

HOME OFFICE  
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13 FEB 1995

8 February 1995

To: All Chief Fire Officers

Dear Chief Officer

**DEAR CHIEF OFFICER LETTER 3/1995**

1. This letter deals with a number of matters which are summarised below. More detailed information is contained in the relevant items attached to this letter.

**A COMPULSORY COMPETITIVE TENDERING (CCT) - THE PROVISION OF INFORMATION TECHNOLOGY**

2. This item asks Chief Fire Officers to comment on the Department of the Environment's proposals to extend Compulsory Competitive Tendering to Information Technology. Comments are requested by 3 March.

**B THE USE OF BREATHING APPARATUS IN CONFINED SPACES**

3. In 1990, the Joint Training Committee agreed that the technique for removing breathing apparatus (BA), while allowing the wearer to continue breathing from the set in order to move within a confined space, should be taught at the Fire Service College on the BA Instructors' course. BA Instructors would then be qualified to teach firefighters within their own brigades. No specific guidance was issued to brigades at that time. This item is intended to remind Chief Fire Officers of the need to ensure that firefighters are aware of the technique and that proper training is provided.

**C THE USE OF BREATHING APPARATUS BY HM CUSTOMS AND EXCISE STAFF**

4. This item informs Chief Fire Officers that HM Customs and Excise are intending to re-introduce confined space rummage duties for their staff within ships. Because of the potential hazards of working in confined spaces and the possibility of irrespirable atmospheres, rummage crews are trained in the use

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of breathing apparatus. Following the issue of guidance about the use of BA in confined spaces (see Item B), Chief Officers may receive an approach from local Assistant Collectors of Customs and Excise inviting brigades to participate in joint training exercises.

#### **D. RELIABILITY AND EFFECTIVENESS OF DOMESTIC SMOKE ALARMS**

5. This Item informs brigades of the results of a Home Office research project to monitor over a three year period 10,000 smoke alarms installed in a cross section of houses in the Tameside region of Greater Manchester. The aim was to give a clearer indication of the overall effectiveness of smoke alarms in the domestic environment. There are no cost implications for local authorities.

#### **E. MEASUREMENTS OF THE FIREFIGHTING ENVIRONMENT**

6. The Fire Research and Development Group was requested by the Joint Committee on Fire Brigade Operations to undertake a research project into the measurement of the firefighting environment. This work, which was carried out by the Fire Experimental Unit (FEU), measured the environmental factors of temperature, air flow, thermal radiation and humidity which firefighters and their equipment have to endure. The FEU has completed its work and the enclosed summary report is circulated to Chief Fire Officers for information.

#### **F. CITIZENS CHARTER COMPLAINTS TASK FORCE: DISCUSSION PAPERS**

7. This Item informs Chief Fire Officers about the work of the Citizens Charter Complaints Task Force and the discussion papers it has issued on "Information: learning the lessons from complaints" and "Complaints systems: redress".

#### **G. HOME OFFICE SPECIFICATIONS FOR UNIFORM AND PERSONAL EQUIPMENT**

8. The Joint Committee on Appliances, Equipment and Uniform is currently undertaking a review of the Home Office specifications for firefighters' uniforms and personal equipment. A number of items, which have either been superseded or are no longer issued to firefighters, have already been removed from the list of specifications. This Item notifies Chief Fire Officers of those items which have been removed from the list and encloses a revised version.

#### **H. THE HOME OFFICE FIRE COVER GIS PACKAGE**

9. The Home Office Fire Cover Model has been developed to assist fire officers with the task of fire cover planning by

providing them with a method of determining the consequences of varying fire cover over a study area or the whole brigade. This Item informs brigades of a development to the Model to include a Geographical Information System.

**I. FIRE AND AMBULANCE SERVICES TRAFFIC CALMING: A CODE OF PRACTICE**

10. This Item informs Chief Fire Officers about the introduction of a Code of Practice setting out arrangements for consultation between highway authorities and the emergency services on proposals to introduce traffic calming measures. The Code, which has been agreed by the Joint Committee on Fire Brigade Operations, is published in the Department of Transport's Traffic Advisory Leaflet 3/94, a copy of which is enclosed.

**J. THE EMERGENCY COMMUNICATIONS NETWORK**

11. We have been advised by the Home Office Emergency Planning Division that following Ministerial Decisions the Emergency Communications Network (ECN) has been significantly re-configured. The separate text transmission facility, based on message switches, has been closed down. The speech network is, however, now able to provide facsimile and PC to PC data transmission (if suitable modems are used). The paper attached to this Item has been prepared by the Emergency Planning Division and is for information only.

**K MEDICAL AND PHYSICAL STANDARDS IN THE FIRE SERVICE**

12. This item notifies of an amendment to the statutory qualifications for entry into the fire service, and of changes to the guidance issued by the Home Office affecting the medical and physical standards for serving operational firefighters.

Visual standards and aids to vision for firefighters

13. Chief Fire Officers are advised of the decision taken at the 102nd meeting of the Central Fire Brigades Advisory Council concerning the issue of visual standards and aids to vision for firefighters whose eyesight falls below the current recommended minimum standards.

Amendment to the Fire Services (Appointments and Promotion) Regulations

14. Chief Fire Officers are informed of a change to the Fire Services (Appointments and Promotion) Regulations concerning the selection of eye specialists to conduct examinations.

The employment of insulin-dependent diabetics as operational firefighters

15. Chief Fire Officers are advised of the decision of the CFBACs' Joint Working Party on Medical and Physical Standards in the Fire Service to remove the operational bar on firefighters who develop insulin-dependent diabetes.

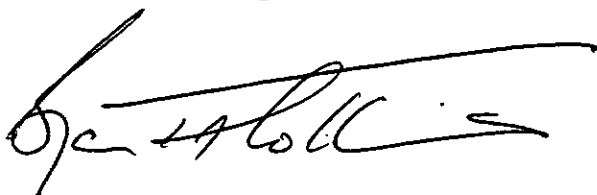
**L ANNUAL FIRE SAFETY RETURNS - AMENDMENTS TO EXPLANATORY NOTES**

16. As a result of a number of Brigade Inspections it is apparent that parts of the guidance notes accompanying the annual Fire Safety Returns are not sufficiently clear and require amendment. This Item gives details of the necessary amendments.

**M. MANUAL OF FIREMANSHIP BOOK 2 - AMENDMENT**

17. This Item gives details of an amendment needed to correct an error in Part 3 of Book 2 of the Manual of Firemanship.

Yours faithfully



**BRYAN T A COLLINS**  
Her Majesty's Chief Inspector  
of Fire Services

**COMPULSORY COMPETITIVE TENDERING (CCT) - THE PROVISION OF INFORMATION TECHNOLOGY**

1. You will be aware that on the 25 October 1994 the Department of the Environment (DOE) issued a consultation document to local authorities, including fire authorities, inviting comment on its proposals to extend the régime of compulsory competitive tendering (for which provision is made in the Local Government Act 1988) to include Information Technology. The consultation document required comments on the proposals to be sent to the DOE by 27 January 1995. However the DOE have agreed to consider any proposals which may result from this secondary exercise beyond that date (see paragraph 9).

2. As the consultation document does not state that the provision of, or elements of the provision of, a fire brigade's mobilising and communications system are specifically exempted from the compulsory competitive tendering requirement it is important to establish whether, in the view of the fire service, any part of them should be specifically exempt.

3. DOE say that the definition of Information Technology for the purpose of CCT is comprehensive and functional in that:

- it encompasses all work connected with the provision of IS/IT services including all core functions, "expert client" skills and other work which may not be appropriate for tendering and potentially contracting out;
- it includes such IS/IT work carried out in any part of the defined activity;
- it includes all such work falling within the definition, whether carried out by in-house staff or contracted out;
- in describing the provision of IS/IT services it includes the technology required to provide those services.

4. For work to be included in the defined activity it must be a service designed to secure the availability or application of information technology. It therefore excludes those tasks carried out using IS/IT equipment as part of a person's normal duties. Also excluded is work which amounts to less than 50% of a person's time.

5. The Home Office understanding is that the definition therefore covers the provision and maintenance of all IT based services used in a fire brigade maintained in pursuance of the Fire Services Acts 1947 and 1959 including all speech and data

communications systems which use radio or line but does not include the use of such systems. Neither does it include building works associated with IT systems.

6. In assessing the appropriate proportion of IS/IT services to be subject to CCT (ie. that percentage of the defined activity which cannot be undertaken in-house unless it has first been awarded through CCT) DOE has taken into account that certain work is not necessarily suited to compulsory competition. It therefore proposes to allow 30% of the total value of a local authority's IS/IT service falling within the defined activity to be retained in house without having to be awarded through CCT.

7. The Home Office would welcome comments of Chief Fire Officers on the proposals and in particular on:

a. the Home Office understanding of the scope of the defined activity as it affects the fire service;

b. the level of the competition requirement; is 30% sufficient to protect those operational elements of the fire service IT systems falling within the defined activity;

c. which elements of the provision of IS/IT systems for fire brigades (captured by the defined activity) could not be adequately protected by inclusion in the competition free element, whatever percentage may be agreed, of the work of the authority and may therefore need to be protected in some other way;

8. If you say in answer to 8. b. that 30% is not sufficient or in answer to 8. c. that a more definite method of protection is required then your responses should be comprehensively defined and fully justified.

9. In order to be included in this consultation process and to inform the Home Office debate, comments are invited by no later than 3 March and should be addressed to Bob Dyce, Fire Service Division, Horseferry House.

10. If you have any queries please contact Yvonne Evans on 0171 217 8449.

## THE USE OF BREATHING APPARATUS IN CONFINED SPACES

### Introduction

1. The purpose of this Item is to reaffirm the need to ensure that personnel are aware of the technique for the removal of breathing apparatus to allow the wearer, while still breathing from the set, to negotiate a restricted opening or confined space.

2. In 1990 the Joint Training Committee (JTC) agreed that the technique should be taught at the Fire Service College on the Breathing Apparatus Instructors' Course and that the trained Instructors would then be qualified to teach the technique to operational firefighters in their brigades. At that time no specific guidance was issued to Chief Fire Officers about the permissibility of the technique and the need for it to be taught to operational firefighters. Some of the considerations which are necessary in using the technique are described below.

3. It should be stressed that the set removal technique will be used rarely and should only be used operationally for effecting a rescue where no other means are available or for self-rescue. The technique should be taught and practised in brigades so that firefighters are able to effect the technique when required to do so operationally. However, for brigade training in the technique to be safe and effective it is judged appropriate for the technique to be taught and practised in safe, controlled conditions. It is not judged essential for the training to be conducted in a simulated operational (realistic) environment.

### HM Customs & Excise

4. It has emerged, through correspondence with HM Customs and Excise, that there is misunderstanding in some brigades about the technique. Further details about the issues relating to HM Customs and Excise are given in Item C of this DCOL.

### General considerations and technique

5. Breathing apparatus sets conforming to the appropriate standard (currently BS EN 137:1993) are designed so that the wearer can remove it and, while still wearing the facepiece, continue to breathe from the apparatus. The set is normally carried on the back of the wearer and supported by a shoulder harness. The set, when in this position and adjusted correctly, affords the wearer freedom of movement with little conscious concern for the supply. Any attempt to operate the set in any other position brings into play additional considerations for the wearer. Movement is inhibited as the weight of the set is not carried in the designed position, both hands may no longer be

available and more awareness of the effect of movement on sustaining the supply is necessary.

6. The teaching of breathing apparatus wearing has always placed emphasis on the adoption of correct donning, starting and operating procedures for breathing apparatus sets. But it has been accepted that there may be specific operational situations when it may be necessary for breathing apparatus wearers to deviate from normal procedures and remove the set whilst still breathing from it when a wearer's escape route becomes restricted, for example, by a fall of debris. These situations present additional hazards to firefighters and extra vigilance is vital to safe and successful conclusions.

#### Guidance on the procedure for removal and replacement of breathing apparatus

7. Detailed guidance on the procedure for the removal of breathing apparatus, and the replacement of the set on the wearer when the obstruction has been passed, is at Annex A. Brigades may care to adopt the guidance as a training note or produce their own detailed guidance based on it.

#### Airline equipment

8. Chief Fire Officers are reminded that, if available, airline equipment may be used in accordance with the procedures laid down in Technical Bulletin 1/1989 and may provide a suitable alternative for effecting the rescue of a person from a confined space. Chief Fire Officers may wish to consider jointly with local Customs personnel the deployment of airline equipment at fire stations likely to be called upon to effect these types of rescue.

#### Financial or manpower implications

9. No financial or manpower implications arise from the issue of this guidance.

Telephone contact number: 0171 217 8746

File reference: FEP/94 66/1500/2



**GUIDANCE ON THE PROCEDURE FOR REMOVAL AND RE-DONNING OF BREATHING APPARATUS**

Key Points

1. The key points to consider are:-
  - (a) the method the wearer adopts in removing the set is totally dependent on the operational circumstances and the type of set being worn. Care must always be taken to ensure that any set removal does not pose a threat to the faceseal and the wearer must always maintain access to his/her contents gauge: removing and replacing the set can result in greater air consumption;
  - (b) when the set is removed care should be taken to ensure that the wearer maintains contact with it and it does not slip out of their grasp as a result of not checking that the ground or element of structure is firm and can support the weight;
  - (c) shoulder width can be narrowed by stretching one arm out in front when negotiating obstacles, but at all times care has to be taken to keep the breathing apparatus set as close to the wearer as possible;
  - (d) firefighters should be encouraged to think their way through each situation as they see it. On no account should firefighters be forced through or into any restriction unless they are reasonably sure that they can pass through;
  - (e) the possibility of the set itself becoming caught or jammed must always be borne in mind; and good teamwork and communication between crew members is paramount to safe working;
  - (f) training for movement through restricted openings and confined spaces does not necessarily require expensive or complicated equipment: everyday objects, such as chairs or tables can be utilised quite effectively within a lecture room;
  - (g) emphasis should be placed on building confidence and making the wearer aware of their individual ability; and
  - (h) when practising the technique the wearer should be aware of the possibility of the supply hose becoming kinked, leading to a loss of the air supply.

## Practical considerations

2. Open circuit compressed air breathing apparatus used by fire brigades conforms with BS 4667 Pt2 or, in the case of recent apparatus, with EN 137. The latter contains requirements for:

- a) wearers being able to climb up and down a (vertical) ladder passing through a 460mm square opening (with the set on); and
- b) crawling through a narrow section (4 m long) which is so low that the wearer has to take off the apparatus and push it in front of him/her or pull it behind him/her while still breathing from the apparatus.

The first of these requirements was carried over from BS 4667 Pt2.

3. It is estimated that an average sized firefighter could negotiate an opening of 250mms x 400mms without breathing apparatus but this increases to 400mms x 500mms when wearing breathing apparatus. It is obvious that the wearing of breathing apparatus can restrict a firefighter's capabilities where restricted access points are present. The provision of airline equipment should provide for such situations.

4. As stated the removal of breathing apparatus whilst wearing should only be used operationally for effecting a rescue where no other means are available at the time or for self-rescue.

5. In both of these situations, breathing apparatus wearers may have to make both horizontal and vertical movements to make progress. Each direction of movement needs to be carefully considered.

### Horizontal movement

6. Once the decision has been made to remove the breathing apparatus, the wearer, with due consideration for the protection of the supply, must decide whether to negotiate the obstacle with the set in advance of the body or following the body. It is generally thought best to progress through unknown crawl situations feet first, thus affording greater protection to the head and upper body. This method, when employed with the set removed, also gives protection to the set and to the respiratory system of the wearer. The movement of the body is away from the more static breathing apparatus, and so great care has to be taken to avoid any tension becoming applied to the supply hose. If this method is employed during a team supported rescue attempt, assistance can also be offered in supporting the set.

7. If the obstruction is very short and the operator can be certain of the ground ahead, it may be advantageous to move with the set in advance of the body. Here, once the ground has been tested, the set is placed in position and the wearer moves towards the set, therefore reducing the chances of placing

tension on the supply hose.

### Vertical movement

8. To make vertical movements with a breathing apparatus set which is supplying the firefighter but not being worn on the back is more difficult and hazardous, especially with the effect of gravity on the set presenting additional problems for the wearer. Having to support the set will generally mean only one hand being available to support the body and the opening may be so narrow as to require the set to be carried above the head or in some way suspended below the trunk.

9. In the pre-planned situation, where assistance and additional equipment may be available, a relatively safe ascent or descent may be possible. However where a self-rescue has to be considered, these manoeuvres can be extremely difficult and hazardous and highly dependent on the operator's strength, agility and physical and mental condition.

**THE USE OF BREATHING APPARATUS BY HM CUSTOMS AND EXCISE STAFF**

Background

1. It is essential, as part of their normal duties, that HM Customs and Excise rummage crews thoroughly search ships, necessitating entering confined spaces which may have small access openings. The potential hazards arising from working in such confined spaces and the likelihood of an irrespirable atmosphere being present have caused HM Customs and Excise to protect their rummage crews by developing safe systems of work and emergency procedures. The process has included training rummage crews in the use of breathing apparatus and working in conjunction with fire brigade personnel who may become involved in the rescue of any rummage crew members encountering difficulty enacting their duties.

2. It has emerged, through correspondence between brigades and HM Customs and Excise, that there is misunderstanding in some brigades about the technique for the removal of breathing apparatus to allow the wearer, while still breathing from the set, to negotiate a restricted opening or confined space.

3. HM Customs and Excise had sought the participation of some brigades in joint exercises simulating the rescue of Customs staff on rummage duties in confined spaces within ships. Brigades showed a willingness to participate in the joint exercises but a number said that Technical Bulletin 1/1989 precluded the removal of breathing apparatus in order to negotiate a confined space. There is no such prohibition in Technical Bulletin 1/1989, provided that the wearer continues to breathe from the set.

4. The correspondence with brigades prompted HM Customs and Excise to ban rummage operations involving confined space entry and prompted them to bring the matter to the attention of the Home Office. The Home Office has made clear to HM Customs and Excise that brigades will always respond to an emergency situation. It has also told HM Customs and Excise that the removal of a breathing apparatus set by the wearer, while still breathing from the set, is permissible, but should only be undertaken in exceptional circumstances.

Re-instatement of confined space rummage duties

5. HM Customs and Excise intend to re-instate confined space rummage duties following the issue of Item B, about the general use of breathing apparatus in confined spaces, in this Dear Chief Officer Letter. HM Customs and Excise also plan to invite coastal brigades and those with ports in their area to participate in joint training exercises of benefit to both customs and brigade personnel. Chief Fire Officers in such areas

may expect an early approach about this from local Assistant Collectors of Customs and Excise. A list of regional responsibilities is at Annex A.

General use of breathing apparatus in confined spaces

6. The above advice should be read in conjunction with Item B in this DCOL about the use of breathing apparatus in confined spaces.

Financial or Manpower Implications

7. No financial or manpower implications arise from the issue of this guidance.

Telephone contact number: 0171 217 8746

File reference: FEP/94 66/1500/2

**CUSTOMS AND EXCISE ASSISTANT COLLECTORS**

**Belfast**  
T Gallagher  
HM Customs and Excise  
Carne House  
20 Corry Place Belfast  
Northern Ireland  
BT3 9HY  
Tel: 01232 352220

**Dover**  
M Burnett  
HM Customs and Excise  
Burlington House  
Townwall Street  
Dover, Kent  
CT16 1SY  
Tel: 01304 224397

**East Anglia**  
W T Watson  
HM Customs and Excise  
Custom House  
Main Street  
Harwich Essex  
CO12 3PG  
Tel: 01255 502246

**East Midlands**  
S Slade  
HM Customs and Excise  
Customs House  
Immingham Dock  
Immingham S Humberside  
DN40 2NA  
01469 574748

**Edinburgh**  
W N Shearer  
HM Customs and Excise  
28 Guild Street  
Aberdeen  
AB9 2DY  
Tel: 01224 256349

**Glasgow**  
A S Barr  
HM Customs and Excise  
Custom House  
Inchinnan Road  
Paisley  
Tel: 0142 306 36

**Leeds**  
C Welton  
HM Customs and Excise  
Custom House  
King George Dock  
Hull  
HU9 4PR  
Tel: 01482 796161

**Liverpool**  
S C Fysh  
HM Customs and Excise  
Custom House  
Merseyton Road  
Ellesmere Port S Wirral  
L65 3AD  
0151 355 2157

**London Port**  
C Wolley  
HM Customs and Excise  
Anchorage House  
High Street  
Chatham, Kent  
ME4 4NN  
Tel: 01634 830933

**Manchester**  
B Conway  
HM Customs and Excise  
Building 302, Cargo Centre  
Manchester Int. Airport  
Ringway, Altrincham, Cheshire  
WA15 8XD  
0161 489 2171

**Northern England**  
J C Henderson  
HM Customs and Excise  
Custom House  
39 Quayside  
Newcastle-Upon-Tyne  
NE1 3ES  
Tel: 0191 261 0981

**Southampton**  
B D Holt  
HM Customs and Excise  
Custom House  
Orchard Place  
Southampton  
SO9 1ZD  
Tel: 01703 827007

**South Wales and Borders**  
C D Brooke  
HM Customs and Excise  
Portcullis House  
21 Cowbridge Road East  
Cardiff  
CF1 9SS  
Tel: 01222 238531

**South West England**  
A Stewart  
HM Customs and Excise  
Custom House  
Parade  
Plymouth  
PL1 2JP  
Tel: 01752 252252

**RELIABILITY AND EFFECTIVENESS OF DOMESTIC SMOKE ALARMS**

1. This Item informs brigades of the completion of a research project initiated by the Home Office to monitor over a three year period 10,000 smoke alarms installed in a cross-section of houses in the Tameside region of Greater Manchester. The aim of the project was to give a clearer indication of the overall effectiveness of smoke alarms in the domestic environment and how well they were maintained once installed. The results of the research project are summarised in the enclosed summary report (Research Report No 58).

The Report's conclusions

2. Notwithstanding the facts that the circumstances of this project (where participants were aware at the outset that follow-up surveys would be carried out) and the dangers of drawing any firm statistical conclusions from such a small sample, it established that a high proportion of the smoke alarms (89%) were still fitted and serviceable at the end of the study. This suggests that the public generally look after their smoke alarms. However, the study has also highlighted several shortcomings in:-

- a. the present method of cleaning smoke alarms;
- b. understanding of the meaning of the low battery warning signal;
- c. the need for annual battery replacement (as specified in the manufacturers' instructions); and
- d. the necessity of regular 'testing'.

2. Real fire situations that occurred during the monitoring period have confirmed that the level of protection afforded by fitting only one smoke alarm per dwelling is limited and that an enhanced level of protection is attainable by fitting more.

Further action

3. Home Office advertising during 1994-95 is likely to concentrate on maintaining awareness of the maintenance procedures and encouraging non-owners to buy a smoke alarm, probably using the existing TV maintenance commercial.

Telephone contact number: 0171 217 8043 (Policy)  
0171 217 8687 (Technical)

File reference: FEP/92 17/20/10

## MEASUREMENTS OF THE FIREFIGHTING ENVIRONMENT

### Introduction

1. The Home Office Fire Research and Development Group (FRDG) was requested to undertake a project to measure the environmental factors of temperature, air flow, thermal radiation and humidity which have to be withstood by firefighting personnel and their equipment. This work was undertaken by the Fire Experimental Unit (FEU) and a copy of the Summary Report, Research Report No. 61, is attached.

2. The work was requested for use in developing standards for equipment but was not intended to assess the ability of firefighters to withstand the operating conditions likely to be encountered. Results from the work on a separate research project currently being undertaken on the physiological effects of wearing breathing apparatus should be more beneficial to brigades in this area.

### The study

3. To collect the data, an instrument package was developed which could be attached to the harness of a breathing apparatus set and carried into exercises. This included a portable datalogger and transducers to measure the parameters on and around a firefighter dressed in firefighting kit with breathing apparatus.

4. Detailed results of the tests appear in FRDG Publication number 4/1993. Air temperatures were recorded in all the tests. In later tests data was also collected on humidity and thermal radiation. In some of the tests data was collected on the firefighter's heart rate, aural temperature and rate of air consumption from the breathing apparatus cylinder. The temperature measurements are presented in terms of how long firefighters experienced different temperatures for a continuous period during the exercises.

### Summary of data collected

5. Humidity proved difficult to measure and analyse but generally, as expected, the humidity was found to decrease to low relative humidity values (less than 3%) at high temperatures. No useful data was obtained on air velocity because the fire conditions encountered did not produce significant air flow.

6. In earlier tests, although data was collected during the more severe exercises at the Fire Service College and other locations, no attempt was made to explore extreme conditions. Temperatures above 120°C were not experienced for times longer than two minutes. Only on two occasions did the temperature exceed 180°C and this was for a period of less than 30 seconds.



7. In a separate series of tests the limits of radiation at ambient temperature were explored. Although 10 kW/m<sup>2</sup> minute was withstood for one minute, damage was sustained to equipment and these conditions would not be acceptable operationally. A more practical limit would be 4 kW/m<sup>2</sup>, which was tolerated for about five minutes and caused no significant damage.

8. With combinations of high temperature and thermal radiation, temperatures above 160°C at shoulder height could not be tolerated by the wearer for a time of more than one minute with radiation of 4 kW/m<sup>2</sup>.

9. The tolerance of the firefighter, in tests or in operational conditions, depends on factors such as clothing, fit of clothing, health, stress levels, work levels, height and earlier exposure conditions during the incident, and these factors were not taken into consideration in this work.

10. While it will probably never be possible to define the firefighting environment completely, the data collected in this study has enabled a better definition of the firefighting environment to be established than has previously been possible. Figure 5 shows a simplified summary of the results for temperature, thermal radiation and time of exposure. Four classifications of exposure have been adopted, namely Routine, Hazardous, Extreme and Critical.

### Conclusions

11. The research has shown that the instrument package could be used to produce reliable data on most of the parameters originally envisaged. The measurement of thermal radiation, using the package, was not considered reliable and fixed sensors were found to provide better results. Data has been collected which allows the firefighting environment to be defined more clearly. Significant data was collected on air temperatures and thermal radiation, as summarised in Figure 5.

12. This data should be useful in drawing up specification requirements and will be of interest to the equipment manufacturers. It is not intended to be used by brigades to identify safe working limits for firefighters or assisting training programmes.

13. Copies of the full report are available from the Fire Experimental Unit Information Desk.

### Financial and Manpower Implications

14. There are no direct financial or manpower implications to this item.

Telephone contact number: 0171 217 8745

ITEM F  
DCOL 3/1995

**CITIZENS CHARTER COMPLAINTS TASK FORCE: DISCUSSION PAPERS**

1. Item D of DCOL 8/1994 announced that the Citizens Charter Complaints Task Force were producing a series of discussion documents. Four of the documents have already been distributed.
2. Two copies of each of the final two discussion papers, "Information: learning the lessons from complaints" and "Complaints systems: Redress", are enclosed for the Chief Fire Officer.
3. Any enquiries about this Item should be directed to Mr Pillai (Fire Service Division) at the number below.

Telephone contact number: 0171 217 8750

**HOME OFFICE SPECIFICATIONS FOR UNIFORM AND PERSONAL EQUIPMENT**

1. A number of Home Office specifications for firefighters' uniforms and personal equipment have been in existence for some years and have either been superseded or the items are no longer issued as uniform or personal equipment.

2. The Joint Committee on Appliances, Equipment and Uniform is currently carrying out a review of all the Home Office specifications and, as a first stage in this exercise, it has been decided to delete the following items from the Home Office list:

- A1 Firefighting Tunic (T.63 cloth)
- A19 Nomex Firefighting Tunic
- B5 Male Officers Overcoat
- D2 Female Officers Overcoat
- E1 Fireman's Axes
- E3 Fireman's Nylon Shoulder Sling
- E4 Fireman's Leather Axe Pouch

3. A copy of an amended list of Home Office specifications for uniform and personal equipment is appended. This list will be subject to further amendments as the specifications are reviewed or replaced by European standards.

Financial and Manpower Implications

4. This Item has no financial or manpower implications.

Telephone contact number: 0171 217 8745

# INDEX TO SPECIFICATIONS FOR UNIFORM AND PERSONAL EQUIPMENT

<b>(A) FIREMAN'S UNIFORM</b>	
A2	Undress jacket
A3	Undress trousers
A5	Raincoat
A6	Cap
A7	Waterproof overtrousers
A15	Protective gloves
A16	Goggles
A18	Method of repair to the Nomex layer of the Nomex tunic
A20	Undress uniform pullover
A21	Firemen's neckerchief
A22	Firemen's shoes
A23	Firemen's lined vulcanised rubber safety boots
A24	Overall jacket with trousers or bib and brace overall
A25	Two piece working rig
A26	Fire fighters' tunic
A27	Fire fighters' anorak
<b>(B) MALE OFFICERS' UNIFORM</b>	
B1	Undress jacket
B2	Undress trousers
B6	Raincoat
B7	Cap
B9	Car coat
B10	Male officers' shoes
<b>(C) FIREWOMEN'S UNIFORM</b>	
C3	Slacks
C4	Raincoat
C5	Fleecy lining for raincoat
C6	Hat (all ranks)
C7	Summer shirt/blouse (all ranks)
C7a	Blouse (all ranks)
C8	Tie
C8a	Maverick bow tie (all ranks)
C9	Overall (all ranks)
C12	Jacket
C13	Skirt (all ranks)
C14	Womens shoes (all ranks)

<b>(D) FEMALE OFFICERS' UNIFORM</b>	
D1	Raincoat
D3	Jacket
<b>(E) PERSONAL EQUIPMENT</b>	
E2	Fire fighters' helmet
E6	Black leather shoulder bag (women all ranks)
E9	Anti-flash hood
E10	Firemen's pocket line or belt line
<b>(F) INSIGNIA ETC.</b>	
F1	Fire Service cap badge
F2	Fire Service buttons (large and small)
F3	Officers' laurel wreath badge
F4	Officers' impeller badge (large and small)
F5	Chromium bar badges (officer and firemen)
F6	Chromium bar badge (control room staff)
F7	Gorget patches
F8	Detachable epaulette for shirt sleeve order (men)
F9	Detachable epaulette for shirt sleeve order (women)
F10	Rank markings for operational uniforms

NOTE: There are no Home Office specifications for the following items of uniform and personal equipment:-

Firemen

Blue shirts and collars  
 Black tie  
 Socks  
 Jersey  
 Plimsolls or slippers  
 Gauntlet gloves (PVC with knitted cuff - see FSC 23/1963)  
 Waterproof coat  
 Dust coat

Male Officers

White shirts and collars  
 Gloves

Firewomen

White shirts  
 Black stockings or tights  
 Plimsolls or slippers  
 Gloves

**THE HOME OFFICE FIRE COVER GIS PACKAGE**

1. The Home Office Fire Cover Model has been developed to assist fire officers with the task of fire cover planning by providing them with a method of determining the consequences of varying fire cover over a study area or the whole brigade. The model is a computer programme which runs on a Personal Computer (PC).

2. The user provides information on the disposition of appliances and the pattern of incidents; and the model provides information on predicted attendance times.

3. In 1985 the model, then operating on a mini-computer, was used to assist the Joint Committee on Standards of Fire Cover and subsequently it was employed by a consultancy to help a number of brigades to review their fire cover. In 1992, Dear Chief Officer letter 3/92 explained that the model was available on a PC to all interested brigades. Over twenty brigades have used it successfully as a result.

4. Over the last twelve months, the model has been further developed by the Fire Research and Development Group (FRDG) to include a Geographical Information System (GIS). The new package now allows brigades to analyze fire cover within an area using on-screen digital maps to provide geographic information on the location of roads, stations and incidents.

5. The software facilities include the ability to:

- \* Predict attendance based upon road speeds and the location and the availability of appliances
- \* Use information on incidents taken directly from Command and Control Systems
- \* Store and display areas of risk within the brigade
- \* Predict the effect of changing fire cover within an area in terms of meeting national guidelines
- \* Determine the effect of local mobilisation policies, such as urban C risk.

6. The effects of changing fire cover scenarios can now be displayed as a graphic overlay to maps of the brigade area, making interpretation of the results both quicker and easier. Full tabulated results are still available for detailed analysis of results.

7. The package has undergone limited field trials in three brigades but is being issued initially as a "beta test" product in order that further development of the package can be undertaken in line with users' comments.

8. The package costs £1000 + VAT per licence, to cover the cost of the proprietary GIS software used in the development. Colour raster digital maps of each brigade area at 1:50,000 scale to go with the package are optional and their cost will vary depending upon the geographic size of the brigade, up to a maximum of £600 + VAT.

9. The package is a Windows based product and therefore requires a personal computer running Windows version 3.1 or later. Hardware specifications are:

	Minimum	Recommended
Processor	80386SX	80486DX
Speed	25Mhz	66Mhz
Monitor	VGA compatible	SuperVGA or better
RAM	4Mb	16Mb
Hard Disc	130Mb Winchester drive	310Mb SCSI drive

The hard disc space required for storage of digital map data will depend upon the geographic size of the area to be studied and the type of maps used.

10. If you would like further information on the package, or would like a demonstration, please complete the attached sheet and return it to:

Miss Cath Reynolds  
Home Office Fire Research & Development Group  
Room 402  
Horseferry House  
Dean Ryle Street  
London SW1P 2AW

Tel 0171 217 8182  
Fax 0171 217 8254

To: Miss C A Reynolds  
Fire Research and Development Group  
Room 402  
Horseferry House  
Dean Ryle Street  
London  
SW1P 2AW

HOME OFFICE FIRE COVER GIS PACKAGE

I am interested in receiving further information on the fire cover GIS package and therefore:

- \* Please provide further details of the fire cover GIS package
  
- \* Please provide further details of a demonstration of the fire cover GIS package

(Delete as appropriate)

Signed : .....

Name : .....

Brigade: .....

Date: .....



**FIRE AND AMBULANCE SERVICES TRAFFIC CALMING: A CODE OF PRACTICE**

1. This Item informs Chief Fire Officers about the publication of a Code of Practice setting out the arrangements for consultation between the highway authorities and the emergency services on proposals to introduce traffic calming measures. Details of the Code are contained in the enclosed Traffic Advisory Leaflet 3/94 "Fire and Ambulance Services Traffic Calming: A Code of Practice".

2. The highway authorities are already required by legislation to consult the police when road hump schemes or traffic calming measures are being proposed. They are now being strongly advised to consult with the fire and ambulance services affected by the introduction of such measures because of the potential impact on response times. This consultation process should take place at an early stage in their design. The Code of Practice has been agreed by the Central Fire Brigades Advisory Council's Joint Committee on Fire Brigade Operations, the Department of Health's Ambulance Policy Advisory Group, the Local Authority Associations and the Department of Transport.

3. Additional copies of the Traffic Advisory Leaflet 3/94 may be obtained from the Department of Transport's Traffic Advisory Unit at the following address:

Driver Information and Traffic Management Division  
Department of Transport  
2 Marsham Street  
LONDON SW1P 3EB

Telephone: 0171 276 6287

4. The introduction of the Code of Practice will have minimal financial and manpower implications.

Telephone contact number: 0171 217 8746

File reference: FEP/93 95/228/1

**THE EMERGENCY COMMUNICATIONS NETWORK**

1. We have been advised by the Home Office Emergency Planning Division that following Ministerial Decisions the Emergency Communications Network (ECN) has been significantly re-configured. The separate text transmission facility, based on message switches, has been closed down. The speech network is, however, now able to provide facsimile and PC to PC data transmission (if suitable modems are used).

2. The attached paper has been prepared by the Emergency Planning Division and is for information only.

Telephone contact number: 0171 217 8449

# THE EMERGENCY COMMUNICATIONS NETWORK

## Description

The ECN is a speech network; however, it is able to provide facsimile and PC to PC data transmission (if suitable modems are used).

With the closure of the RGHQs the top tier nodes have been re-located, with 10 in England and Wales and 3 in Scotland. (Diagram 1). All of these top tier nodes are inter-connected with 30 channel digital circuits, with resilience provided both by routing and using two network suppliers.

Each of the top tier nodes is connected to several counties, using analogue circuits. Each county is also connected with its immediate neighbours, thus providing a resilient "mesh" network at the county level. (Diagram 2 depicts a typical area covered by a top tier node).

County administrative Districts are connected to the county switch and also to at least one neighbouring district, usually with a common interest. In addition to ease of communication this facility provides alternative routing into the network. (Diagram 3).

Police forces and fire brigades are connected to their respective county switch. It is recommended that access to the ECN is provided at least from the force or brigade control room; staff from the HO Emergency Planning Telecommunications Group will be pleased to discuss possible arrangements. The installation of circuit cards in Brigade switchboards will cost an estimated £1000 each.

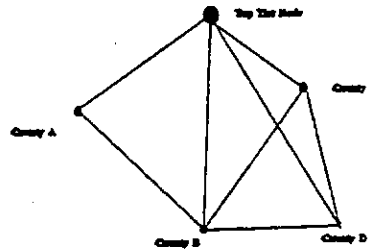
All of the system just described operates on private circuits rented from either BT or Mercury. A point to point radio network is also in place. This is being modified to provide switching in the radio system, giving the utmost flexibility within the constraints imposed by radio frequency allocations. Radio currently is only available at counties or police forces.

ECN The Emergency Communications Network

Top Tier Node Location

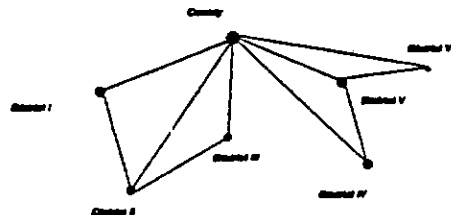


ECN The Emergency Communications Network



COUNTY CONNECTIVITY

ECN The Emergency Communications Network



District Connectivity

## Useage

The ECN has been moved away from its previous focus on post nuclear war communications to being available for use in emergencies and disasters in both peace and war.

The Home Office wishes to encourage its use in order to ensure that users are familiar with it and that it continues to be a viable, operational network, with faults being rapidly detected and rectified. On the other hand it must continue to be available for emergencies and not be seen as a cost free substitute for other means of communication.

The ECN should therefore be restricted in its day to day use to:-

providing communications between emergency planners and their equivalents (eg operational staff) in other bodies;

planning and conducting exercises;

planning for emergencies.

The sensible application of these guidelines should ensure that the network is always available in an emergency.

Call logging exists at every switch on the network. The analysis of call destination and duration will be carried out at random, especially in the event of congestion.

Further information on the ECN can be obtained from the Engineering Manager, Barry Maloney (Tel 071 273 2999) or the Field Liaison Manager, Alan Wood (Tel 021 455 8631).

## Radio Sites

Over the years the Model Agreement on Site Sharing has provided a framework for joint site development with respect to buildings, tower structures and automatic emergency electrical power generators. With its cessation there is a need to consider its replacement as far as the ECN is concerned with a recognition of mutual benefit. No charges are made for ECN useage; forces and brigades are asked to consider this when assessing charges for the use of radio sites by the ECN.

**MEDICAL AND PHYSICAL STANDARDS IN THE FIRE SERVICE**

Visual standards and aids to vision for firefighters

1. The Central Fire Brigades Advisory Council (CFBAC) met on 24 October 1994 and considered recommendations from its Joint Working Party on Medical and Physical Standards (JWPMP) on the question of visual standards and aids to vision for firefighters.

2. The CFBAC noted the progress of research being conducted on behalf of the Home Office by City University, and concluded that the study relating to the wearing of spectacles on the fireground should be accelerated so that a final report could be ready by April 1995.

3. The Council further agreed that those firefighters who fall below the current recommended minimum eyesight standards<sup>1</sup> should be allowed to continue to perform the full range of operational duties provided that, when wearing glasses, they were able, in the view of brigade managements, to meet normal firefighting standards.

Amendment to the Fire Services (Appointments and Promotion) Regulations

4. The Fire Services (Appointments and Promotion) (Amendment) (No.3) Regulations 1988 introduced a requirement for eyesight tests on entry to be conducted by a duly qualified ophthalmologist selected by the fire authority.

5. Since the amending Regulations came into force brigades have reported difficulties in employing qualified ophthalmologists to conduct eye tests, primarily for reasons of lack of availability and cost. It was suggested that the statutory requirement should be relaxed to allow fire authorities to select eye specialists other than ophthalmologists to carry out the examinations.

6. In the light of these concerns the JWPMP recommended to the CFBAC that the Regulations should be amended to enable brigades to opt for another form of specialism from that prescribed at present. The CFBAC endorsed the recommendation and agreed to advise the Home Secretary to amend Regulation 5(1)(e) of the Fire Services (Appointments and Promotion) Regulations, to allow duly qualified optometrists and ophthalmologists to conduct eye tests.

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<sup>1</sup> Home Office Fire Service Circular 8/1987: Report of the Joint Working Party on Appointments Provisions, Part III, paragraph 3.11(d).

7. An amendment to the Regulations is being drawn up by the Home Office. It is open to fire authorities to use the services of optometrists, if desired, in advance of the change formally coming into effect. However, in any case where a duly qualified optometrist employed by the fire authority detects in an applicant signs of an abnormal eye condition or incipient eye disease, the individual must be referred by the authority to an ophthalmologist.

The employment of insulin-dependent diabetics as operational firefighters

8. Existing guidance to fire authorities and brigades on the employment of insulin-dependent diabetics is contained in the report of the Joint Working Party on Appointments Provisions. It recommends that insulin-dependent diabetes should be an absolute bar to firefighting<sup>2</sup>.

9. On 8 December 1994 the JWPMP met to consider a report prepared by the Association of Local Authority Medical Advisers (ALAMA) on insulin-dependent diabetes and firefighting, which identified the principles to be taken into account and the risks associated with the operational employment of an insulin-dependent diabetic.

10. The JWPMP concluded that the bar on serving firefighters who develop insulin-dependent diabetes should be lifted and that each case should be considered very carefully on its individual merits, taking due account of guidelines put forward by ALAMA. The JWPMP agreed that the existing policy which bars diagnosed diabetics, whether treated by insulin or not, from joining the fire service, should remain.

Telephone contact number: 0171 217 8247

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<sup>2</sup>

Home Office Fire Service Circular 1/1989: Report of the Joint Working Party on Appointments Provisions, Part IV, paragraphs 4.19 - 4.22.

**ANNUAL FIRE SAFETY RETURNS**

1. As a result of a number of Brigade Inspections it is apparent that parts of the guidance notes accompanying the annual Fire Safety Returns are not sufficiently clear and require amendment. This has led to some omissions, particularly in Section F of FSR 1 & 2, and to misinterpretation of the definition of a valid application on FSR 4.

2. In addition, recording contraventions of conditions attached to Fire Certificates has been related to "serious" conditions, with the result that other contraventions have not been recorded. For the future all contraventions of the fire certificate should be recorded.

**EXPLANATORY NOTES TO FIRE SAFETY ANNUAL RETURNS**

3. The following amendments have been made to the guidance notes accompanying the annual Fire Safety Returns.

**ANNUAL RETURNS NOS 1 & 2**

4. Paragraph "i". Under the headings "Talks, FS in the home, FS Talks Other, and FS Quizzes" the audience totals should be recorded.

These paragraphs will now read:-

Talks, FS in the Home - These include all talks given on the subject of fire safety in the home irrespective of the venue or audience.

The audience totals should be recorded.

FS Talks Other - F5 is intended for the recording of any talks on the subject of fire safety or fire prevention not included at F3 and F4. For example, talks to specific groups of people about specific fire safety matters perhaps connected with their type of employment.

The audience totals should be recorded.

FS Quizzes - All work undertaken in connection with the promotion of the fire safety message through such activities as the Youth Quiz and Fire Safety Quiz should be recorded here.

The total number of persons who receive training in fire safety as a result of the activities should be recorded.

ANNUAL RETURN NO 4

5. Section A

The definition of a VALID APPLICATION is amended as follows:-

A VALID APPLICATION is an application in respect of a premises where:-

(i) the application has been looked at, as part of the administrative/management function (this may include such actions as acknowledging the application, requesting plans), and it appears that a fire certificate is required;

(ii) the construction of the building is at such a stage that a meaningful inspection could be made leading to the preparation of a section 5(4) notice or the issue of a fire certificate;

(iii) the premises has not been exempted from needing a fire certificate;

(iv) no full inspection has yet been carried out.

6. Section E

Paragraph (c) is amended to read "the number of occasions when contraventions of the 71 Act were identified and prosecutions were not proceeded with; and the number of occasions when fire risks were identified but no section 10 notices issued because steps were taken to rectify matters at the time".

Such occasions could result from a) the reinspection of certificated premises, or b) having the contravention, or serious risk, being brought to the attention of the fire brigade by a third party.

If the nature of the offence, or the risk, is such that a formal notice (including one issued at the time of the inspection) of steps to be taken to remedy matters (or formal letter detailing the offence, or risk, and the action taken to remedy matters) is issued, this should be recorded in this section.

Telephone contact number: 0171 217 8197



MANUAL OF FIREMANSHIP BOOK 2

1. This book contains an error which should be corrected in all existing copies.

2. Amendment

Part 3, Chapter 9, Page 61, 1st sentence:

Delete "One tab has two separate knots and an overall length of 50mm and the other is unknotted and is 125mm long."

Replace with "One tab is knotted and has an overall length of 50mm whilst the other is unknotted and is 125mm long."

3. Whilst there are no operational implications arising from this, the amendment makes the description of the guide line in the Manual consistent with that contained within the Technical Bulletin 1/1989 (page 41) and it will be incorporated in the next impression of Book 2.

Telephone contact number: 0171 217 8098