavily barricaded with burglar proofing.

### Exterior operations

If the fire in a warehouse has reached the point where it has overpowered the fixed fire suppression systems and already vented through the roof or caused partial roof collapse or become too dangerous to commit crews to the interior, an exterior fire fighting operation will be the only option. This may be due to the sheer volume of the building content, the type of product stored, an explosion or a design flaw that prevent the suppression system to effectively reach the fire.

Deciding on a defensive approach should be a simple decision and should become obvious during the early stages of the size-up. It is important that crews should only be deployed offensively if the reward matches the



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- risk. If the risk to staff is significant and the chances of saving the building are minor, go defensive.

Aerial devices and ladders should be given priority of positioning and be so placed that they can be most used to their fullest potential. During a defensive operation they will be used as elevated water streams. A good strategy could be to place them in a position where they can direct their monitor into the doors used for loading and unloading the delivery trucks. This should allow them to flow water deeper into the warehouse than any handline or ground monitor.

A defensive strategy does not necessarily mean that it must be an exclusively exterior operation. It might be possible to set up handlines and ground monitors inside a structure where only part of it is on fire. This will be done to prevent the fire from spreading and will be dependent on several factors such as the integrity of the structure, smoke profile, etc.

A very important consideration when dealing with a fire containing toxic chemicals is the control of the fire water run-off. The incident commander must consider the topography of the surrounding area and note any risk of the potentially toxic run-off reaching water sources nearby. Products specially developed for the containment of run-off have been acquired by some fire departments and in other cases agreements with hazardous waste removal companies have been reached whereby they will respond to such incidents and deal with the run-off control. Not controlling the run-off could lead to a bigger disaster than the actual fire damage.

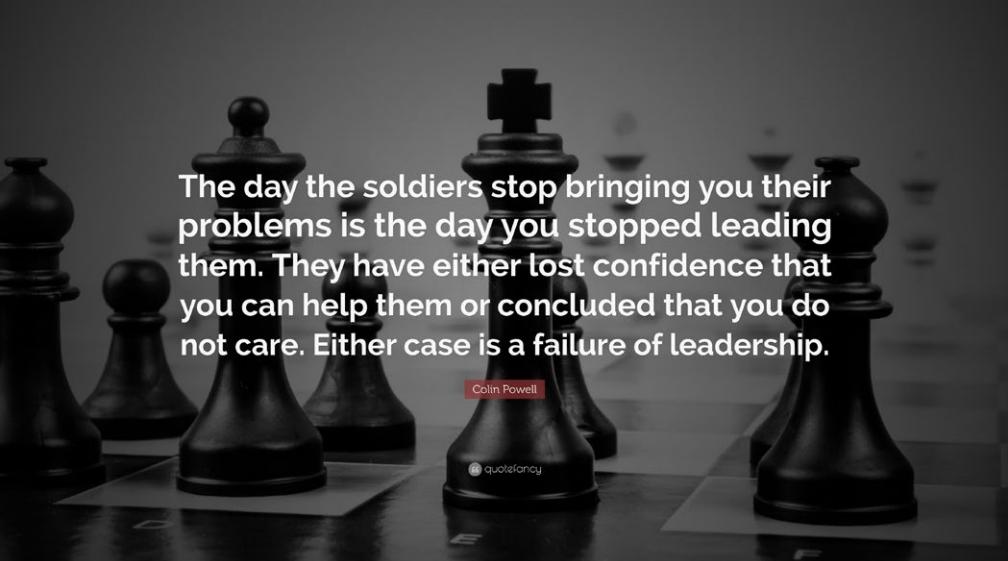
### Strategic considerations

A large warehouse fire will present an incident commander with several challenges. Large fire column, water supply, resource allocation, collapse potential and other considerations will all have to be factored in to achieve an eventual solution. It will be important to focus on certain priorities:

- Size-up, Size-up, Size-up. The information gathered in the early stages of the incident will determine the direction for the next few hours. It is through this information that the most important strategic decision, whether to go offensive or defensive, will be made.
- Ventilate early to enable attack teams to enter the structure safely and effectively.
- If the decision is to go offensive also prepare for an extended defensive operation and prepare your command sectors for a possible change in strategy.
- Never confuse your strategy by going defensive and offensive concurrently. Defensive operations, by its nature, will invariably compromise the effectiveness and safety of the interior attack crews.
- Assign an experienced officer to take charge of the water supply and give them everything they need. All your plans will come to nothing if you don't have enough water or lose your water supply.
- You will probably be there for a while. Ensure that relief crews, additional foam, rehab and other support resources are activated and available.
- Ensure effective hazardous run-off control. It might keep you off the news cycle for a few weeks.
- Remember the pre-planning visits. They are much more important for crews than sitting around the fire station, watching TV or cleaning fire trucks. ▲

# Lead more and manage less?

By Etienne du Toit: AlFireE, PrDM, B Tech: Fire Technology (Pretoria Technicon)



**The day the soldiers stop bringing you their problems is the day you stopped leading them. They have either lost confidence that you can help them or concluded that you do not care. Either case is a failure of leadership.**

Colin Powell

quotefancy

*"I cannot trust a man to control others who cannot control himself."*

~ Robert E Lee

*"Rank does not confer privilege or give power"*  
~ Peter F Drucker

In this article, I want to examine the belief that leadership and management are synonyms. While management is all about improving systems and processes for organisational performance, leadership in the fire service entails critical decision making, often in dynamic, potentially life-threatening situations with consequential risks. Effective fire service leaders ask the right questions and think strategically in making well-informed conclusions upon which they can act. In addition, fire service leaders develop, maintain and motivate teams.

A manager is a member of an organisation with the responsibility of carrying out the four important functions of management ie planning, organising, leading and controlling. But are all managers leaders?

Unfortunately, not all managers are leaders. Some managers have poor leadership qualities and employees

follow orders from their managers because they are obligated to do so, not necessarily because they are influenced or inspired by the leader.

Leaders are followed because of their personality, behaviour and beliefs. A leader personally invests in tasks and projects and demonstrates a high level of passion for work. Leaders take a great deal of interest in the success of their followers, enabling them to reach their goals to expectation. In the fire service and in fact any other disciplined service, ambition can thrust an objective or a project forward. When balanced with integrity, ambition pushes individuals and teams to their greatest potential.

Fire service leaders must also possess tenacity balanced by flexibility. Finding a solution to an extraordinary problem or successfully completing an apparently insurmountable task often demands unassailable willpower to keep going and searching for solutions. Abstract thinking and the ability to reconfigure an approach, rather than stubbornly sticking to one not working, must accompany such tenacity.

Fire service leaders carry weighty responsibilities. If lacking sufficient

self-confidence, doubt can paralyse them and their subordinates from acting. They must possess the emotional fortitude to weather setbacks and still lead the next charge forward. The confidence and ability of those led are greatly affected by whether leaders trust themselves to tackle the mission ahead, making this trait indispensable in leadership.

Ultimately, strong leadership projects confidence. All this assist in developing and establishing the element of command presence.

Having had the privilege to work with some excellent leaders in the fire service, apart from having a vision and the ability to think strategically and critically, they were all able to interact with other people in a genuine way. They were very skilled at building and sustaining a culture that not only appeals to people but that deliberately pursues and stimulates collaboration between them.

While it is not the intention of this article to discount the benefits of systems management and there are many, it hopes to raise a concern about institutional blind spots that inhibit sound judgment in leadership.

As leaders, should we not pause and think deeply about whether we are losing the appropriate leadership philosophy to the lure of building and controlling management systems? The answer, in my opinion, is to find balance between these poles. ▲

# City of Cape Town Fire and Rescue Service Fire Training Academy now IFSAC accredited

SC Frederik Munnik, station commander: Fire Training Academy, City of Cape Town Fire and Rescue Service



**Clinton Manuel taking receipt of the IFSAC Certificate of Accreditation from Mr Derek Simmons**

The City of Cape Town Fire and Rescue Service Fire Training Academy received its International Fire Service Accreditation Congress (IFSAC) accreditation in September 2021. The academy is the first local government fire service training academy to receive the IFSAC recognised accreditation within South Africa.

A local government fire and rescue service has a legislative responsibility compelling it to develop the skills of their workforce and capacitate their human resource with prescribed qualifications. It is stipulated that the workplace must be used as an active learning environment and that a municipality must budget for the development and implementation of training programmes.

The City of Cape Town Fire and Rescue Service Fire Training Academy is declared a training institution under the Fire Brigade Services Act (99 of 1987). It has been providing training since 1991 and over time met all prescripts of being recognised as a training provider in South Africa.

The Academy is learner-directed and focused on competence-based training objectives. Each employee or partnership institution member is developed so that s/he will be empowered to master certain skills objectives at specified levels of competence.

Though having been compliant to the IFSAC policy, we did not have direct access to their certification. The City of Cape Town Fire and Rescue Service Fire Training Academy is seen as a legitimate entity with registered instructors, assessors and moderators. It was the first accredited municipal fire service training provider, registered with the Local Government Sector Education and Training (LG SETA), under the South African Qualifications Authority (SAQA), during 2005.

As part of a metropolitan municipal fire service, the Academy sought and achieved accreditation with the South African Emergency Services Institute (SAESI) for six IFSAC levels during 2008; this being the only access route to obtaining

occupational focused international qualifications at the time.

Some years later, we were also accredited with the Quality Council for Trades and Occupations (QCTO) as a skills development provider and assessment centre.

However, neither SAQA nor the QCTO certifies against the National Fire Protection Association (NFPA) standards, which is seen as international best practise and is the set benchmark for professional fire fighters in South Africa. Some of these codes and standards were adopted within South Africa as far back as 1993.

The Fire Training Academy consists of four organisational structures being the facilitation, assessment, moderation and facilities management sections. Currently staffed with 22 uniformed members, contributing to a collective 656 years of experience, they not only facilitate ongoing training, conduct assessments or independent moderation but also remain operationally active and tend to emergency incidents as the need arises. In turn, the uniformed staff is supported by two administrative officers, five maintenance staff and seven contractual Expanded Public Works Programme (EPWP) staff members.

In the past, the Academy was able to cater for the accredited training needs of the City of Cape Town Fire and Rescue Services staff, though be it through having to register NFPA-aligned courses with a third entity. However, we could only provide intermittent training to some staff members of the other five district and 24 local municipal fire services within the Western Cape Province. Very few of these fire services had direct

access to accredited training, let alone certification against international standards such as those of the NFPA. Thus, to obtain certification of any such achieved qualifications, fire service staff was forced to also interact with a third party on completion of their registered training course. This at cost to the individual employee as the Municipal Financial Management Act prohibits local governments from making payment to a third party via a non-competitive process; and from the enrichment of another entity, deriving from the functions and services as provided by a municipality, creating a dilemma with undesirable ripple effects throughout the fire services within the Western Cape Province.

Clinton Manuel, Head: Training for the City of Cape Town Fire and Rescue Service Fire Training Academy, is currently the chairperson for the Western Cape Provincial Training Committee and continually involved with the SAQA Standards Generating Bodies (SGBs), QCTO and the like. Over the past years he has identified shortfalls and barriers in obtaining professional qualifications within the fire service, thus he opted to find a resolve in accessing IFSAC certification. He approached the City of Cape Town Fire and Rescue Service chief fire officer, CFO Ian Schnetler and financial head, Timothy Ackerman (retired), indicating the wish to explore the possibility of establishing a direct affiliation with IFSAC.

In turn, they supported the concept and the string of benefits that such an alliance could pose for the City of Cape Town Fire and Rescue Service staff members. Mr Manuel was given 'carte blanche' to explore our accreditation potential, identify and network possible avenues and in preparing to make application to IFSAC. Chief Schnetler motivated the importance and benefits of this project to the city's hierarchy, whilst Mr Ackerman was instrumental in obtaining funding and generously providing expertise guidance on the crucial financial aspects and processes.

Identified benefits of this venture would include establishing a direct



**IF SAC site visit team members: Derek Simmons, Bill Benjamin, Clinton Manuel Matthew Thorpe, Angela White**

link on a global platform with higher educational institutes such as the Oklahoma State University situated in Stillwater, USA and enabling consultation and allowing for guidance on NFPA standards and international best practices. This will ensure that an international-aligned standard of training is maintained, which also incorporates occupational orientated psychomotor components. Fire service instructors, trained and certified on par with international standards, can be more effectively deployed within the City of Cape Town Fire and Rescue Service and the Western Cape, bringing quality training to greater numbers of local and provincial emergency service members.

Being able to issue IFSAC-seal bearing certificates, affords members of fire services the opportunity to become qualified and potentially speeds their advancement opportunities, as certification delays will be eliminated, being advantageous to career pathing and promotional processes. It also circumvents interaction with a third entity with over prescriptive policies and restrictions that resulted in lengthy backlogs of staff waiting to attend a particular training course or receive certification after successful completion of a registered training intervention.

As per the generic job description, fire service officers are responsible

for and have accountability in training their staff. Officers can be empowered to invest in the skills development and growth of their staff. Skills can be aligned to generic key performance areas detailed within an individual's job descriptions, strengthening the ties between skills ability and job functions.

After tedious months of exploration and preparation, Mr Manuel submitted an application to IFSAC during October 2019, requesting that the City of Cape Town Fire and Rescue Service Training Academy becomes a non-voting IFSAC member. He travelled to Lexington in the USA to present our case and provide motivational context of the legislative requirements of fire services within South Africa. Following a procedural voting process and based on the strong case presented to the Accreditation Board by Mr Manuel, our application was accepted with an amendment; the City of Cape Town Fire and Rescue Service Training Academy would be a voting member of IFSAC.

A site visit by IFSAC members to the Fire Training Academy was scheduled to take place over a period of eight days during May 2020, to evaluate aspects of the 86 certifying levels that were applied for. However, the outbreak of SARS-CoV-2 forced postponement to July 2020. With the odds stacked against us due to the global pandemic restricting international travel, the

- site visit was called off indefinitely as South Africa entered the second wave of COVID-19 infections.

However, we endured and Mr Manuel forwarded yet another site visit motivation during March 2021, proposing that a web-based site visit be conducted. In support, he highlighted the negative impacts that a delay in accreditation would have on all the fire services of the Western Cape. Reiterating the cumbersoness of working through a third entity, expanding on the negative effects of delayed certification being not only financially costly to individuals but also resulting in delayed advancement having an indirect cost to the person due to lost income. The Certificate Assembly Board of Governors (CABoG) agreed to the notion of conducting a virtual site visit, conditional that it be scheduled on the American time zones and limiting the amount of certification levels applied for initially to 30. As such the virtual site visit transpired from 2 August 2021 with an exit interview conducted five days later on 6 August 2021. The IFSAC City of Cape Town site visit endeavour would push the boundaries of IFSAC as the world's first site visit being conducted virtually since the organisation's inception in 1990 and later prove to be the 'new norm'.

An IFSAC site visit team consisting of four members was assigned to conduct the evaluation of our Academy. Lead by Matthew Thorpe of the Office of State Fire Marshal, North Carolina and assisted by three esteemed site team members hailing from Wisconsin Technical College, Portland Community College and the director of Fire Services for the Department of Justice and Public Safety in Newfoundland, Canada. Their task was to review the certification levels applied for against established NFPA standards and IFSAC's criteria for certificate accreditation. Inclusive of aspects related to certificate administration, our academy policy and procedures, written and manipulative skills tests, test development and assessment methodology along with the management and security thereof. The evaluation also included conducting internal interviews with

the Cape Town presenting team members in relation to current norms and operations at our training academy and within our fire service.

Under the leadership of Mr Manuel, a team of seven staff members was assembled to present the various required components of the eventual allotted 32 bread and butter certification levels during the site visit. The team presenting on behalf of City of Cape Town Fire and Rescue Service consisted of our training head, Mr Manuel, presenting policies and procedures components, along with divisional commanders J Laubscher (facilitation), D Wheatley (assessment), M Abrahams (moderation) and E van Bergen (course and assessment registrations and quality assurance), whilst station commanders M Makeleni, L Grobbelaar and F Munnik represented as instructors/assessors.

On the day, each site visit evaluation was preceded with a presentation team briefing starting at 09h00. Thereafter, we made final preparations prior to engaging with the IFSAC site team members from 14h00 onward. Forming breakaway groups within the virtual platform, the team members would present the various aspects assigned to them and partake in interviews until the evaluation day's conclusion around midnight, South African time. The presenting team members underwent direct questioning and had to field interrogation of submitted document components from very experienced and knowledgeable evaluators.

IF SAC policy allows a 90-day period for any amendments and resubmission of documents after conclusion of a site visit. The presenting team, through pure resilience and determination, committed to doing this overnight. Thus, by conclusion of the site visit team's evaluation, all documents that required some amendment were re-submitted and approved; a fete unsurpassed and as such was commented on by the site visit team leader during the exit interview and within his report to the Certificate Assembly Board of Governors. Mr Thorpe stated that the

professionalism, experience, expertise and passion of the presenting team members were exemplary. He made mention that the team's efforts in preparation was evident, also noted their openness to comments and/or recommendations of the site visit evaluators and commended their immediate correction/modification of presented components. Bearing in mind this was the first time that the presenting team members participated in a process of this nature, their commitment to excellence and dedication to the personnel within the City of Cape Town Fire and Rescue Service came to the fore. The team maintained that their selfless efforts were to the common good of our fire service and its members.

It should be noted that whilst the presentation team was immersed in the site visit, the remaining staff assigned to the Fire Training Academy continued unabated with the scheduled training activities of recruit fire fighters and operational staff, in spite of reduced training staff numbers.

On 1 September 2021 at the IFSAC CABoG meeting, the site visit team's report was tabled, reviewed and voted on by the Certificate Assembly. The outcome was unconditional accreditation being granted for the 32 certification levels applied for by the City of Cape Town Fire and Rescue Service Fire Training Academy.

The IFSAC Fall Meeting, involving the General Assembly and CABoG, took place in Tulsa, Oklahoma in the USA from 21 to 23 October 2021. The invite was extended to Mr Manuel, who in response stated, "It was well received and a joyful moment that brought a sense of higher achievement on a global scale, when the City of Cape Town Fire and Rescue Service name was seen listed on the IFSAC meeting agenda."

He attended the Fall Meeting and reflected on the amalgamation of the laborious efforts during the past two years, all converging during the moment when presented with the IFSAC Certificate of Accreditation for the City of Cape Town Fire

and Rescue Service Fire Training Academy. This accolade was received alongside other international entities such as UAE Abu Dhabi, US Department of Defence Fire and Rescue Services and various US State Training Institutes.

Whilst in Tulsa, Mr Manuel attended training on assessment and certification processes against NFPA standards and related assessment methodologies. He was also invited to attend site team leader training, during which the City of Cape Town virtual site visit process was dissected, with the eventual conclusion that it will serve as the benchmark for future site team visits of this nature. It became apparent that IFSAC underestimated the knowledge, skill and abilities of the City of Cape Town Fire and Rescue Service Fire Training Academy staff to function on a global platform. In future, all site visit team leaders will use our model when rolling out virtual site visits due to inherent advantages to the safety of participating IFSAC site visit team members and the financially beneficial factors.

After the Certificate Assembly meeting, Mr Manuel was appointed as a governor, being the first South African citizen to serve on the IFSAC Certificate Assembly Board of Governors (CABoG), making him eligible for election as a member of IFSAC Certification Board, who manages and decides on the business dealings of IFSAC on the global platform, thereby also concreting relations with the Oklahoma State University.

Due to our direct accreditation with IFSAC, the South African Emergency Services Institute was forced to repeal the City of Cape Town Fire and Rescue Service long standing accreditation with them. Thus, the Cape Town Fire and Rescue Service can no longer traverse the SAESI route to obtain registration of IFSAC accredited training programmes. Fortunately, this was anticipated and our policies and procedures document, as approved by IFSAC, could accommodate registration of the then ongoing courses.



**Recipients of the first City of Cape Town Fire and Rescue Service Fire Training Academy IFSAC Hazmat Awareness Level certificates issued**

In turn, this allowed the Fire Training Academy to host their first graduation ceremony on 3 December 2021, which was attended by the Safety and Security Directorate MAYCO member, Alderman JP Smith as the keynote speaker, chief fire officers and management staff of the Cape Town Fire and Rescue Service and several neighbouring fire services, members of the City of Cape Town chaplaincy, along with family and friends of the certificate recipients. The honour of presenting the very first, IFSAC seal bearing City of Cape Town Fire and Rescue Service certificates was bestowed on the initiator of this dream, Mr Manuel. A total of 15 certificates for Fire Service Instructor 1 (NFPA 1041) and 22 certificates for Hazardous Materials/Weapons of Mass Destruction (WMD) Awareness Level (NFPA 1072) was presented to qualifying staff members. In continuation of setting a global trend, the ceremony was virtually live streamed.

The selfless efforts of the Fire Training Academy staff, who will not personally benefit from this endeavour, contribute to the future development of fire service members within the City of Cape Town, other provincial emergency services, response agencies, higher learning institutions and other partners/stakeholders. We are now better equipped to capacitate our staff and through making training more accessible, we can empower other institutions to capacitate

themselves, this being the first of many benefits. To this end, the City of Cape Town Fire Training Academy has already fielded enquiries from other local emergency services and international entities for assistance.

Now, the City of Cape Town Fire Training Academy is an internationally recognised and fully accredited training institute, no longer obliged to subscribe to standards of a lesser level. We are a direct certifying agency, having its own policies and procedures and no longer a subsidiary to or having to deal with a third party to promote occupational and personal development of our staff. This not only allows us to prescribe how we do business; being a voting member, we may also provide input into the business of IFSAC, potentially reaching the global community.

Whilst attending proceedings during the fall meeting in Tulsa in the US, Mr Manuel was not only presented with the City of Cape Town Fire Training Academy accreditation certificate but also accepted our first IFSAC certificate seals. In doing so, he removed a large financial burden from the fire fighting community within the Western Cape. Previously a certificate bearing an IFSAC seal had to be procured at cost of R520 (current to date) per certificate application; this deficit being the liability of the particular individual making the application. Based on this cost, the monetary value of the

# The importance of an effective incident management team during emergency situations

By Michelle Kleinhans, managing director, Dynamic Incident Management (Pty) Ltd



**Heard the phrase "Do you have an effective team?"**

Does your jurisdiction have an effective and efficient incident management team (IMT)?

Are they trained and qualified Incident Command System (ICS) team members?

Does your jurisdiction follow the Incident Command System standardisation or follow their own?

**E**ffective incident management teams are the foundation of every successful management of any emergency or disaster situation and are teams in which each member brings his or her knowledge and skills to the table, which contribute to the overall success of the management of the incident and the resources as ONE TEAM with ONE PLAN.

- seals received by the City of Cape Town surmounts to an instantaneous saving of R1 560 000 to the current and future certificate applicants.

Our accreditation pose additional benefits in that staff members need not be taken from shift to attend training solely at the Fire Training Academy premises, deviating them from their operational functions. Targeted initial, continuation and/or conversion training, as depicted within the SANS 10090, can be rolled out whilst remaining at their designated workplace. Hence, not necessitating additional staff to work overtime or staff having to be transferred to fill gaps created whilst others are partaking in training programmes at the Fire Training Academy. Other beneficial cost saving is achieved through eliminating extra travelling expenditures and reducing overall training costs.

This also equates to more staff benefiting from standardised training whilst station crews can acquire the same skill sets as a unit, without negatively affecting their service delivery capabilities. This frees the Fire Training Academy to more easily accommodate induction training, expand on technical specialist training and focus on assessments of the various off-site training initiatives.

As an accredited assessment centre, the Fire Training Academy can provide other institutions access to assessment and certification within the levels of qualifications, thereby generating potential income that can financially benefit the City of Cape Town.

Though this initial and monumental milestone was achieved and

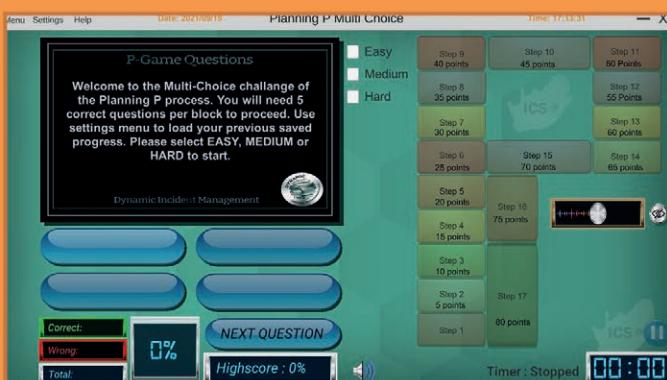
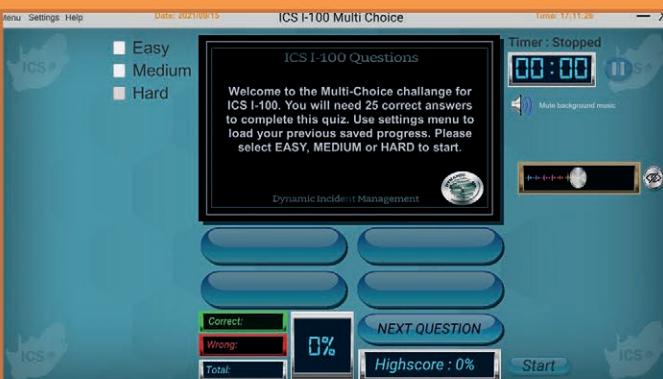
surpassed, there is no respite for the City of Cape Town Fire Training Academy staff. The initial goal of achieving 86 certifying levels was knee-haltered by the global pandemic. This team have proven that there are innovative methods to achieve the desired outcomes. Not resting on their laurels, they intend obtaining the other 54 levels through extension of scope early during 2022, thereby expanding on the legacy they have imprinted within the history of the City of Cape Town's Fire and Rescue Service.

In the words on Mr Manuel, "We can now grow our own trees to our own requirements and the greater community stand to reap the reward".

Article reviewed by Clinton Manuel, head: training, City of Cape Town Fire and Rescue Service ▲

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- An incident management team is deployed to manage the logistical, fiscal, planning, operational, safety and community issues related to the wildfires and provides the command and control infrastructure that is required to safely, effectively, efficiently and with an integrated coordinated effort manage the wildfire incident from beginning to end.

It is important to understand that an incident management team will require delegation of authority that includes scope of authority to manage an incident on behalf of an agency, organisation or landowner. The incident is not the incident management team's incident; no, they work for the relevant landowner due to their skills, knowledge and experience in managing of wildfires or other related incidents.

What is an effective and efficient incident management team (IMT)? An incident management team (IMT) is described as "A team of functional personnel that provides on-scene incident management support during wildfires that exceed a jurisdiction's or agency's capability or capacity, thus integrated incident management system".

A well-developed team comprise of at least three functional levels deep in ie the incident commander, command and general staff positions and the important unit level positions within the

Incident Command System structure required to management the incident.

The idea is to put together a trained, qualified and skilled group of people in a specific position that can respond to any incident or emergency anywhere in the country to help manage the incident that continue throughout multiple days on behalf of an organisation, province or country. These teams typically have 10 to 20 trained, qualified and skilled personnel available for deployment.

Developing an incident management team is not an easy task. It requires a lot of work, commitment and passion, standard operating procedures, alerting and deployment protocols and constant recruitment and training of members, is but the beginning of setting up an effective IMT for the country or jurisdiction.

Standardisation is the key concept for an effective incident management team, instead of each team doing it as 'they want to do it'. We will certainly not be able to adopt a national standard until we all agree where we want the standard to take us in developing, maintaining and deploying incident management teams within South Africa.

Team members should complete certain fundamental and functional ICS courses, take a position specific course of one or more of the various positions

within the ICS structure to form a team or to be considered for recruitment within an IMT. Jurisdictions and agencies should avoid forming IMTs that is not qualified or not working according to National Standards and protocols including the use of National and possibly international ICS documentation to develop the Incident Action Plans during incidents.

Incident management team members should:

- Understand that accountability comes with each position, especially the incident commander or unified commanders
- Provide a strategic, well developed plan of action
- Provide clear objectives
- Have a defined integrated structure, use common terminology and ICS standardisation
- Follow a proper planning process and tracking of resources
- Proper briefing sessions to all resources
- Complete incident action plans per operational period in the incident documentation pack for handover to owner of incident
- Regularly be part of refresher training and simulated exercises

Not all agencies/organisations feel comfortable asking for an IMT to manage an incident on their behalf, especially if they are not used or familiar with an incident management team and their operations.

# Command Corner: Incident response safety

By Chief Tim Murphy, US Forest Service Africa Disaster Management Technical Advisor

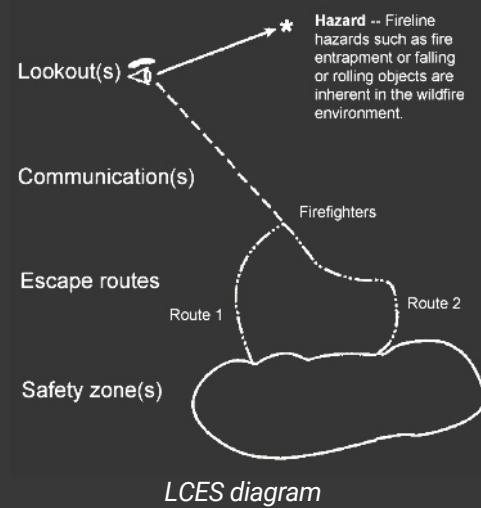
The number of injuries and fatalities among emergency responders who are responding to incidents is increasing at an increasing rate. Below is a checklist of considerations that should be utilised when responding to fires and other incidents:

## Checklist of considerations

- Emergency responder and public safety will always be the number one priority
- Utilise LCES (lookouts, awareness, communications, escape routes, safety zones) in all incident activities
- Personal protective equipment will be used on all incidents.
- Upon arrival at the scene size up incident:
  - What has happened?
  - What is happening?
  - What will or could happen?
  - Is this a HazMat situation?
  - Decision point, go - no go.
- Anytime traffic flow is affected by the incident, contact the jurisdictional law enforcement agency for assistance.
- Conduct all operations as far from

traffic lanes as possible to provide for crew and public safety.

- Park units on the same side of the roadway whenever possible to avoid traffic congestion.
- Personnel do not exit the emergency vehicle until instructed to do so by the leader.
- Exit the emergency vehicle away from the roadway or where hazard exposure is minimised.
- Exit the emergency vehicle with full personal protective equipment.
- Post a lookout to watch for and control oncoming traffic.
- Utilise forward and rear spotters when visibility is impaired or road conditions warrant.
- Utilise and place road traffic warning signs whenever possible.
- If equipment needs to be removed from the traffic side of the apparatus, one person will retrieve the equipment and a lookout will watch for oncoming traffic.
- Fire engine operators will operate pumps from the non-traffic side or from the cab of the apparatus when possible. Keep all hose, fire tools and equipment out of traffic lanes when possible.



LCES diagram

- During night operations utilise reflective clothing, vests and other safety equipment as necessary.
- All emergency responses on roadways will be concluded as quickly as possible to reduce personnel exposure.
- Cancel or demobilisation unnecessary apparatus as soon as possible.

Each agency emergency vehicle operator will follow their particular laws and agency policies governing the operations of emergency vehicles. 🔥

To ease this feeling, they should remember that the jurisdiction always remains in charge and that the IMT works for the agency administrator that provides the IMT with a delegation of authority outlining the expectations, clear mission and assignment and outcomes to the incident management team incident commander and staff and that all incident documentation stays the property of the relevant jurisdiction.

Think of this when building an effective team!

- Must have a qualified incident commander and staff members
- Must have clear objectives
- Requires balanced skills, roles and responsibilities to achieve overall objectives
- Implement effective ICS processes, effective information systems and coordination of resources
- Provide good communication across the team and for the community
- Follow appropriate trusted leadership
- Pledge support and trust by listening and giving support

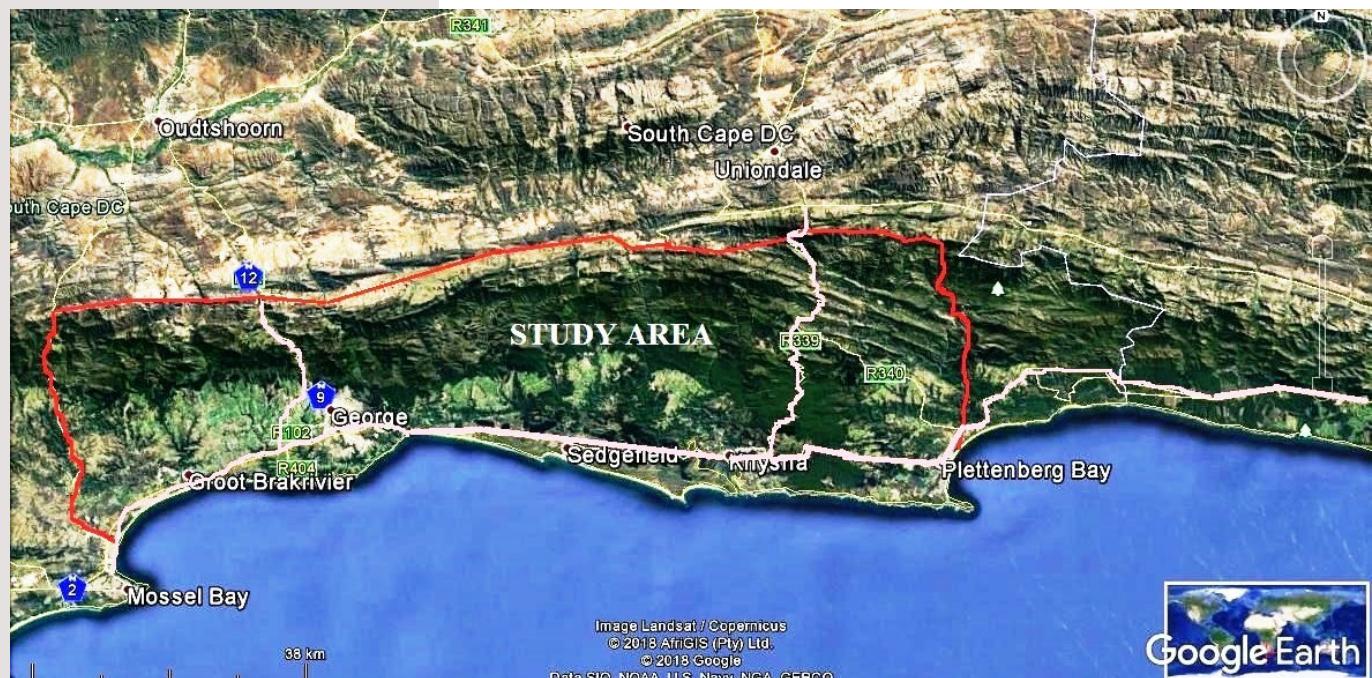
- Conduct openness and conflict management professionally
- Always insist on mutual cooperation
- Ensure individual development
- Work towards sound inter-group relations and respect for each other
- Seek regular performance and goals review as a team member

Now, ask the question again: do you have an effective team?

If no, we do! Contact us for our team assistance or for training your own team. 🔳

# The Garden Route in flames: Chapter VI - Ensuring that optimum use is made of prescribed burning application in the Garden Route region

A book by Dr Neels de Ronde



*Photograph 9: The Garden Route region, excluding the Tsitsikamma, with the 'study area' demarcated with a red line. The white lines are the national roads to be incorporated.*

The following article is the sixth in the series of excerpts from a book written by Dr Neels de Ronde, *The Garden Route in flames*. Dr De Ronde lives in the Southern Cape in South Africa and has done extensive research in the field of land management and wildfire prevention. Dr De Ronde gave permission to Fire and Rescue International to publish the book in the magazine in separate sections for the benefit of all forestry and wildfire managers, fire protection associations and land owners in order to gain insight and an understanding of the intricacies that form the basis of such extreme fires and how it can be prevented, highlighting effective fuel management and fire prevention measures.

## 6.1 Overcoming the resistance against the use of fire in the Garden Route region

Hopefully this writing can contribute towards the optimum use of prescribed fire and get rid of the negative and harmful fire exclusion policies settling in the region during the past few decades. By concentrating the application of this technique on the "as-yet" unburned areas of the region, the resident public can be getting used to this idea to save the Garden Route.

However, the people living in the region will have to be 'in' on the burning plans to be conducted, by making them aware of such action. Schools, the regional press as well as any announcements

regarding such burning, will have to be published before such burns are planned and applied.

Once the fire managers responsible for the prescribed burning programme have been identified, a selected few should be trained in such burning operations, which will have to be applied in two basic fuel types, namely (i) fynbos (non-infested as well as infested with weeds) as well as in (ii) industrial Pine plantations, while the planning staff responsible for the new fire prevention plans, will have to work in close cooperation with the fire managers who will conduct the burning operations.

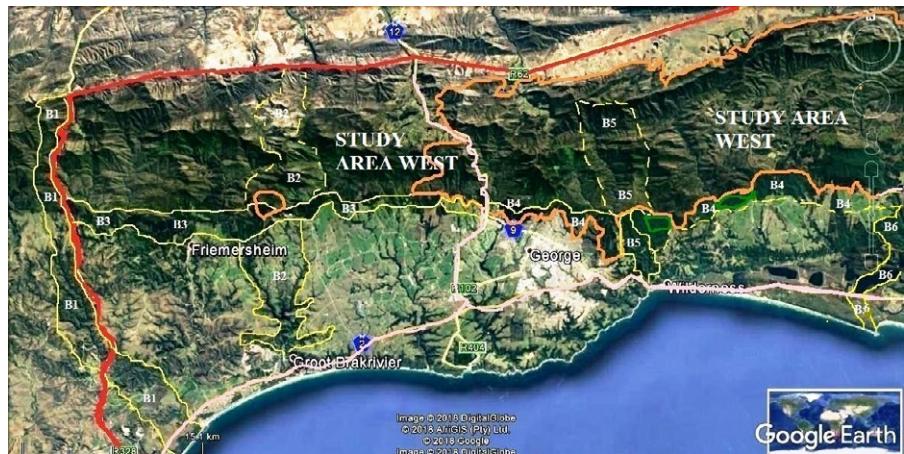
The overall control over the regional fire prevention plan will have to be

preferably the responsibility of the Provincial Government, maybe as an extended task for CapeNature because they already control a lot of this land in the region in the form of Nature Reserves. Whatever is decided about this, SANParks also controls a significant portion of this land, so maybe this can be made a joint responsibility between these two organisations? Then we also have to consider the role of the local fire protection authorities? I will not discuss this issue further but it is clear to me that the Provincial Government should have the key role in this controlling body, in close cooperation with Central Government and future budgets will have to be allocated and provided for accordingly.

CapeNature is at present handicapped by inadequate funding and this will have to be changed should they get the key role in at least the control over the prescribed burning programme in areas not burned over by any of the two wildfires discussed here, at least for the interim. Future long term responsibility for the fire prevention programme can then be sorted out between the role players, at least before such burning is eventually extended into the wildfire areas, as soon as the fynbos has reached the optimum burning age (thus before 2030).

## 6.2 Drawing up, control and maintenance of the regional fire prevention plan for the Garden Route region

These issues become confusing because there are too many role players and every one of them wants to be heard and wants his fire protection plan ideas to be approved! I want to see an attempt to streamline the control over the regional fire prevention plan, by means of temporarily cutting out the areas that were burned over by the Knysna and Outeniqua wildfire areas, as there is at present no fire hazard there for a number of years and to concentrate on the region's area not having been affected by these two fires, so that we can for the interim focus on the fire prevention of the as yet unburned land in this region.



Photograph 10: Zooming in on the western study area section, with the main buffer zones now also added, using not only the road systems but also the topography linked to consider the routes for the main buffers and existing vegetation and the 2018 wildfire area (main buffers B1 to B6).

The above basically means that we have to focus on the Garden Route plateau as the only area unburned by serious wildfires, with the exception of the area burned over by the Knysna Wildfire during 2017. Thus looking at land under control of our nature conservation bodies, such as SANParks and CapeNature and then add to this the owners of the Pine plantations on the plateau (and portion of the Outeniqua Mountains still unburned) as the main ownership and management of the unburned land.

We are then looking at a percentage of > 75 percent of the land still not having been exposed to serious wildfires. To look at representatives of these main role players only for a start, could then be used to form a steering committee, with these members combined forming the representative body of control, with the Provincial and Central Governments leading?

## 6.3 Training issues

While some fire bosses have experience in prescribed burning of fynbos, I am not sure if there is any experienced prescribed burner in the region with experience in prescribed burning inside Pine stands. Here I strongly recommend that someone such as Ben Potgieter (based in Sedgefield but seldom at home) is consulted to assist here in practical burning training application burning in the Garden Route region, in Pine plantations as well as in Fynbos.

Alternatively, a few fire managers can travel to Sabie to join the York Timbers team there because they have a few excellent under canopy burning specialists in their service, which could assist. As February is their peak burning period, consult with them about an optimum date for such a visit. Safcol foresters can contact Annalize van Wyk for a suitable date for some practical experience, at Safcol Nelspruit. Such training sessions before attempting to burn under tree canopies, is not only strongly recommended but local burners from the Cape regions cannot do without such a training session because of the danger of using the wrong burning application methods for specific fuels and conditions.

I have drawn up this writing in such a way, that the planning managers will not only find a good introduction for each aspect of the methodology for the creation of fire prevention plans as well as maintenance but I have added a bibliography at the back of this book for further reference, which will cover more detail about specific aspects. For fire (application) managers, the book should be sufficient for use of fire prevention plans, etc but for them, practical application of fire-use is as important as for the fire bosses.

It is subsequently also highly recommended that they also attend at least one practical training

# Rocket HEMS Bell 222 medical aviation simulator first in the world

**W**ith the first aero medical simulator in a Bell 222 in the world, Rocket HEMS is at the forefront of aviation medical training. The company built a medical aviation simulator in a real Bell 222 aircraft airframe, creating an environment as close to the real thing as possible.

Michael Dollenberg, procurement and logistics manager at Rocket HEMS and also full time flight paramedic, is the project leader and responsible for creating this training platform. "This is as close to the real environment as possible. We wanted to build a training platform where you can simulate the sound the engine of the helicopter

makes, the rotors moving, the limited space and the flashing with a strobe effect, giving the student a more realistic sense of medical patient treatment during flight."

Dollenberg, a flight paramedic with a history in engineering and tech, explains when you are a flight paramedic, there are all these stressors that are added once you start working. "They have a huge influence on your ability to function. We can now with this simulator, create electrical system failures, simulate a fire in the cockpit, create a gas leak. All of these are ways to help a student train for the real thing."

The Bell222 airframe they used is considered part of the Henley Air Fleet, the biggest fleet of Bell's in the world. The cockpit itself is an exact replica. All the possible usable components were taken out, so that the company has helicopter spares on the shelf, should their engineers need it. "It got to the point where we realised we have all these spare airframes and the aircraft will never fly again. So why not just use the frame? Henley already has a Bell 222 pilot training simulator, so we did the same from a medical perspective."

They are also busy adding high definition cameras inside and Dollenberg would be able to monitor

► session. Alternatively, there are people such as Ben Potgieter who can attend to such specialised burning programmes on contract. For other burning work, there are also local people available such as the Chuma Fire organisation, which specialises in grassland, fynbos and firebreak burning and who have practical experience to attend to such burning tasks.

## 6.4 Working strictly according to a fire prevention plan

As I have discussed earlier, such plans are vital for fire prevention work control and maintenance and detail yearly plans will have to be drawn up by sub-regions and then be controlled by the selected Government organisation, where I suggested the Western Province Provincial Government, preferably CapeNature. I realise that they, at present, do not have the financial ability (nor staff capacity) to take control of such tasks and some serious budgeting will be necessary for them to get involved in controlling the regional fire prevention plan.

Fortunately, CapeNature still have a staff core with the necessary experience to attend to the tasks of

developing, creation and maintenance such a regional fire prevention plan for the Garden Route region, by simply extending their existing fire prevention and conservation burning plans, with the added financial requirements of course. However, the decision-making readers may consider otherwise and I will not make this a "must" for the region. As long as this programme is attended to by dedicated managers

## 6.5 Assessing the 2017 and 2018 wildfire areas for fire prevention needs

As is clearly indicated on Photographs 9 and 10, the regional buffer zones proposed for the Garden Route region cover both these wildfire areas as well as the yet unburned land of the region. Where the Knysna wildfire area is covering a mixture of fynbos and Pine plantation land, the Outeniqua wildfire covers mainly fynbos-covered land.

The organisation responsible for the planning and development of the regional fire prevention plan can thus, quite rightly, request both CapeNature as well as SANParks to assist with the fire prevention plan implementation while the fynbos-covered land under their control recovers from the

wildfires. This is until such time when this shrubland can be incorporated with prescribed burning according to the regional fire prevention plan, which will be during 2030 earliest. This will allow them to complete the fire prevention attention on land under their control mainly on the plateau, as yet unburned for the interim period.

It thus appears that CapeNature as well as SANParks should be responsible for most prescribed burning on the Garden Route plateau area as yet unburned and to keep this up to date until at least 2030, when maintenance on this land should be minimal, though still very necessary. However, the attention of the 2017-2018 burned-over fynbos area will be ready for prescribed burning application mainly from the year 2030 onwards.

Both CapeNature as well as SANParks should also assist with regional buffer zone preparation on their neighbours' property, particularly if the owners of this land do not have the capacity to do so. Such cooperation will be necessary to ensure that buffer lines are completed according to plans. ▲



the student's ability from anywhere in the world. There is a computer server in the back, controlling the networking and routing solution. It talks to the cameras on board, as well as the recording system, so that they can record all the video that is happening real time.

"I have a link and can plug it into the office network connection. We can upload that data stream real time elsewhere and live stream it. The whole system is designed to be particularly independent of required resources. As long as I have a power supply, everything will keep on working. We could even take a portable generator and take the machine outdoors."

Dollenberg says the company is working on software that will enable them to change the patients' condition. "If the students manage the patients inappropriately, the blood pressure can drop. We can simulate cardiac arrest. The patients' condition is based on how the students manage their simulated patients and we can watch the students over the cameras. There is no instructor with them to hold their hand."

When you are familiar with the way Rocket HEMS operate, you will know this HEMS provider is not satisfied with only being at the forefront of the best global practices.

"We want to look at what is considered good practice and that is our foundation. We want to take everything that is possible and exceed that expectation. We literally bring definitive, high level emergency care to the scene; therefore you have higher survival rates and better outcomes."

One of the challenges for flight paramedics is the limited space. "You don't have space, the air is dry, there are vibrations, noise, the stroboscopic effect of the rotors. Even paramedics with years of experience on the road,

don't understand it, that is why we have now taken it to the next level. Our students can get hands on, immersed in the experience and learn to deal with the stressors first hand. So when they get up there and touch a patient, they know what they are in for."

The simulator will be available to other emergency services and training programmes, should they require it. "It's not something we want to hog for ourselves," says Dollenberg. "It's the first of its kind in the world and the potential is phenomenal." 🔥



# The late Divisional Commander (DC) William John Olivier, a born fire fighter at heart



In this edition of Fire and Rescue International, we continue with our 'Your story' articles, paying tribute to the people in service, sharing their backgrounds, experiences and achievements, telling your story. In this issue, we are profiling William John Olivier, best known as Willie, of the City of Cape Town Fire and Rescue Service, who passed on 9 September 2021. This is the first of the 'Your story' articles that we are doing posthumously. We were busy with the article prior to Willie's passing and asked those who worked with him to assist us in finalising it in his honour. We thank CFO Ian Schnetler and his colleagues Pat Muir and Craig Cyster for their input and assistance.

Born on 25 December 1963, one of eight children, Willie grew up and attended school in George in the Southern Cape. On completion of school, Willie joined the then South

African Prison Service for around two years. In September 1981, he decided to change careers and joined the then Parow Municipal Fire Department. From those early days and changes in the municipal structures, until his passing, Willie chalked up 40 years of fire service, 19 years at Parow, eight years at Belhar as divisional commander operations and 13 years in Milnerton as divisional commander fleet operations.

Pat Muir, now retired from City of Cape Town Fire and Rescue Service, said, "During the early days of his career, we were still independent separate municipal services. 18 fire services, in the greater Cape Town Area. The only time that we really got together, was for 'darts, snooker, volleyball and of course the 'Pram Marathon', a lot of crazy firemen pushing prams from the Forshore, around Chapmans Peak, Cape Point and ending at Lakeside Fire Station."

"I have known Willie just on 36 years, having been at Tech together, with a few others from then different services. 1994 saw the start of changes to the municipal structures going towards the formation of the Unicity and saw the six substructures starting to work together and getting to know each other on a more personal level, with the 'mutual aid agreement' being utilised more often," added Muir.

"The first inter-sub-council working committee was established in 1999, working towards the standardisation of the fire service. This was chaired by Ian Schnetler, our present CFO, then still with the CMC, looking at all aspects of the fire service. Here, Willie and I started our full-time working relationship, shaping the

way our City of Cape Town Fire Service would go. With the formation of the Uni-city, initial standardisation was relatively slow due to funding restrictions of the new city. In 2006, we saw a change in local government and a definite boost for the fire service, with funding made available for the replacement of 'old' vehicles. Also at this time, the 2010 Soccer World Cup was in the pipeline", said Muir.

He continued, "A fact finding trip was undertaken in 2007 to visit the larger fire vehicle manufacturers at that time, to establish the capabilities of the various role players to deliver vehicles to the city. In 2008, Willie transferred from divisional commander operations in Belhar to head fleet operations stationed at Milnerton and planning started in earnest looking forward to the 2010 Soccer World Cup. The arrival of the first new vehicles and equipment was in 2009 and our workload increased and we were then joined by Willem Moolman and Leigh Wallace, as well as the ex-ambulance workshop staff in the fleet office. The first major project was the start of rebranding of entire fire fleet, chevrons and high visibility markings, which has now become the standard through most services."

"With Willie's perseverance, Mr Ackerman's ability to find the funding, help from our friends at corporate fleet services and Councillor JP Smit, we managed to bring the fire fleet to where it is today! 311 vehicles replaced with some 12 still to be delivered. A fire service to be proud of!" said Muir.

He added, "As our officer and head of fleet operations, Willie was a

great team player. Normally the first person in the office each morning, he would usually make the first cup of coffee of the day and by 07h30, we would have concluded our morning meeting of planned activities for the day. Willie served on various work groups and committees both within and outside the City of Cape Town Fire Service always giving it his all. He was an excellent, manager, organiser, he just had a way with people. One of his favourite quotes was 'to be successful, one must look successful'; well the fire service looks just that!"

Muir continued in saying, "With the distribution of vehicles and equipment, he was always as fair as possible to make all members feel equally important, hoping that this would lift the moral of the service. It was his passion that helped with the introduction of various additional items at that stage not freely found on the fireground such as the Polaris 4x4 and the 6x6 fire fighting vehicles, compressed air foam systems (CAFS), high flow/pressure backpack blowers and drones, to mention but a few; we tested all personally."

"Willie also played a major role in getting the Incident Command System (ICS) programme into the city. But he was at his happiest when in a jump suit. We spent many hours together on the fireground, even when not on call. He would usually come to my office saying "kom ons gaan net vinng kyk wat daar aangaan, ons is nou nou terug"; well, the rest is history. We spent many nights in the mountains. We spent a lot of time together. We had the uncanny ability to communicate without actually speaking, knowing precisely what the other would say or do, given a situation."

"Willie's unending support for programmes such as the seasonal fire fighters every year speaks for itself. Clearing and control burning on Robben Island for a week at a time; here Moolman normally accompanied him with the seasonal staff and some of the training officers. Willie also gave much

of his time assisting at incidents outside the boundaries of the City such as in Knysna, Clanwilliam, Porterville, Betty's Bay, Hermanus and George, to mention but a few. He also played a major role with the establishment of a central breathing apparatus (BA) and hose room at Bellville Fire Station to support our service as well as input into many of the new fire stations that we see around us and ones that are still to come," Muir added.

He continued, "Willie was also very supportive of the many events that involved the fire service such as, the International Fire Fighters' Day (IFFD), the World Rescue Challenge (WRC) and various vehicle extrication competitions, the Toughest Fire Fighter Alive etc. He was also the driving force behind the "Pink" Fire engine for special events.

"Willie was very competitive by nature, always striving to do his best for the yearly fitness evaluation, in the gym any time from 05h30 in the mornings, always encouraging all in the office. But he suffered setbacks and fought back hard and being a 28-year cancer survivor never got him down. The will to overcome these obstacles showed his past 18 months since his stroke and he really pushed himself to the limit to get back to work right to the end."

"Willie's greatest Love definitely was his family! From the Brotherhood of fire fighters, know that you and your family will always be in our prayers and thoughts."

The latest fleet of new state-of-the-art fire vehicles at Goodwood Fire Station are shining beacons of William Olivier's burning passion for the fire service as he helped procure the funds needed to bring the vehicles to the station as one of his last projects before he passed away.

#### Memorial service held in honour of City of Cape Town's DC Willie Olivier

A touching memorial service was held at the Goodwood Fire Station in Cape Town on 29 September 2021 honouring the memory and celebrating the life of Divisional

Commander (DC) Willem John Olivier. The memorial started off with a welcome from City of Cape Town Fire and Rescue Service's Craig Cyster, head: Command and Control, followed by a prayer by Chaplain Alan Kelly. Chief Fire Officer Ian Schnetler provided the obituary followed by a tribute to DC Olivier by Patrick Muir, who had known Olivier for just on 36 years. A script reading and homily followed by Reverend Linda Idas, a prayer by Chaplain Bridget Jongbloed, a reading of the Fire Fighter's Prayer by Tracey Whittaker and a bell ceremony by the Guard of Honour. CFO Schnetler then handed over the flag to the Olivier Family followed by a blessing from Reverend Idas.

#### A message from CFO Ian Schnetler

City of Cape Town Fire and Rescue Service's CFO Ian Schnetler sent us the following message. "William John Olivier or always known as Willie, (I used to always ask him – nou Willie, hoe het so 'n egte Afrikaanse man soos jy, so 'n Engelse naam gekry en hy het altyd geantwoord, dis nie ek nie meneer, dit was my Ma) was a special fire fighter, officer and a stalwart in the fire and rescue service, from his beginning days at Parow Fire Brigade, through to his final days with the City of Cape Town Fire and Rescue service."

CFO Schnetler continued, "He was a son, a brother, a father, uncle, a fire fighter and a true officer and a gentleman."

"As a chief fire officer, I would "never fear when Willie was near" as his heart and soul was part of the fire and rescue service. He had a vast network of people; his knowledge gained through his willingness and assistance to everyone in the fire services family was legendary. Virtually everyone in the fire services environment from across the country knew him. If there was a challenging fire to deal with, Willie was first on scene. Even in his last few months, when his body was giving up, he was at fires to try and manage and have the necessary resources put

► in place to deal with it. His last big one was at the Helderberg where a fire from a neighbouring municipality threatened our borders and I remember him calling me and saying, "My Baas" (his nickname for me at the best of times in his distinctly Afrikaans accent), ek gaan net gou kyk wat daar aangaan en sal meneer laat weet".....and off he went (with an officer having to drive him due to his disability at the time) around the area to ensure the City borders remained safe."

"We had many times where he and I worked "back to the floor" shifts on weekends on a skid unit during the summer, where we assisted those on duty with vegetation fires; we would complete the shift many

times having tasted smoke and fire again, the very reason we originally joined the service in the first place. Unfortunately, in the latter part of his illness after his stroke, we could not manage to do that anymore."

"It's such a pity that a man of his calibre and passion for the profession, would be struck down so suddenly and yet then still have the fight to continue, where mere mortals would have given up. He fought to the end but there were higher forces calling him away."

"I am glad he went to heaven, as if he went the other way, I would have already have received the STOP message from him, saying that the fire is under control and 'die saak is reg, ons sal nou nou klaar wees'."

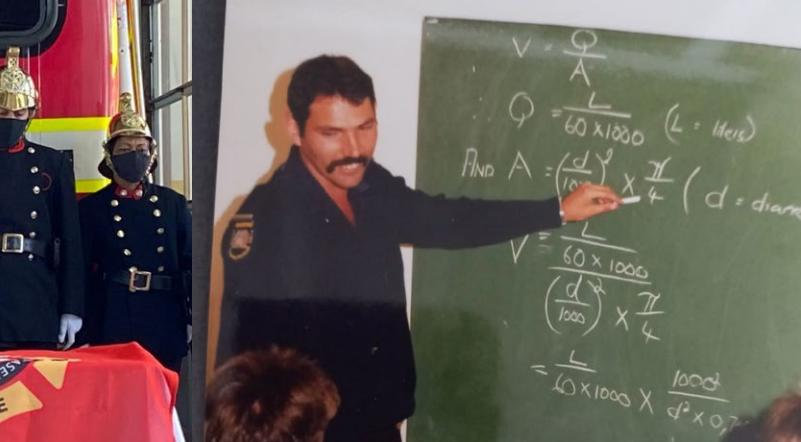
CFO Schnetler concluded, "We will always miss him and his 'can do' attitude to everything in life. We salute you, Willie. Long may you live."

#### From Fire and Rescue International

DC Olivier was a 28-year cancer survivor, with ups and downs. A mentor to many, he will be sorely missed by all those who knew him, worked with him and were friends with him. A fire fighter deep in his heart. Willie, may you rest in Peace, my friend. Thank you for the legacy that you leave behind. You are a hard act to follow.

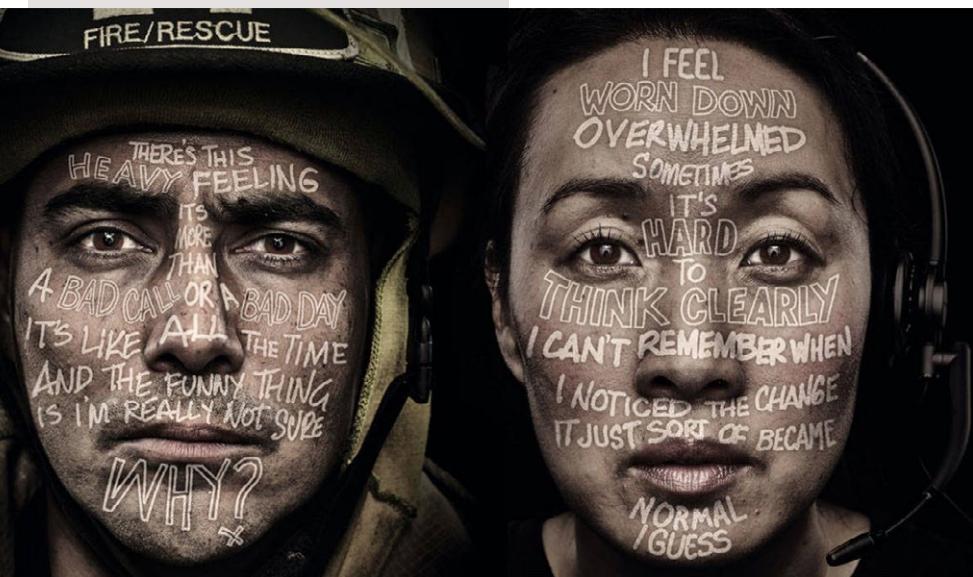
To Anja and children Lliam and Hannah, our deepest condolences on the loss of your husband, companion, friend and father. May he rest in Peace. △





# Burnout: When there's nothing left to give

Spot the signs early to help prevent more destructive effects



**B**urnout can result in even the most dedicated and passionate individuals feeling overwhelmed, helpless and disengaged in their working and private lives, with potentially severe consequences for their mental and physical health, relationships and productivity.

Given the pressures of the current COVID-19 pandemic, much greater awareness of this often-overlooked syndrome is needed to help prevent its destructive progression, warns Dr Dumakazi Mapatwana, a psychiatrist practising at Netcare Akeso Alberton.

"Burnout is a complex reaction to sustained extreme stress. It is not an overnight phenomenon but rather a gradual process defined by emotional, physical and mental exhaustion that follows chronic and severe stress, which is most often work-related but may include other kinds of stress, like caring for a sick family member," she says.

The concept of burnout was developed to describe a multi-faceted syndrome characterised

by depersonalisation, emotional exhaustion and a sense of low personal accomplishment that eventually leads to decreased effectiveness at work.

"Sadly, it is often only when burnout has progressed to the point where it is seriously impacting their lives that people seek the help they need. Persons experiencing burnout may develop depression or anxiety and they often misuse alcohol or substances in an attempt to cope with their situation, which they often perceive as hopeless."

Burnout could contribute to heart disease, high blood pressure, type 2 diabetes, obesity, metabolic syndrome, chronic insomnia, high cholesterol and chronic pain and could make one more vulnerable to illness. "It can also impair job satisfaction and performance, increase absenteeism and may ultimately lead to dismissal in extreme cases," Dr Mapatwana adds.

Diaan Bisogno, a clinical psychologist practising at Netcare

Akeso Stepping Stones, says that emotional detachment, hopelessness and helplessness are characteristic of burnout. "People with burnout struggle to find meaning in anything they do, often feel powerless and that nothing they do will make a difference," she notes.

"We are living in an extremely stressful time and when there are not enough resources, people get burnt out. We've been coping with the pandemic for a long time, and every time people get a little bit of hope that the situation may improve it seems there is some new blow, such as a higher level of lockdown restrictions or a new variant of concern. When you are burnt out, these changes require energy many people just don't have anymore. The reserves are empty, there is simply nothing left to give," Bisogno says.

"When you start detaching emotionally, it often numbs relationships with those closest to you. There is no energy left for nurturing other aspects of your life, which further diminishes social support, over and above the physical distancing measures we are practising to prevent contracting and spreading COVID-19."

"It is not uncommon for people facing burnout to turn to drugs or alcohol or misuse medication, as they struggle to cope. For instance, a person may take cocaine or tik so they can get through 18 hours of work without sleeping or abuse sleeping pills to counteract insomnia, leading to dependence and addiction that is often linked to depression, anxiety or other mental health conditions," Bisogno adds.

## Burnout in the workplace

"For employers, the consequences of burnout in their team include



We need to be alert to initial signs and red flags

more absenteeism, reduced productivity, high staff turnover and instability, which only creates more anxiety among the staff members," Bisogno says.

"For many frontline workers, vicarious or indirect trauma resulting from continuously dealing compassionately with others in distressing situations is an inevitable part of the job. While this occupational hazard can't be avoided, it can often be managed better through building resilience and spotting and addressing the warning signs early with the help of mental health professionals, so that it does not lead to burnout."

According to Dr Lerato Motshudi, head of clinical research and programme development at Netcare Akeso, it is possible for individuals to develop skills and techniques to help address these kinds of pressures effectively before they become overwhelming.

"Through a unique combination of skills development and talk therapy, the Netcare Akeso burnout management programme strengthens individual awareness of risk and builds resilience for prevention of burnout," she says.

The programme makes use of evidence-based psycho-emotional tools shown to be effective in building resilience and grit. The individual is assisted to appreciate their own level of risk of burnout, and this

enables them to focus on the areas of greatest personal relevance. Our experience has led to the identification of common workplace stressors which are prevalent in a wide range of corporate and working environments."

Know the symptoms of burnout  
"It is important for all of us to take care of both our mental and physical health, especially in difficult times. We need to be alert to initial signs and red flags and act on those because if they are ignored and not addressed, burnout can have significant consequences, including serious medical conditions," Dr Mapatwana says.

The symptoms of burnout may be physical, emotional and behavioural and could comprise the following:

#### Physical

- Feeling tired and drained most of the time
- Changes in sleeping and eating habits
- Frequent physical complaints: unexplained headaches, stomach problems or muscle aches
- Muscle tension
- Frequent illnesses from lowered immunity

#### Emotional

- Sense of failure and self-doubt
- Feeling helpless, trapped and defeated
- Emotional detachment from others
- Feeling alone in the world
- Lack of drive or motivation
- Increasingly cynical, critical and generally negative outlook



**Dr Dumakazi Mapatwana,**  
a psychiatrist practising at  
Netcare Akeso Alberton

- Feeling irritable and impatient with co-workers, customers or clients
- Decreased satisfaction and sense of accomplishment

#### Behavioural

- Poor concentration, making mistakes at work
- Withdrawing from responsibilities
- Isolating yourself from others
- Procrastinating, taking longer to get things done
- Using food, drugs or alcohol to cope
- Taking out your frustrations on others
- Skipping work or coming in late and leaving early

For information about mental health issues and services, accessing care and for professional help in a mental health crisis, Netcare Akeso is here to help. In the event of a psychological crisis, emergency support can be reached on 0861 435 787, 24 hours a day.

Contact Netcare Akeso on [info@akeso.co.za](mailto:info@akeso.co.za), visit [www.akeso.co.za](http://www.akeso.co.za) or book psychologist and occupational therapist consultations via [www.copetherapy.co.za](http://www.copetherapy.co.za) and psychiatrist consultations through Netcare appointmed™, online at [www.netcareappointmed.co.za](http://www.netcareappointmed.co.za) or by calling 0861 555 565. The COPE Therapy website [www.copetherapy.co.za](http://www.copetherapy.co.za) also contains many useful blog posts on various issues and tips relating to mental health.

Source: Netcare Akeso ▲

# Getting to the point to protect your self

By Morné Mommsen, BED HRD (NWU), IKMA, KMCS, kickboxing and firearm instructor/coach, Midvaal Fire and Rescue and Warrior Combative



**I**t is sad to read about fellow emergency workers being killed for doing their job. When will South Africa management start to realise that South Africa is becoming the capital world for crime?

Police officials, traffic officials, security officials, ambulance services and fire departments are all being targeted by the very same industry we try to serve and protect, which include urban civilians and farmers and their workers.

I personally think that no training will be able to protect you against these types of attacks because we are narrow minded, meaning we focus purely on the patient or victim we assist and we don't focus on the overall environment. These types of attacks are fast and are performed at a maximum forceful capacity.

Do we have a solution for this and the answer will be "YES"? If you follow a long-term training

programme that promote a good fighting fitness programme (not gym), basic fighting methods (not Krav Maga) and after a few months of hard work reaching a level of fitness and understanding the basic fighting principles, then you will be ready to advance to a more forceful level of self-defence. Let me explain.

What to do? Will always be the question, and everyone is looking for a quick solution towards this problem, meaning that some will attend a self-defence seminar, or attend one- or two-day self-defence classes, or start searching for answers on You Tube and "think" they are now fighting experts. It takes a lifetime of hard work every day to achieve a grading belt and just to be told you not ready yet, what makes you think you can do it in a day or two.

There are many within South Africa that promote Krav Maga or mix martial art sports for the

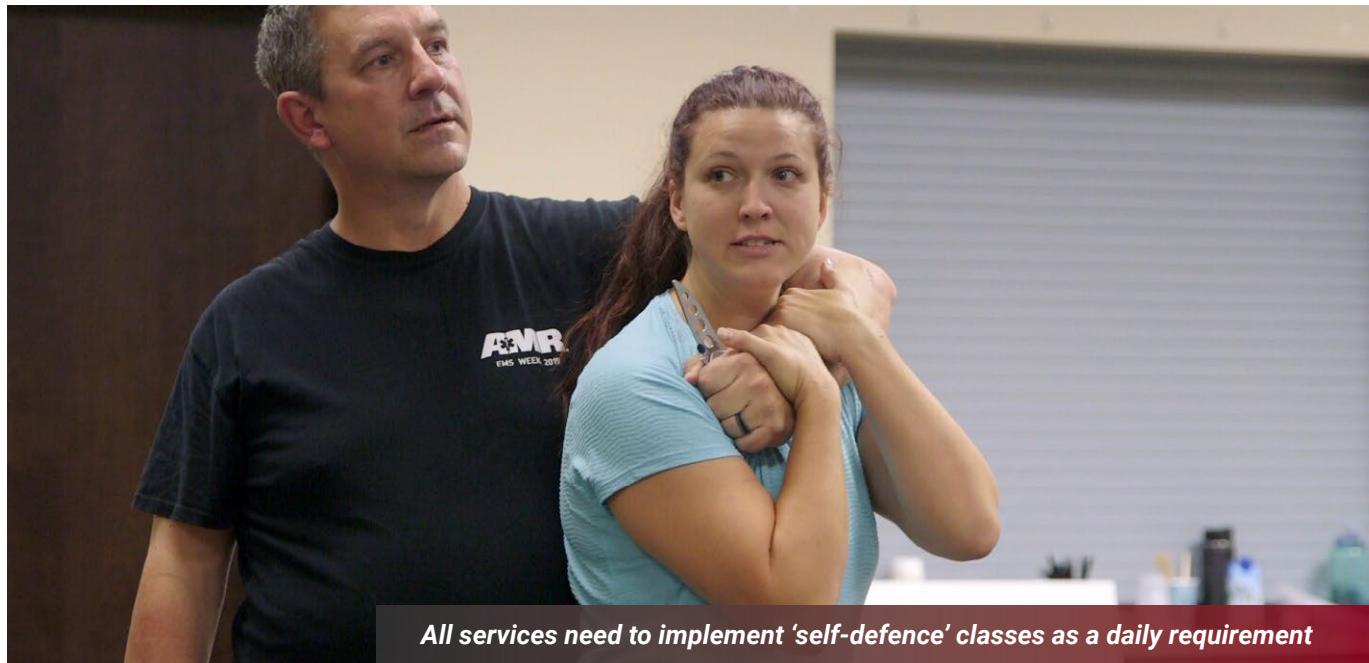
wrong reasons and they are most probably not affiliated with a fighting association such as the South Atlantic Karate Association (SAKA), World Association of Kickboxing Organisation (WAKO) or World Krav Maga Association or any other well-known associations; if so, stay away. Most who present Krav Maga will only make use of the name and did not train under the leaders of Krav Maga, such as World Krav Maga Association. Rather approach a well-known martial art institute within your area.

Krav Maga is NOT Mix Martial Arts such as MMA and entail much more than MMA can currently provide.

As a Krav Maga instructor (Warrior Combative) and a kick boxing student, I can with all honesty state that if one focuses purely only on Krav Maga, you will not be able to fully protect yourself. The reason for me making such a statement is as follows: As an example, I will use kickboxing as my platform but you can relate to any other approved martial art sport -

- Kick boxing or approved martial art sport will teach you how to stand (fighting stance) correctly and properly (the basics, not teach by Krav Maga) and
- Will teach you the fundamentals of fighting and
- Will teach you how to correctly punch and
- Will teach you how to correctly kick and
- Will teach you how to bob and weave correctly and
- Will teach you how to do a sparring session properly and correctly and
- Will teach you all you need to know about fighting correctly.

Krav Maga is too advance and complicated to start with and



**All services need to implement 'self-defence' classes as a daily requirement**

will take more than one class or YouTube video to master.

Krav Maga will:

- Focus on the fundamentals of self-defence
- Krav Maga will focus on the 'element of surprise' and without the basic fighting principles you will fail with the element of surprise approach,
- Krav Maga will focus on how fast and accurate you can execute the advance skill(s) and without the basic punching and kicking abilities, you will surely fail
- Krav Maga will focus on the direct threat such as a choke (front, side, rear to be done in different ways), bearhug (rear, front, side), grabbing of (hair, arm, hands and clothing), multiple attackers, drunk attackers, attack with a knife, baton, stick, firearm and surprise attacks (ground fighting, confined space fighting, blind folded fighting) etc.
- Krav Maga will focus on an all-round approach towards personal and family protection.

Most martial art systems teach you how to practice a certain skill but don't teach you how to get out of such a skill if it happens to you.

Krav Maga is unfortunately a fighting kraft that is not well

understood by the industry and everyone these days claim that they have done Krav Maga but unfortunately this is not true. Krav Maga students and even experts with minimum to advance Krav Maga experience will most probably end up in a situation he/she can not win, for this reason it is recommended to first start with a well known martial art to first learn the basics (including fitness) and then advance to a more aggressive skill programme such as Krav Maga. Krav Maga is a very fast and aggressive style and most people don't continue with Krav Maga after the first few lessons because of the direct and no mercy training platform. There are certain skills that can't be taught by moving slow and/or by receiving soft punches or kicks to the body, because you need to train for the reality.

Therefore, as a Krav Maga instructor and kick boxing student/coach, please follow the advice as indicated; this will save you a lot of time, effort and money and most probably it will also save you from an embarrassing moment in life.

We do offer basic Krav Maga classes starting with kickboxing principles then, if basics are mastered, we will progress to an intermediate Krav Maga class,

were we start to focus on the direct attack ie chokes, grappling, bearhugs, sexual assaults etc. If mastered, we will progress to a more advanced Krav Maga class, whereby focus will be on knife attacks, firearm attacks, multiple attackers etc.

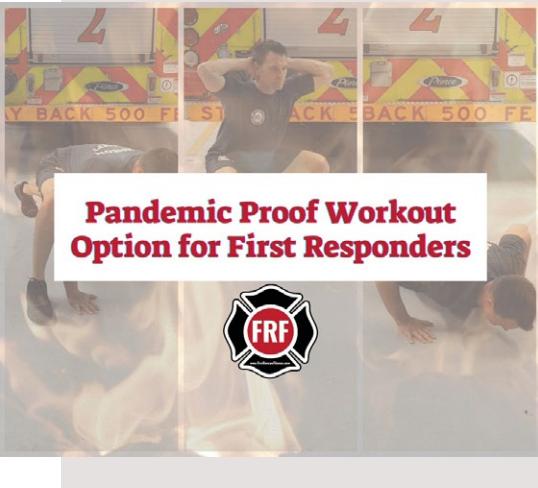
As a recommendation, all services need to implement 'self-defence' classes as a daily requirement. The question will be how this will be possible and the answer is both easy and difficult:

- Get a service provider to train employees daily over a period of one to three years (but it is difficult because most only focus on one martial art style and do not include what is needed for the street) or
- Identify one or two possible Instructors within your service to be trained over a period of a year (part time training course) who will as a practical skill go back and teach what he/she have learned (only year one) and on the end of the day becoming a qualified self-defence instructor for the service he or she represent.

You are welcome to make contact via email: [dnaemergency@gmail.com](mailto:dnaemergency@gmail.com) if any guidance or assistance is needed. Stay safe and remember "you must be the change to change the world". ▲

# Pandemic proof workout option for first responders

By Aaron "Zam" Zamzow, Fire Rescue Fitness



The pandemic have left many people scrambling to figure out different workout options. Gyms have been open, then closed, now open with restrictions. Fire station workout rooms have also been restricted to not let any off-duty personnel use the equipment. All these restrictions have probably made an impact on your workouts.

Never fear, you can still get a great workout from home and/or any station that does not have a lot of equipment. You just need remember these five steps and follow this guide. This is the same guide I have used to help train pro athletes and thousands of fire fighters.

Step 1. Choose three to five exercises to actively warm-up your body. This is one of the most overlooked components of working out. Walking on the treadmill is a great start but it does not improve the mobility of your hips and shoulders. Choose some exercises that help to get your blood flowing and will get you moving in all planes of motion (twisting, squatting, reaching). Perform five or six repetitions of each exercise and perform them in a circuit or two if you need to work on your flexibility. Please note that you don't want to hold these stretches for more than two or three

seconds. Try to improve your range of motion with each repetition.

Some great exercise options are the full-body chop, spiderman stretch and knees side to side. If you have a foam roller, you should incorporate that in this step for three minutes.

Step 2. Choose three core exercises that will strengthen and challenge your shoulders, abs, and glutes. As a first responder, you need to focus on working the muscles of the low back, shoulders, hips, knees, and glutes as these are the areas that are more susceptible to injury on the fire/rescue scene. Perform 10-15 reps of each exercise and perform them in a circuit. Perform two circuits of these exercises if you have a high level of fitness. Rotational plank, glute bridges and bent over arm "y" raises are great exercise options.

Step 3. Choose four to five full body strength exercises that work all your major muscle groups. When we are performing tasks on the fire/rescue scene, we never isolate muscles. Every movement requires multiple muscle groups to work together to accomplish the task: hose advance, search, patient carry. For this reason, at some point in your training you need to also focus on exercises that challenge your entire body. Some great options are push-ups, body

weight rows or pull-ups, squats, lunges and carries. To perform any pulling exercises, you can use webbing or straps and fix them over a door or tie them to a handle on the engine. Perform 10 to 15 repetitions of each exercise in a circuit. Repeat the circuit another time or two depending on your level of fitness.

Step 4. I like to call this part of the workout the 'afterburner'. So far you have worked mobility, core, strength and now it's time to work your heart. Choose two exercises that will get your heart rate going and perform them each for 30 seconds back to back. Go as hard as you can for the minute then rest a minute and repeat. Two great exercises are burpees and mountain climbers. Try to perform this circuit a total of two to three times.

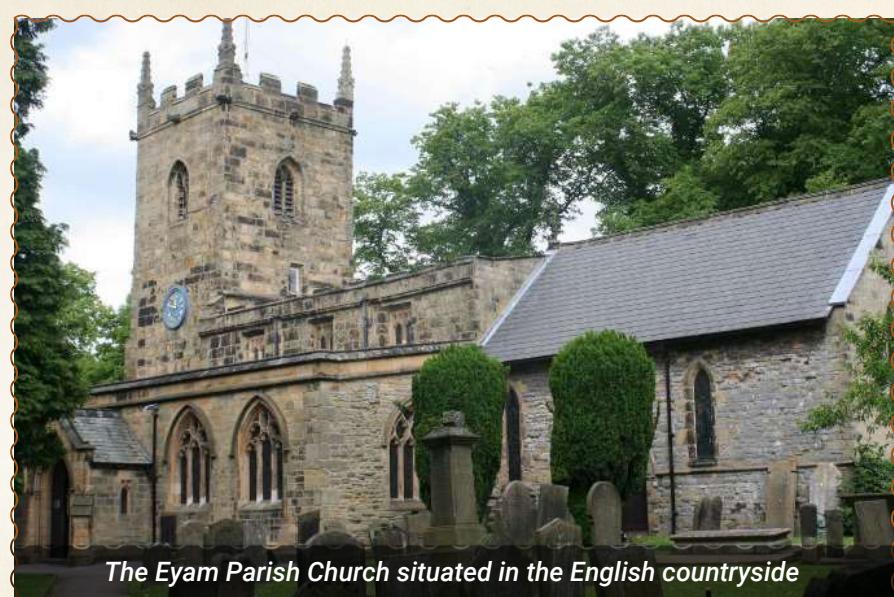
Step 5. Time to cool down and stretch. Hopefully at this point you are tired and sweaty. Before you finish, take a couple of minutes to stretch your muscles and bring your heart rate back down to normal. This is an easy step. Perform the same exercises that you did in step one instead of holding them for two to three seconds (like you did in the beginning), for this step you need to hold them for 30 seconds each. Take deep breathes and feel the stretch of each movement. Do not over stretch!



# A history of quarantine and the lessons learnt from the small village of Eyam in the English countryside

**S**ince COVID-19 was declared a global pandemic, many countries around the world imposed some form of quarantine to control its spread. What can the history of quarantine teach us about isolation and lockdowns now?

Beginning as early as three thousand years ago, quarantine and isolation were employed as technologies against the proliferation of disease. As human understanding of disease transmission grew, quarantine sophistication and efficacy improved, until it became standard practice in combating epidemics. Though not always successful, quarantines delayed or contained outbreaks by removing all potential pathogen carriers from the populace. At first, lightly used against leprosy and plagues of antiquity, quarantine, as a technology, expanded rapidly in the Western world during the Black Death epidemic. Its initial success against the plague established quarantine as a standard procedure to stopping the spread of epidemics and pandemics.



*The Eyam Parish Church situated in the English countryside*

The practice of quarantine, as we know it, began during the 14th Century in an effort to protect coastal cities from plague epidemics. The Bible's Old Testament's Book of Leviticus details how people with leprosy were effectively isolated from the rest of the community. When

the bubonic plague emerged in the 1370s, European cities also started their own quarantine system. Ships arriving in Venice from infected ports were required to sit at anchor for 40 days before they and the goods they carried, could come ashore. This practice, called quarantine,

That is, it! You just created and completed (hopefully) a very efficient and effective workout. The key is

to stay consistent and perform workouts like this three times a week (at least). Remember, you are not

only working out for yourself but to help serve your community, your crew and your family. ▲

**3**

**Strength Training Exercise Options**

**4**

**Afterburner (Cardio) Exercises**

**Burpees**

**Mountain Climbers**

**Chops**

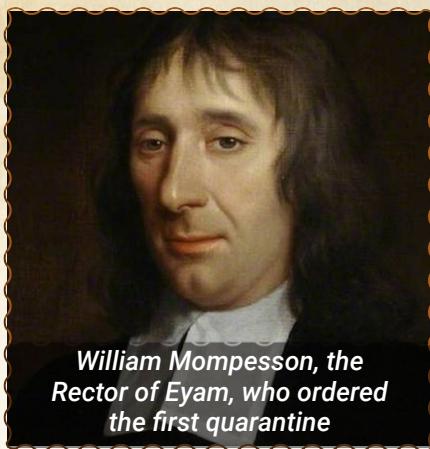
**Spidermans**

**Stretch and Recovery Exercises (hold each for 20-30 seconds)**

**Knees Side to Side**

**Foam Roll**

**5**



**William Mompesson, the Rector of Eyam, who ordered the first quarantine**

- ▶ was derived from the Italian words quaranta giorni, which mean 40 days.

Even with the Great Plague of London in the 17th Century, quarantine stations were provided by parishes to allow infected people to isolate. As in Bardonecchia, watchmen stood guard outside to ensure that no one either escaped or tried to get in.

During the next 100 years, similar laws were introduced in Italian and in French ports and they gradually acquired other connotations with respect to their original implementation.

### The Black Death

The use of quarantine rapidly expanded during the Black Death of

the 14th Century. Originally appearing in the Far East, the disease that would come to be synonymous with plague first emerged in Europe as nothing more than a rumour in 1346. Over the next five to ten years the plague exploded onto the Western world, killing millions and altering the fabric of every society it touched.

Measures analogous to those employed against the plague have been adopted to fight against the disease termed the Great White Plague, ie tuberculosis and in recent times various countries have set up official entities for the identification and control of infections.

Even more recently (2003) the proposal of the constitution of a new European monitoring, regulatory and research institution has been made, since the already available system of surveillance has found an enormous challenge in the global emergency of the severe acute respiratory syndrome (SARS). In the absence of a targeted vaccine, general preventive interventions have to be relied upon, including high healthcare surveillance and public information. Quarantine has, therefore, had a rebound of celebrity and updated evidence strongly suggests that its basic concept is still fully valid.



The Black Death took an enormous toll on Europe's population. Though reliable information is scarce, between 1347 and 1351, the "Black Death was darting about, mortality varied from an eighth to two-thirds of a region's population." By the time it subsided, 20 million people had died in Europe alone, reducing the population to 80 million people. The epidemic completely halted the rise in human population begun in 5000 BCE; it killed so many people that it would take Europe more than 150 years to return to its former population.

By the late 14th Century, the effects of the plague were so bad that Italian city-states resorted to desperate measures in an attempt to preserve public health. The doctrines of contagion set up in Italy led to two vitally important "forms of public health control, municipal quarantine and isolation of the victims."

The forty-day quarantine was strictly adhered to and maintained for the next 300 years throughout Europe. In northern Italy, the quarantine continued in order to avoid the importation of diseases to their busy commercial ports. In 1652, the city of Genoa quarantined people "who had been in close and direct contact with infected people or merchandise" for the standard period of forty days.

The forty-day quarantine proved to be an effective formula for handling outbreaks of the plague. According to current estimates, the bubonic plague had a 37-day period from infection to death; therefore, the European quarantines would have been highly successful in determining the health of crews from potential trading and supply ships.

In England, as in the rest of Europe, the Black Death lingered and tormented people for several hundred years. England's major cities were particularly vulnerable; poor sanitary conditions and massive overcrowding facilitated outbreaks. The last in a long series

of pandemics, the Great Plague of London in 1665, killed between 75 000 and 100 000 of the capital city's citizens. During the summer months the death rates rose, peaking in September "when 7 165 Londoners died in one week."

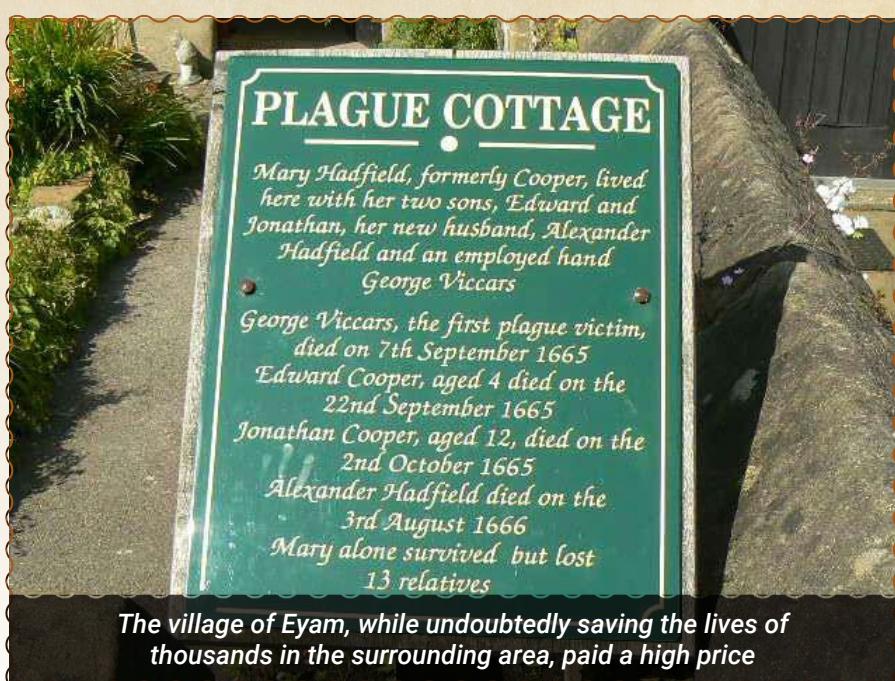
### The importance of the small village of Eyam, England

Eyam is an English village and civil parish in the Derbyshire Dales that lies within the Peak District National Park in England. Eyam's main claim to fame is the story of how the village chose to go into isolation so as to prevent infection spreading after bubonic plague was discovered there in 1665.

Eyam instituted a self-imposed quarantine in 1666, after its citizens began dying of disease, the bubonic plague. It came in a parcel of cloth sent from London to the village tailor Alexander Hadfield. When Hadfield's assistant George Viccars spread the cloth out by the fire to air, he found it was infested with rat fleas. He died a few days later with his burial being recorded in the parish registers on 7 September 1665.

Spread by infected fleas, the bacteria enters the skin through a flea bite and travels via the lymphatic system to a lymph node causing it to swell. This causes the characteristic buboes, which typically appeared under the arm but could surface in the neck or groin area also. Combined with the black bruising under the surface of the skin, fever, vomiting and spasms, the plague was a truly terrifying disease that spread with a startling ferocity.

At the urging of William Mompesson, the Rector of Eyam, quarantine was imposed in late May or early June of 1666. By mutual agreement, the citizens of the village agreed to confine themselves to "within a circle of about half a mile around the village." Nearby towns and various lords left food and other supplies at several pre-arranged points on the boundary of the village. These



quarantine methods prevented the disease from spreading outside the parish.

The village of Eyam, while undoubtedly saving the lives of thousands in the surrounding area, paid a high price. Percentage wise they suffered a higher death toll than that of London. However the impact on medical understanding was significant.

Doctors realised that the use of an enforced quarantine zone could limit or prevent the spread of disease. The use of quarantine zones are used in England to this day to contain the spread of diseases such as foot and mouth. It took longer for the ideas of quarantine to filter through to become common practice in hospitals. Florence Nightingale pioneered the use of isolation wards to limit the spread of infectious diseases in hospitals during the Crimean war. This is still used today, with hospitals learning quickly that to contain the spread of diseases such as the Norovirus, isolation wards needed to be used.

Other lessons were learnt from the methods used at Eyam. Doctors began to use other practices to limit the risk of contamination. At Eyam this was done by paying for food

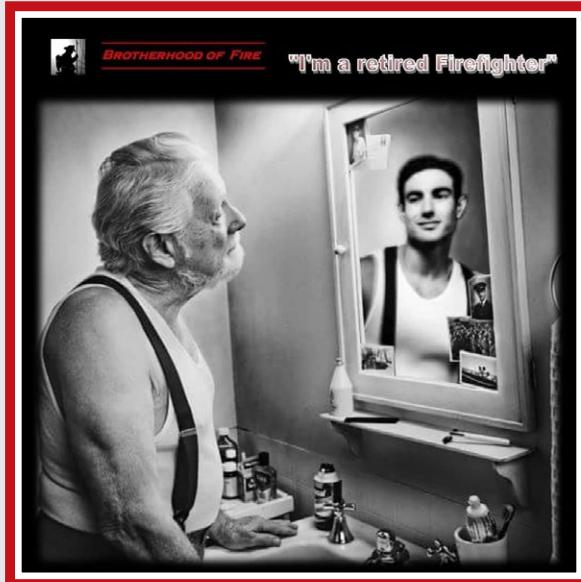
supplies by dropping coins into pots of vinegar or water, preventing the coins from being directly handed over. This continues today with the use of sterilisation of equipment and medical clothing. Most recently, lessons learnt from Eyam have been seen in the handling of the Ebola epidemic in Africa. The quick disposal of bodies close to the immediate area of death has limited the risk of spreading the disease.

After 1666, although there were many isolated outbreaks, there were no further epidemics of the plague in England. While the events at Eyam did little to change attitudes initially, in the longer term scientists, doctors and the medical world used Eyam as a case study in the prevention of disease.

Beyond the plague, quarantine, as well as various forms of self-isolation and physical and social distancing, has been adapted to respond to and contain other outbreaks including smallpox, yellow fever, the flu epidemic, severe acute respiratory syndrome (SARS) and the Ebola virus.

Sources: Virginia Tech Undergraduate Historical Review, Centres for Disease Control and Prevention, GAVI, Historic UK

# Thoughts of a retired fire fighter



No, I haven't forgotten the excitement of riding on a fire rig.  
"Lights flashing, sirens wailing," nor the feeling of "a good save"!  
Whether it be human life or valued possessions of a fellow citizen.

I haven't forgotten the feeling of standing, ankle deep, in freezing water on a 5 below January night, gloves frozen to the nozzle, fighting a fire I know was caused by carelessness or worse.

I haven't forgotten the terror of being lost in a smoke filled building....feeling the taste of hot coffee and a cold meat loaf sandwich at four in the morning.

Now I walk into my old firehouse, only to find it filled with strangers.  
I may not walk as fast or stand as straight as you.  
My hair may be grey or thin.  
My jokes don't come as easy as they once did.

But I know in my heart I have paid the price and have earned the right to say proudly...  
"I'm a retired fire fighter".

Retired Battalion Chief Joe Carber (Now deceased)  
Fire Department City of New York (FDNY)

Source: **Brotherhood of Fire**