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This circular is	<b>For information</b>	No response required	
This circular is	<b>Relevant to the National Framework</b>		
Status	<b>This circular reaffirms the currency of existing advice and guidance on the use of Breathing Apparatus and firefighting in buildings of sandwich panel construction.</b>		

# Firefighter Safety at Operational Incidents

## Issued by:

**Sir Ken Knight**

**Chief Fire and Rescue Adviser**

## Addressed to:

**The Chair of the Fire and Rescue Authority  
The Chief Executive of the County Council  
The Clerk to the Fire and Rescue Authority  
The Clerk to the Combined Fire and Rescue Authority  
The Commissioner of the London Fire and Emergency Planning Authority  
The Chief Fire Officer**

## Please forward to:

**Head of Health and Safety  
Head of Training**

## Summary

The circular clarifies the position of existing advice and guidance in relation to: the training, supervision and wearing of Breathing Apparatus (FRS) and the potential hazards associated with buildings of sandwich panel construction when involved in fire. It also provides an update on the review of respiratory protection procedures.

## For further information, contact:

**Sean Ruth**  
**Office of the Chief Fire and Rescue Adviser**  
**Communities and Local Government**  
**First Floor, Ashdown House**  
**123 Victoria Street**  
**London, SW1E 6DE**

Direct line **020 7944 5578**  
Fax **020 7944 8319**  
E-mail [sean.ruth@communities.gsi.gov.uk](mailto:sean.ruth@communities.gsi.gov.uk)

Website [www.communities.gov.uk](http://www.communities.gov.uk)

### 1.0 Background

- 1.1 This Circular provides an update on the operational guidance respiratory protection project to review the current advice on the provision, use and training for Breathing Apparatus (BA) by Fire and Rescue Services (principally Technical Bulletin (TB) 1/97 and the Fire Service Circulars (FSC) 17/70, 2/71 and 8/81); it also reaffirms the currency of the existing guidance. This circular also highlights the importance of the existing guidance (Dear Chief Officer Letters (DCOL) 3/96, 94/4 and 15/99) which outlines the hazards associated with firefighting in buildings which include sandwich panel construction.
- 1.2 The Circular is intended to remind all Fire and Rescue Services that the previous guidance remains current and that they should continue applying the advice contained within the extant Circulars and centrally issued guidance until such time they are either replaced or consolidated into new advice. It is recognised that, with the introduction of the Integrated Personal Development System (IPDS) and competence based training, FRAs may have differing Training Strategies in place that ensure operational staff are able to maintain competence. It will be for the FRA to demonstrate that their Training Strategies and Training Delivery Models meet the principles set out in current guidance.

### 2.0 Breathing Apparatus

- 2.1 Technical Bulletin 1/97 'Breathing Apparatus Command and Control Procedures' is currently under review and a national working group has been set up to take the review forward. The guidance on BA training (including refresher training) contained in Fire Service Circulars 17/70, 2/71 and 8/81 are also covered within the review. However, until completion of the review these existing items of guidance remain extant. In particular, Fire and Rescue Services are advised that the following principles contained within the guidance should be maintained.
- 2.2 The Incident Commander should conduct a dynamic risk assessment, using appropriate information, to ensure that safe systems of work are adopted for the commitment of BA wearers. Within this process the Incident Commander is expected to identify, analyse and assess the risks and select the appropriate BA procedures for controlling the risks, prior to committing crews wearing BA. FRAs should ensure that all managers who carry out the role of Incident Commander have received suitable and sufficient training, including refresher training, to enable them to be competent in relation to this responsibility. Risk assessments should only be undertaken by a competent person.
- 2.3 One of the key elements of control at an incident is the correct selection of the appropriate Stage of Breathing Apparatus Control (Rapid deployment, Stage 1 or 2 and BA Main Control) to ensure that suitable and sufficient BA support and emergency arrangements are in place. There have been many advances in equipment and technology since 1997 and the revision of TB 1/97 will identify the recommended standard of emergency arrangements for the future. However, until new guidance is in place it is expected that FRSs will follow existing guidance on provision and equipment for BA emergency teams as a minimum.

- 2.4** The role of the Breathing Apparatus Entry Control Officer (BAECO) is essential to the safe control and support of BA operations. The skills and knowledge to carry out the BAECO role in terms of maintaining proper records on the Entry Control Board, communicating with BA teams, and the briefing and de-briefing of BA teams, is an integral part of both BA training and refresher training.
- 2.5** Training for the role of BAECO (to monitor the safety of deployed BA teams within risk areas) should include the limitations of the current calculation of air usage and create the operational understanding that the calculated time of whistle is only for guidance based on the average consumption of air. Whilst BA duration tables were historically based on approximately 40 litres per minute FRSs are reminded that FSC 55/2004 identified that the actual average consumption rates could vary between 40-72% greater than this figure, dependent on work rate and conditions. FSC 55/2004 states “air usage and volume of air remaining (even if monitored through telemetry) is not a sufficient control measure in its own right for ensuring safe deployment of personnel”. BA duration tables are not the sole measure of ensuring BA wearer safety, Fire and Rescue Services should consider the use of appropriate air consumption figures in BA training and at operational incidents having taken FSC 55/2004 into account and ensure that sufficient control measures are in place to eliminate the risk associated with the inability to accurately circulate actual air consumption. The outcomes of the research will be incorporated into the review of TB1/97 review and future guidance will reflect any change in BA duration tables.
- 2.6** The most appropriate way of ensuring a consistent approach to BA Wearing and Command and Control Procedures at all incidents is to ensure that knowledge of BA procedures is coherent throughout each FRS. Each FRA is responsible for ensuring that the appropriate policies and procedures are in place to ensure that a level of consistency in relation to BA training and assessment of competence, is maintained and that the policy is delivered.
- 2.7** Initial/refresher training and assessment should be undertaken by personnel who are deemed competent as BA instructors. These instructors should have undergone additional training to fulfil the particular requirements of the role and been appropriately assessed. The maintenance of competency within the role should be subject to regular assessment and instructors should be required to maintain a portfolio of evidence to enable them to demonstrate the maintenance of their competence. Such FRA-wide co-ordinated training should be in addition to and not replace, effective Station based assessment and training which clearly supports the maintenance of skills.
- 2.8** The wearing of BA is a safety critical control measure in hazardous operations. Therefore, all operational firefighters expected to wear BA as well as those who direct and supervise BA operations need to be able to demonstrate competence in the relevant practices and procedures which they will be expected to undertake within their role. Whilst wearing BA at operational incidents assists in maintaining competence, it may not be in itself considered sufficient to demonstrate continuing competence.

- 2.9** The Integrated Personal Development System (IPDS), based on the assessment of competence within the workplace, is the recognised framework for ensuring the competence of all firefighting personnel within their role. Due to the broad range of activities and complexities associated with the wearing of Breathing Apparatus, the safety critical implications of the activity and the difficulties of monitoring all aspects of such operations, assessment through simulation will continue to form an important and integral part of ensuring competence within this activity.
- 2.10** Fire Service Circular 17/70 recommends that breathing apparatus wearers attend a 2-3 day refresher course at two-yearly intervals, and that any firefighter who has not worn breathing apparatus at a fire during any period of 12 months should have refresher training in heat and smoke. Since the publication of FSC 17/70, 2/71 and 8/81 there have been significant advances in the provision of BA training and the introduction of the Integrated Personal Development System (IPDS) which has enhanced the maintenance of competence within the fire and rescue service. However, until such time as the Circulars are reviewed, the guidance they contain remains current.

### **3.0 Fire Behaviour**

- 3.1** There has been widespread introduction of fire behaviour training within Fire and Rescue Services to enhance firefighter safety when involved in compartment firefighting operations. The published guidance for the planning, implementation and delivery of fire behaviour training is contained in Fire Service Manual - Volume 4: Fire Service Training: Guidance and Compliance Framework for Compartment Fire Behaviour Training. This is currently being revised with the new version expected to be published in due course.
- 3.2** The Fire Service Manual clearly identifies the learning outcomes for fire behaviour training; however BA Refresher training may be distinctly different. Whilst compartment fire behaviour training could be combined with BA refresher training it is important that the aims and objectives for both topics are adequately identified and delivered.

### **4.0 Knowledge of Building Construction**

- 4.1** In January 2008, the Chief Fire and Rescue Adviser (CFRA) wrote to all CFOs to remind Fire and Rescue Services of the need to ensure that operational risk information was available to firefighters in relation to high risk buildings. In particular, the danger when fighting fires in Thermo Clad Panel (sandwich panel) buildings was highlighted. Dear Chief Officer Letters (DCOL) 3/96, 4/94, 15/99 in conjunction with the Fire Research and Development Group report 'Firefighting Options for Fires Involving Sandwich Panels' described the hazards and appropriate actions that need to be taken to maintain firefighter safety whilst fighting fires in buildings of sandwich panel construction.

**4.2** Fire and Rescue Services are reminded that firefighters and, in particular, Incident Commanders will only be able to make a suitable and sufficient assessment of the risks at operational incidents, including being alerted to critical safety issues, if they are able to recognise building construction types and the impact that these buildings have on fire behaviour. FRAs are therefore reminded of their responsibility to ensure that safety critical information is available to Incident Commanders and all personnel in respect of risks within their area. Arrangements should also be in place to ensure personnel can recognise types of building construction.

### **5.0 Consultation**

**5.1** Consultation has taken place with the Health and Safety Executive (HSE), Chief Fire Officers Association (CFOA) and the Fire Brigades Union (FBU) on the contents of this circular.

### **6.0 Further Information**

**6.1** Any queries with the contents of this circular should be addressed to Sean Ruth, Office of the Chief Fire and Rescue Adviser.

**Sir Ken Knight**

**Chief Fire and Rescue Adviser**