OPERATIONAL NEWS

LFB

The newsletter for all London Fire Brigade operational staff

Issue 28 **December 2014**

Breathing apparatus emergency teams

Observations from both monitoring officers and the operations review team (ORT) have indicated that incident commanders are not always giving enough consideration to establishing and maintaining breathing apparatus (BA) emergency teams at incidents, when BA teams are committed.

It is very rare for BA teams to get into serious difficulties in a fire, however experience has shown that occasionally BA wearers can become trapped or endangered due to rapid fire development. It is vital that if things go wrong, a BA emergency team is rigged and ready to commit at immediate notice.

A BA emergency team should be nominated and rigged as soon as practicable at any incident where BA is in use. The BA entry control officer (BAECO) will be responsible for prompting the incident commander (IC), who is responsible for providing a BA emergency team as soon as resources allow.

The nominated BA emergency team/s should remain in position for as long as BA teams are committed into a fire, and should not be used for any other task nor committed as a regular BA team themselves. ICs should establish a BA

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INSIDE

Operational News reflects important operational and health and safety issues for staff. Topics are identified from our robust audit and review processes which include performance reviews of command and operations, supplemented with articles on new equipment, procedures that reduce risk and address health and safety concerns. Where appropriate training packages on page 8 provide further information on the topics covered.

Breathing apparatus emergency teams continued from P1

emergency team in their initial tactical plan and ensure that sufficient resources are made available to maintain it throughout the incident. A BA emergency team should be:

- Led by a minimum of a crew manager.
- At least the size as the largest BA team or teams working together on the same task.
- Rigged to at least the same level of protection as BA teams already committed.
- Equipped with one 'second set' for every two BA wearers in the emergency team.

A BA team leader must have BA radio communications to enable the emergency team to monitor and communicate with committed BA teams. The BA teams should adopt the call signs Emergency Team 1, Emergency Team 2, etc. Crews allocated the task of BA emergency team should not have previously worn BA at the incident. Once staff are nominated as a BA emergency team, they should take a proactive role in the incident and establish themselves adjacent to the BA entry control point in fresh air. They should undertake information gathering and take part in briefings and debriefings as BA teams enter and exit via the BA entry control point.

All BA emergency team members should familiarise themselves with incident progress and request and study any building plans which are available.

The emergency team leader should monitor BA radio traffic of the teams that have been committed, to keep abreast of details such as the location of the crews, the tasks being performed and the fire conditions they are experiencing.

All BA teams should follow policy, and ensure that they communicate with the BAECO to provide updates on their location, fire conditions, and any other relevant information that could assist the emergency team to locate them. BA emergency teams should consider the **R E S C U E** pneumonic:

R Rigged and ready for immediate deployment by IC to assist firefighters in distress.
E Equipment required to undertake rescue (cutters/other specialist tools) is available.
S Second set bag, is prepared and ready for immediate use.
C Communication equipment is checked and constantly monitored.
U Undertake safe deployment to last known location of the team in distress on instruction of the IC.
E Entry and egress routes should be planned, with alternative routes considered.

BA emergencies are very rare, but staff should never become complacent. Ensuring that a fully equipped and briefed BA emergency team is available for immediate deployment to a firefighter emergency could potentially save the life of a colleague in distress.

Refreshment and rehydration at incidents

Dehydration is a key factor in the onset and severity of heat stress. The chance of suffering from these effects will be significantly reduced by ensuring that staff keep hydrated.

Operational staff should be aware that the drinking water filtration system carried on all pump ladders has now been removed, and will not be replaced. These were removed from service after discussions with water utility companies. Providing an additional drinking water bottle was decided as the safest way for staff to rehydrate at incidents. A second personal issue water bottle has been issued to operational staff up to and including watch manager. It is the responsibility of all individuals to ensure that these personal water bottles are filled up at the change of watch and stowed onto the appliance using the boxes which previously contained the filtration systems.

Incident commanders (ICs) should factor into their resource planning the need to order any additional bottled water when an incident is likely to be protracted and crews are working in hot or arduous conditions. This additional drinking water will be delivered by operational support units (OSUs).

The Salvation Army canteen van will be mobilised by Brigade Control to incidents of eight pumps and above. With appropriate justification, an IC can also request the attendance of the canteen van at other incidents and major exercises. An example would be to a complex or protracted incident during extreme weather, where crews would benefit from warm drinks and snacks. The canteen van provides a basic facility for light snacks and beverages (hot or cold) and is based at Croydon Fire Station.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

The Brigade's structural firefighting PPE was chosen after extensive testing and evaluation by our own staff.

To ensure that PPE is fit for purpose, the law stipulates that it has to comply with the Personal Protective Equipment at Work Regulations. In addition, certain items of PPE are required to meet other stringent industry standards, including British Standards (BS) and European standards (CE).

The Brigade's structural firefighting PPE exceeds all of the required standards, whilst also being versatile enough for firefighters to undertake a wide range of activities. It is also sufficiently light and breathable to minimise the risk of heat exhaustion. The primary function for PPE is to provide protection from heat whilst keeping staff warm and dry and allowing a full range of movement.

The main standard relating to structural firefighting PPE is 'BSEN 469:2005 Protective clothing for fire fighters'. This standard has a multitude of test requirements, which include:

- Flame spread.
- Heat transfer.
- Residual strength.
- Heat resistance.
- Tear strength.
- Penetration by liquid chemicals.
- Water resistance.
- Breathability.

On the very few occasions when PPE has become damaged at operational incidents or in training, the Health and Safety Team have ensured that the item is sent for independent testing. On every occasion when this has happened, it has been confirmed that the item of PPE exceeded the requirements of the industry standards.

The nature of our service means that staff will occasionally be exposed to hazardous situations. Comprehensive training, and adopting correct procedures reduces risk to firefighters, and the correct maintenance and wearing of PPE is one further element of the risk mitigation process.

As a portion of the overall number of injuries sustained by London firefighters, burns injuries are relatively infrequent and almost always minor in nature. This is mainly due to the professionalism and training of firefighters, but PPE also plays its part. The aim of PPE is to provide a control measure to ensure YOUR safety.

If there are any concerns with regard to personal safety or the safety of others whilst at work, the first action is to withdraw from the immediate hazard area, away from the danger to a place of safety. When attacking a fire, this can be achieved by always remaining as low to the floor as possible, and temporarily withdrawing should a build up of heat be detected.

Thermal imaging cameras (TICs) are a vital tool to assist firefighters as they progress to attack a fire, and should always be used by BA crews when engaged in compartment firefighting. The Brigade provides appropriate and suitable PPE, and it is the responsibility of all staff to ensure that it is maintained in the best possible condition at all times. Comprehensive training, operational experience and situational awareness all contribute towards staff remaining safe whilst responding to operational incidents; PPE is one more vital element in protecting staff.

Look after your PPE and your PPE will look after you.

Fires in voids and basements in commercial premises

There have been a number of recent incidents where fire and hot gases have rapidly spread in concealed voids, with potentially significant consequences for firefighter safety.

At many such incidents, even experienced officers and firefighters have been surprised with the speed and extent of concealed fire spread. Many of these incidents have occurred in shop premises, often with residential accommodation at the rear and on upper floors.

A commonly identified theme is fire spread from basement or ground floor through voids located behind panelled walls or through vertical shafts containing utility services .On occasion, hot gases and fire have filled large voids located above false ceilings in shop premises leading to rapid and concealed fire growth above the heads of the committed BA teams.

Many of London's older shops and restaurants have undergone numerous refurbishments over the years, creating voids behind walls, in partitions and above false ceilings. Many Victorian shops were originally constructed with high vaulted ceilings, which over the years have been covered by suspended ceilings to reduce heating costs and provide a modern appearance. When fire enters such voids it can rapidly spread unseen to other parts of the building with potentially dangerous consequences.

At incidents where there are 'persons reported' trapped in the premises, it is understandable that the IC will wish to commit BA teams for search and rescue without any delay. In such circumstances, the IC should undertake a dynamic risk

assessment and consider the following:

- Where has the fire started and how far has it spread?
- Does the building have a basement?
- Is it possible that the fire is located in a basement, even though smoke may be emitting on the ground or upper floors?
- Is it possible that fire and hot gases are spreading unseen behind walls or in ceiling/floor voids?

Before BA teams are committed they should receive a comprehensive briefing to highlight where a fire is believed to have started (if known) and the potential for concealed fire spread. When teams are committed, they should ensure that they make full use of a thermal imaging camera (TIC) as they proceed. The TIC should by used by BA teams to constantly check for concealed fire spread. BA teams should consider **A-B-C**:

A Above their heads, potentially through suspended ceilings.

B Below them, potentially with fire travel in floor voids or basement areas.

C Concealed voids behind walls and partitions.

Information on heat sources and identified fire spread obtained using the TIC should be immediately communicated via radio to the BAECO/comms officer, and the IC should be notified. This will allow the IC to alter their tactical firefighting plan if required.

BA teams should not proceed past or above an identified serious fire before it has been fully contained/extinguished, even when people are reported trapped.

The IC and BA teams should ensure that main firefighting jets are used to deal with any compartment fire at the earliest opportunity. A backup BA team should be committed at the earliest opportunity with main jets to ensure that any fire is safely contained before the initial BA team progress to undertake search and rescue.

After arrival at a fire, the IC should ensure that a 360 degree recce of the premises is undertaken at the earliest opportunity to check for trapped people, and report on fire spread / development.

Effective fireground communication will ensure that the IC and BA teams are kept fully updated on fire development and spread.

Void above a ceiling.

Void below floor.

Concealed void behind wall.

Key point summaries

To provide incident commanders (IC) with easy access to key information at incidents, the key point summaries (KPS) for the most commonly used and risk critical policies have been amended and will be available in a new format. The KPS will be aligned to the decision making model (DMM) and included as an appendix to each policy.

Each KPS will also be available on the mobile data terminal (MDT) to provide the IC with a printable, current and accurate document to assist with their management of the incident. The KPS can be referred to at any time during an incident, but the content and format has been prepared with the early stages in mind, when an incident is often at its most dynamic and an IC needs immediate access to information concerning the hazards, operational considerations and guidance regarding operational procedures and actions.

A total of 78 policy notes have been identified as requiring a new key point summary format; 44 of the most commonly used have been amended, published and made available on the MDT. The remainder will be amended as part of the normal operational policy review process.

For a full list of policies affected go to Hotwire/policies and procedures/ A-Z of policies – then select Flowchart KPS. ICs should not use any locally produced aide memoirs as these may be out of date and may contain inaccuracies.

If you have any queries please contact Operational Procedures on x[redacted]

Ventilation induced fire spread

During compartment firefighting operations, any air being drawn into the compartment could lead to a rapid rise in temperature, significant fire development and fire spread.

Uncontrolled ventilation of a compartment fire can have major consequences for BA crews.

A recent safety event highlighted the need for BA teams to be briefed on possible uncontrolled ventilation before entering a compartment fire. A BA team experienced an intense backdraft which passed over their heads as they made an entry to a fire compartment where uncontrolled ventilation (failure of double glazed window units) had just occurred.

As soon as resources allow, ICs should appoint safety officers to look for signs of uncontrolled ventilation or fire development on external aspects of a building, before and when BA teams are committed for compartment firefighting. Any sudden signs of fire development or spread should be communicated by fireground radio to the IC and BA teams should be updated by the BA entry control officer (BAECO). A tactical withdrawal or evacuation should be considered at this point.

ICs should take into account prevailing wind conditions (pressure, strength and direction) when committing BA teams, particularly to high rise fires. Even a slight wind blowing into a ventilated fire compartment could make firefighting operations more arduous and pose greater risks to BA teams.

ICs should appoint staff to watch for signs of uncontrolled ventilation.

Ventilation can create a safer working environment for crews if undertaken in a controlled manner and on the direction of the IC. The opening or closing of doors or windows to ventilate a fire can improve conditions for people who may be trapped, as well as for BA teams. When ventilation is carried out by fire service staff in this manner it is known as 'tactical ventilation'.

Other means by which a fire can be ventilated include:

- **Uncontrolled ventilation**

Uncontrolled ventilation occurs when elements of a building or compartment such as windows and doors fail or when damage occurs to the structure of a compartment enabling the products of combustion to escape to open air or enter an adjacent compartment.

- **Automatic ventilation**

Automatic ventilation occurs when pre-installed vents, extraction or air conditioning systems are activated automatically, usually in the early stages of the fire, by the fire detection system or fusible link devices.

- **Natural ventilation**

Natural ventilation describes collectively the techniques of vertical and horizontal ventilation when they are not assisted by mechanical means. This includes the use of installed vents, windows and doors.

- **Negative pressure ventilation (NPV)**

Negative pressure ventilation describes the process where ventilation of a compartment is achieved by reducing the pressure within compartments by using a mechanical fan to extract the products of combustion or by use of a firefighting branch from within the compartment to be ventilated. The branch should be set to a wide cone and directed through an opening, which will draw the products of combustion out of the compartment.

Everyone on the fireground has a duty to immediately inform the IC if they observe a significant change in fire development or smoke conditions, and BA teams should be updated without delay. Early reporting of changing conditions will ensure that BA teams can undertake a safe tactical withdrawal if necessary.

LONDON AMBULANCE SERVICE AT INCIDENTS

When requesting the attendance of the London Ambulance Service (LAS), incident commanders (ICs) should always supply accurate and up to date casualty information to Brigade Control.

Details of the information required by the LAS is contained in PN 856 – Working with the Ambulance Service and PN 518 Messages from Incidents.

The LAS continues to deal with very high levels of demand on its emergency service. All LAS 999 calls are prioritised based on the nature and severity of the reported injury or illness. This process identifies the medical requirements of people seeking assistance, prioritises them accordingly, and where appropriate, progressively restricts the type of emergency responses despatched.

LAS resources may be redeployed whilst en-route to an incident, when a more serious (or life threatening) call is received. Therefore, it is important for ICs to provide regular updates on casualty information as an incident progresses or when there is a change in the casualty's condition.

An example would be a casualty who is rescued from a fire who is initially conscious and breathing, who subsequently becomes unconscious. A priority message should be sent to Brigade Control to provide an update to the LAS. By doing this, the LAS may re-prioritise the call and divert a paramedic or ambulance from another incident.

Details of the LAS's call categorisation and target response times were detailed in an article featured in Operational News 25.

Following the sending of a 'Persons Reported' message, as soon as any casualty details are known they must be passed to Brigade Control as a matter of urgency. This will enable the LAS emergency operations centre to allocate the correct medical resources, and prioritise life threatening calls.

If ICs send a 'Persons Reported' message from an incident, and it is subsequently confirmed that no persons are involved, this information should be sent to Brigade Control without delay. This will ensure that LAS resources are released to attend other emergency calls.

ICs at larger and protracted incidents should also consider releasing LAS resources as soon as possible. Refer to Section 6 of Policy number 856.

A casualty report form must be fully completed after treating a casualty, especially when oxygen has been administered – see Immediate Emergency Care policy 543 appendix 5.

The Incident Management Team (Operational Assurance) continue to liaise closely with colleagues in the LAS to ensure that genuine life threatening emergencies reported by the Brigade receive a timely response. Any delays in attendance of the LAS should be recorded on the Incident Monitoring Process Database (IMPD) with full details of the delay, time of call, casualty information, LAS arrival times and any updates that were given to control whilst waiting for the LAS to arrive. This information will assist the incident management team to investigate the delay with LAS colleagues.

WATCH TRAINING PACKAGES

Training packages, associated with operational news issues, are available for your immediate use. They can be accessed via an ICON on your desktop which links to all the current training materials related to the items below and previous packages. Additionally there are links to trainee packages and support material. Just click on this ICON on your desktop.

Red represents training themes are mandatory for all watches – new training material is available.

Amber represents training themes are mandatory for all watches – existing training material is available.

Article	Training	Guidance and supporting information	STEP – Recording reference (Create on STEP)
BA emergency teams	Article	PN 466 Respiratory protective equipment – breathing apparatus – operational procedures	Lecture/Assets – Equipment/PPE – BA Wearers Guidance & Technical Information/BA – 466
Refreshment and rehydration at incidents	Article	PN662 Hydration of personnel at operational incidents and training events	Lecture/People – Health, Safety & Environment/Occupational Health/ Hydration of personnel at operational incidents and training – 662
PPE – The last line of defence	Article	PN693 Structural firefighting personal protective equipment (PPE)	Lecture/Assets – Equipment/PPE/ Structural firefighting personal protective equipment (PPE) – 693
Fires in voids and basements in commercial premises	Article	PN 837 Use of the Thermal Imaging Camera (TIC) PN 678 Thermal Imaging Camera	Lecture/Assets – Equipment/Ops Equipment – Imaging equipment/ Use of the thermal imaging camera – 837 Lecture/Assets – Equipment/Ops Equipment – Imaging equipment/Thermal Imaging Camera – Argus 4 – 678
Key point summaries	Article	Ops News 28 Article in relation to introduction of KPS within operational policies – Operational news training	Lecture/Training notes/Training/ Key Point Summaries – Ops News 28
Ventilation induced fire spread	Article	FFD training note M4.77 Tactical ventilation	Lectures/training Notes/Training/Tactical Ventilation (Training Note)
London Ambulance Service attendance at incidents	Article	PN856 Working with the ambulance service PN543 Immediate Emergency Care (IEC) Medical first Aid	Lecture/Incident Command – Command Procedures/Incident Command Procedures/ Working with the ambulance service – 856 Lecture/Incident Management – First Aid at Incident/First Aid at Incidents/Immediate Emergency Care (IEC)/Medical first Aid – 543

SENIOR OFFICER COMPUTER BASED TRAINING (CBT)

Computer based E-Learning Training packages are available for your immediate use.
They can be accessed via the BIG learning system. https://lfb.big-learning.com/index8.html

All training associated with Ops News 28 is mandatory and should be completed in the next quarters training plan.This will then be evaluated utilising the Questionmark system.

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