OPERATIONAL NEWS





The quarterly newsletter for all London Fire Brigade operational staff

Issue 23 July 2012



Provision of water supplies

During the past few years the pressure and flow in water mains across the greater London area has been lowered to help reduce water leaks. Pressure and flow may also vary during different times of the day when water utilities use automatic pressure reducing devices to limit the pressure at times of low demand, particularly at night. These devices are strategically sited and it is not always possible to override them quickly to increase the pressure and flow of water for firefighting purposes.

This reduction in pressure and flow may impact on firefighting operations when large volumes of water are required.

During an incident, early recognition of

the following by the incident commander (IC) is important:

- Whether the available water supplies are sufficient to support the tactical plan being implemented to resolve the incident.
- Identifying resource requirements to set up a water relay.
- Early mobilisation of hose layers units (HLU) – a HLU is mobilised on make pumps eight and high volume pumps (HVP) are mobilised on request.
- Requesting attendance of bulk media tactical advisor (BMA).
- Requesting attendance of Turncock mobilised on make pumps six.
- Nominating a sector commander water.

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Battery management

Information from the incident monitoring process database is showing that failure of battery powered equipment can be the result of poor battery maintenance.

Since the recent introduction of telemetry, the Protective Equipment Group has had to replace a number of PSS Merlin telemetry entry control boards reported with telemetry defects. On further investigation, a significant percentage of these have proved to be working correctly. Analysis of the equipment data logs has identified that the cause of the apparent malfunctions were a result of insufficiently charged batteries.

On one occasion a breathing apparatus team had to be withdrawn from an incident when they lost contact with the entry control officer. The investigation determined a loss of power to the telemetry board caused by poor battery management.

All staff are reminded that the PSS Merlin telemetry entry control boards must be connected to the appliance charging system when not in use in order to ensure effective operation.

Information on the charging procedure is available in policy 760 Respiratory Protective Equipment – Dräger PSS Merlin telemetry equipment – technical information

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Watch Training packages

Operational News reflects important operational 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 or procedures that reduce risk. Where appropriate training packages on page 4 provide further information on the topics covered.

Incident commanders (IC) should consider the early identification and implementation of an appropriate hazard zone within which a specified level of specially trained staff, enhanced levels of PPE, supervision and/or information are required to support safe operations. The hazard zone must enable the IC to achieve the following:

- Separate those at risk, including fire service staff, from the hazard.
- Facilitate safe operations for the emergency services.
- Protect the scene and prevent unauthorised access to evidence or property.

Comments on the incident monitoring process database have highlighted that where there is a lack of visible

identification of the hazard zone, firefighters, people from other agencies and members of the public have either knowingly and unknowingly entered restricted areas. Wherever practicable, a hazard zone should be physically identifiable using methods such as barrier tape and cones to mark boundaries. The IC must ensure that everyone at the incident is fully briefed on the existence of both visible and non-visible hazard zones. The use of safety officers, police and other appropriately briefed personnel may be required to manage the perimeter of hazard zones. The command support system available on command units has the facility to determine, record and print hazard zones which can be used to brief staff.

Battery management (continued)

and on the breathing apparatus telemetry DVD provided to all stations last year.

At another incident a thermal imaging camera failed due to poor battery management resulting in an additional appliance being mobilised to provide a replacement. All of the above situations were avoidable and had implications for operational effectiveness.

At change of watch all battery operated equipment should be tested in accordance with its policy note. All staff should be familiar with battery charge displays and the various charging protocols. For example the battery within the Entel hand held radio should be changed whenever it drops below three blocks.

HOARDING

Recent incidents have highlighted an increase in occupiers hoarding items within domestic properties. It can be difficult to identify a property where hoarding is taking place until an incident occurs, which can pose an increased risk to both firefighters and occupants.

Hoarding can block escape roules for occupants and can also delay or prevent firefighters entering the property. In serious cases rooms may be filled to the ceiling with stacks of belongings that can easily fall over and entrap occupants or firefighters. Although firefighters may force open an inward-opening exterior door to enter, getting out through the same door may present a problem. Hoarding can also result in changes to the normal layout of a property and an inability to locate internal walls, which can lead to disorientation.

The fire loading will be significantly greater and may lead to abnormal fire growth and development. Incident commanders (IC) will need to undertake a dynamic risk assessment, taking account of life risk, paying careful

attention to fire growth and any visible signs of backdraft/hot gas explosion.

During the initial assessment there may be clues that indicate hoarding is taking place. Neighbours may have information and other common indications include windows blocked by shelves or boxes, indoor furniture in the garden, blocked doors and visible exterior structural damage to the home.

Firefighting at a property with substantial hoarding may necessitate additional resources. High fire loadings will require a significant weight of attack and incidents are often protracted during the damping down and turning over phase. Any rescue efforts will be extremely demanding and damage control will be difficult.

At deep-seated fires in cluttered properties, it can take hours to fully extinguish the fire and ensure re-ignition does not occur. For example, at an incident in Lexham House, Barking, crews worked for 34 hours and 19 appliances were required for damping down. Absorption of water

by hoarded materials will add significant weight to a structure already burdened with an accumulation of items.
Consideration should be given to the structural integrity of a property and a risk assessment undertaken to ensure safety of staff.

Water run-off may be contaminated and there may be issues with hygiene caused by unconventional methods of cooking and sanitation. Therefore, decontamination of crew members should also be a consideration at these types of incidents.

Local authorities have the powers to enter private premises where they believe there is a risk to public health but not when they suspect a fire hazard. Some local authorities have dedicated teams that can assist in clearing contents pre and post fire. London boroughs have different arrangements for dealing with issues in relation to hoarding. Where instances of hoarding are identified through community safety initiatives or operational activities contact should be made with the local Brigade community safety team for advice.

BARIE ROVING

The Entel HT981 radio and Savox HC-1 breathing apparatus radio interface equipment (BARIE) have been in operational service since 2007 as the Brigade's breathing apparatus radio communications equipment. On its introduction a roving procedure was developed that affords the best level of protection to the communications cabling. The majority of the cable, together with the whole microphone and earpiece assembly, is protected either by its position on the BA set or by positioning it beneath the fire tunic and fire hood. The cable roving eliminates the risk of snagging during wear, retains the integrity of the fire hood seal, and offers a high level of protection to the equipment from heat damage.

Over the last 12 months there have been a number incidents where BARIE cables have been exposed to high temperatures and damaged. No loss of communications occurred. However in all cases the cable sheathing was compromised or damaged to such an

extent that the BARIE had to be withdrawn from service. On investigation it has been found that, in all but one case, the BARIE was roved incorrectly. Had the correct roving occurred the damage would have been prevented.

One particular area of concern is the way that the bone microphone and ear piece assembly are roved. Correct roving protects the headset and maintains the integrity of the fire hood seal. It is therefore essential that wearers ensure that the microphone and earpiece assembly cable is passed down through the neck of the fire hood and enclosed within the tunic flap as shown in the image (right).

BARIE roving procedures are detailed in policy 516 Entel HT981 radio and Savox HC-1 Breathing Apparatus Radio Interface - training note. This procedure ensures that the BARIE set is afforded the maximum available protection when the wearer enters a heated environment. Correct roving reduces the likelihood of heat damage and is a safeguard to

maintaining communications between BA leams and the entry control point.

For further information refer to policy 516 or refer any queries to the incident communications mailbox.



Provision of water supplies (continued from page 1)

When HLUs or HVPs are mobilised, the IC. should notify control of the exact location of their rendezvous point. Additional resources should also be sent to the base hydrant/water supply to assist the HLU/HVP crew as needed.

Brigade procedure requires a minimum of twinned 70mm hose when supplying a pump from a hydrant. Monitoring reports show that this procedure is generally being carried out. However, observations from BMAs have indicated that often in the early stages of an incident, hose has been run direct from the hydrant to the fireground with as many as 12 lengths twinned to the base pumping appliance. This creates high levels of frictional loss and can severely reduce the flow, which leads to an insufficient supply to meet the correct weight of attack. The situation is made worse when the mains pressure is low. Initial ICs should consider positioning an appliance as close to the hydrant as practicable and where necessary request additional resources to facilitate this.

Other feedback from incidents has shown there is still little consideration given to branch/monitor settings prior to the fire attack resulting in early overrunning of the available supply. In most cases, this can be resolved by simply reducing the flow settings of jets provided for external firefighting.

The above points will benefit from effective planning to ensure staff develop and maintain a good working knowledge of local water supplies, including open water sources and availability of supplies near key local risks. Information gathered during 7(2)d and other familiarisation visits should be recorded through the operational risk database, supplementing the information on water supplies available on the mobile data terminals.

Hydrant flow rates can be measured using the appliance flow gauge although crews should be aware that the hydrant pressures and flow rates may vary at different times of the day.

Firefighters should develop and maintain a knowledge and understanding of the effects of flow rates and frictional loss in hose, together with the operation of pumps, branches and monitors. These core skills and underpinning knowledge should all be incorporated within watch and station training plans.

BMAs can be requested to attend incidents via control to provide advice on provision of water and foam at incidents including water relays and the use of high volume pumps, hose layers and bulk foam units. They are also available to attend training events and exercises. The duty BMA can be contacted for advice via control.

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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.

Amber represents training themes are mandatory for all watches to which they are relevant. These will be detailed within the training guidance.

Green represents optional and can be included in the watch training programme at the discretion of the WM based upon identified watch training needs

| | | will be detailed within the training guidance. | the vivi based upon identified water training needs. |
|--------------------------------|----------|--|--|
| Article | Training | Guidance and supporting information | STEP – Recording reference (Create on STEP) |
| Provision of water supplies | Article | Training support icon – training presentations – FFD training notes – M2.39 water carrying water relay Training support icon – training presentations – FFD PowerPoints – M2.39 water carrying and water relay Fire Service Manual – Volume 1: Fire Service Technology, Equipment and Media Hydraulics, Pumps and Water Supplies | Lecture/Pumps Pumping Water Supplies/Water Supplies/Water Relay |
| Battery management | Article | Policy 678 Thermal imaging camera – Argus 4 HR320 – technical information Policy 760 Respiratory protective equipment Dräger PSS Merlin telemetry equipment – technical information Policy 458 Entel HX-480/1 hand held incident ground radio | Lecture/Assets – Equipment/Ops Equipment – Imaging Equipment/Thermal limaging Camera – Argus 4 – 678 Lecture/Assets – Equipment/PPE – BA Wearers Guidance & Technical Information/Respiratory Protective Equipment – PSS Merlin telemetry equipment – 760 Lecture/Assets – Equipment/Comms Equipment – Radios/Entel HX-480/1 Hand Held Incident Ground Radio – 458 |
| Hazard zone identification | Article | Policy 415 Cordons | Lecture/Incident Command – Command Procedures/Incident Command Procedures/Cordons – 415 |
| BARIE roving | Article | Policy 516 Entel HT981 fireground radio and savox interface equipment (BARIE) – training note Policy 592 Breathing apparatus radio interface equipment (BARIE) | Lecture/People – Training/Workplace Training/Entel HT981 Fireground Radio and Savox interface Equipment – 516 Lecture/Assets – Equipment/PPE – BA Wearers Guidance & Technical Information/BA radio interface equipment (B.A.R.I.E) – 592 |

A range of practical drill options for the above subjects are recordable under – drill/*use pull down list for appropriate drill.

YOUR FEEDBACK IS IMPORTANT TO US

Staff are reminded that the selection of articles for Operational News bulletins is greatly influenced by entries made on the Incident Monitoring Process Database (IMPD).

All operational staff have access to this and feedback is encouraged and welcomed. There is an opportunity following every incident or training event to have a debrief, discuss improvements or good practice and for outcomes to be entered on the IMPD. For example it is possible to enter observations relating to Brigade procedures including items of equipment (i.e. not specifically attributable to an individual or team). See page 22 of the IMP User Guide.

Operational News is printed on FSC (Forest Stewardship Council) certificated paper that guarantees well managed forests.