



**OFFICE OF THE  
DEPUTY PRIME MINISTER**

Sir Graham Meldrum CBE OStJ QFSM Dniv  
FIFireE CCMi  
HM Chief Inspector of Fire Services  
Office of the Deputy Prime Minister  
Zone 17/D  
Portland House  
Stag Place  
London SW1E 5LP

E-Mail: [graham.meldrum@odpm.gsi.gov.uk](mailto:graham.meldrum@odpm.gsi.gov.uk)

Enquiries: 020 7944 6923

Web Site: [www.odpm.gov.uk](http://www.odpm.gov.uk)

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To: All Chief Fire Officers

Dear Chief Officer

**DEAR CHIEF OFFICER LETTER 1/2003**

This letter deals with matters described briefly below. More detailed information is contained in the relevant "Items" attached.

**A AUTOMOTIVE EMC DIRECTIVE 94/54/EC**

HGN (F) 26 contains updated guidance from the Home Office about the application of the Automotive EMC Directive 94/54/EC and its application to Fire Service vehicles.

**B BRITISH STANDARDS –VARIOUS**

This item brings to the attention of Chief Fire Officers new and revised British Standards.

**C THE BUILDING REGULATIONS 2000.  
AMENDMENTS 2002 TO APPROVED DOCUMENT B (FIRE SAFETY)**

This publication has been published and comes into effect from the 1st March 2003.  
The purpose of the amendments in the document is to provide visible recognition to the new European technical specifications and supporting fire test methods, which have been produced in support of the Construction Products Directive (CPD).

Yours faithfully

Sir Graham Meldrum CBE  
HM Chief Inspector of Fire Services  
HM Fire Service Inspectorate



## Information & Communications Technology Unit (ICTU)

### ICTU Guidance Note

HGN(F)26

## The Automotive EMC Directive 95/54/EC and application to Fire Service vehicles.

### 1. Home Office guidance

Three sets of documents on this subject have been issued to Fire Brigades:-

- (a) Initial guidance dated 25th May 2001, with HOCAP Guidance Note HGN(F)24, sent to all Chief Fire Officers, Fleet Managers and Communications Officers.
- (b) Further guidance to the Fire service dated 18th February 2002, sent to all Chief Fire Officers, Fleet Managers and Communications Officers.
- (c) Copies of DTLR public consultation (with closing date of 5th June 2002) issued with a covering letter dated 27th March 2002 by Fire Policy Division to all Chief Fire Officers.

Soft copies of all these documents are available on the Home Office POISE "F" drive and also on the European Police Information Centre (EPI-Centre). If you have any questions arising from this guidance note, then please contact Home Office, Information & Communications Technology Unit, Automotive & Equipment Section via [Michael.Phillips@homeoffice.gsi.gov.uk](mailto:Michael.Phillips@homeoffice.gsi.gov.uk)

### 2. Background

The Automotive EMC (ElectroMagnetic Compatibility) Directive 95/54/EC is primarily concerned with ensuring that the driver's control of a vehicle is not affected by ElectroMagnetic Interference from electrical/electronic equipment installed in vehicles, both original fit and aftermarket fit.

This Directive has been enacted into the law in Great Britain (England, Wales & Scotland) through the Road Vehicles (Constructions and Use) Regulations, and in Northern Ireland through similar legislation.

As they originally stood, the Road Vehicles (Construction & Use) Regulations demanded :-

"on and after 1st October 2002 no person shall cause or permit to be used on a road a vehicle –

- (a) in respect of which an EC certificate of conformity has been issued; and
- (b) which is fitted with any electrical/electronic sub-assembly (ESA) that was not fitted to the vehicle when the certificate was issued, unless the ESA is marked in accordance with the requirements of Community Directive 95/54/EC"

This meant that:-

- After 1st October 2002, all aftermarket electrical/electronic equipment, including radios, lightbars, sirens, video systems etc. would have needed to be compliant with the technical requirements of the Directive, and be “e” marked accordingly, for use in vehicles which have been type approved to European requirements.

(Vehicles which may have been type approved are those registered since 1st January 1996).

- Ongoing installation and use of non “e” marked electrical/electronic equipment in type approved vehicles after 1st October 2002 would have resulted in the user operating a vehicle unlawfully on the road.

It was considered that the original Regulations were retrospective, since any type approved vehicle which was originally fitted with non-compliant (non “e” marked) equipment would overnight have become illegal for continued road use on and after 1st October 2002.

### **3. Implications for the Fire service**

The Regulations centered on the application to "type approved" vehicles, and whilst Fire officers' cars (registered since 1st January 1996) were clearly within the requirements, debate was ongoing as to whether Fire appliances were subject to type approval, although it was understood they did need to comply with the Road Vehicles (Construction & Use) Regulations.

A survey of Fire brigades was carried out between May and October 2001 that revealed that virtually all Fire service vehicles then in use were all fitted with non-"e" marked equipment such as mobile radios, lightbars, sirens etc. The cost and logistics of purchasing and installing all new “e”-marked equipment into these Fire service vehicles was not considered achievable before 1st October 2002. Neither was it considered feasible to carry out “e”-mark certification on all of the existing installed equipment that the survey identified due to the extensive range and variety of devices.

Since it was felt illogical for a vehicle that has been used satisfactorily up to that date to then become illegal after 1st October 2002, the Home Office wrote to the (then) Department of the Environment, Transport & the Regions (DETR) asking them to urgently re-examine their interpretation of the Automotive EMC Directive. The DETR (later the DTLR) subsequently initiated a public consultation, with a proposal to issue amended legislation which would accommodate non-"e" marked equipment.

The proposed amendment to the Regulations was that all non-“e” marked equipment that had been taken into use before 1st October 2002 (defined as "legacy" equipment) would be legally permitted for ongoing use in those vehicles on the roads after 1st October 2002.

Further, that equipment (taken into use before 1st October 2002) would be legally permitted to be transferred and installed in new vehicles after 1st October 2002, thereby allowing a worthwhile life from that equipment rather than Fire brigades having to commit budgets to premature replacement.

The public consultation ended on 5th June 2002 and it is understood that many Fire brigades responded directly to the (now) Department for Transport - DfT, expressing their deep concern about the retrospective legislation that was due to kick-in on 1st October 2002 and the consequences for ongoing use of Fire service vehicles fitted with non-"e" marked equipment. The Home Office also made an appropriate response to the DfT consultation on behalf of the Fire service.

#### **4. Outcome of DfT Public Consultation**

Following the public consultation phase, the DfT laid the proposed amendment to the Regulations before Parliament, and the amendment to the Road Vehicles (Construction & Use) Regulations came into force on Wednesday 4<sup>th</sup> September 2002.

Click on the HMSO website address indicated below for a copy of the revised regulations :-

<http://www.legislation.hmso.gov.uk/si/si2002/20022126.htm>

or otherwise log onto the HMSO website :-

[www.hmso.gov.uk](http://www.hmso.gov.uk)

then click on “Legislation – UK – Statutory Instruments – 2002 – No 2126”

- This amendment now allows ongoing installation and use of all non-“e” marked “legacy” equipment in type approved vehicles after 1<sup>st</sup> October 2002.
- equipment first used on or after 1<sup>st</sup> October 2002 will be required to meet the technical requirements of the Automotive EMC Directive 95/54/EC and be “e” marked accordingly.
- In addition, we have obtained an exemption for equipment used for intrusive surveillance of persons involved in serious crime, and being operated by Government law enforcement agencies under a relevant authorisation (ie Part III of the Police Act 1997 or Part II of the Regulation of Investigatory Powers Act 2000). This is of primary benefit to the Police service.

This result meets all of the requirements that we have been seeking, and the Home Office has written to the Department for Transport to express our thanks on behalf of the Police and Fire services.

#### **5. New electrical/electronic equipment**

Whilst the DfT proposal to amend the Regulations would allow the ongoing fitment and use of “legacy” equipment in both old and new vehicles, the Regulations will still require any electrical/electronic equipment

- (a) within the scope (\*\*\*) of the Automotive EMC Directive 95/54/EC, and
- (b) first taken into use on and after 1<sup>st</sup> October 2002, to meet the technical requirements of the Directive and be “e” marked accordingly.

\*\*\* equipment outside the scope of the Directive would for example include any device only used when the vehicle was stationary, such as an electric tyre pump, or a device which was not installed in the vehicle, such as a handheld cellphone (although the cellphone adaptor would need to meet the requirements of the Directive)

There will obviously be instances where users are purchasing more equipment of the type that they used before, and there may be challenges as to whether an item without the “e” mark was actually a “legacy” item (taken into use before 1<sup>st</sup> October 2002) or a “new” item (taken into use after 1<sup>st</sup> October 2002). It is recommended that users maintain accurate records of equipment inventories, including serial numbers and delivery dates.

## **6. Regulatory requirements**

Fire brigades have previously been advised that any tenders they issue for new equipment should include the requirement for it to be "CE" marked and "e" marked where necessary.

### **"CE" marking**

Electrical/electronic equipment shall be "CE" marked to demonstrate compliance with the EC Directives 89/336/EC (The generic EMC Directive) as amended by Directives 92/31/EC and 93/68/EC (The CE Marking Directive), and to demonstrate compliance with 73/23/EC (The Low Voltage Directive)

Radio equipment shall be "CE" marked to demonstrate compliance with the EC Directive 1999/5/EC (The Radio and Telecommunications Terminal Equipment or RTTE Directive)

### **"e" marking**

Both radio equipment and other electrical/electronic equipment intended for installation in road vehicles shall also be "e" marked to demonstrate compliance with the Automotive EMC (ElectroMagnetic Compatibility) Directive 95/54/EC, for installation after 1st October 2002 in new vehicles which have already been type approved.

## **7. EMC requirements for mutual operation**

Compliance with the aforementioned European Directives is mandatory for all electrical/electronic equipment including the mobile radio. However, "CE" and "e" marking will not necessarily ensure that the equipment has the immunity or emission requirements necessary for operation in a vehicle with other items of installed equipment.

Research and tests have demonstrated that the on-board mobile radio equipment is the major influence in achieving electromagnetic compatibility for the fully operational fire service vehicle.

Automotive & Equipment Section has therefore produced two EMC Specifications to cover both vehicles (cars and motorcycles) and the operational electrical/electronic equipment to ensure that :-

- (a) The emissions from any equipment do not interfere with the installed fire service mobile radio which is very sensitive, working down to sensitivities of a few millionths of a volt.
- (b) The immunity of any equipment will withstand the high RF levels generated by the installed fire service mobile radio transmitter operating at around 20 Watts.

It is recommended any Invitations to Tender issued by Brigades should include the requirements for Fire service vehicles to comply with Specification 6 and for equipment which is to be installed in Fire service vehicles to comply with Specification 5.

## **8. Application of Regulations to Fire appliances**

The question has frequently been raised as to whether Fire appliances are/are not subject to the Automotive EMC Directive, and the on-board equipment should be "e" marked. In particular, reference has been made to "Croners Road Transport Operation" which implies that Fire appliances may be exempt from the Automotive EMC Directive.

The guidance that has previously been issued was based on the information available at the time and as the situation was then understood, each Fire appliance was likely to be a one-off, and did not need to go through the full Type Approval process to get a Certificate of Conformity, although it was still subject to the Road Vehicles (Construction & Use) Regulations.

Advice was subsequently received from the DfT, which clarified the position:-

*First of all please note the usual rider that my answer is not a definitive answer as only a Court of Law can give you that, and this is a particularly sticky area where European and UK law do not always coincide. However my "expert" opinion is as follows:*

*The key area is whether the vehicle possesses an EC Certificate of Conformity (CoC). This is explicit under the current C&U regulation 60 but perhaps less clear under our draft amendment - but nevertheless still the case.*

*A fire engine definitely CANNOT obtain an EC CoC whereas for ambulances they are not mandatory but they are theoretically available when a manufacturer produces 500 or more identical vehicles. It is conceivable that an ambulance could have one if it was of a type produced in large numbers, so you would have to examine the records for that particular vehicle to be certain. You can tell by the VIN plate on the vehicle because if the vehicle is EC type approved there will be an e-mark and the type approval number, for example as follows: e11\*98/14\*0123.*

*Therefore, ambulances and fire engines can be fitted with non e-marked ESAs.*

*Mike Lowe*

*DTLR – Vehicle Standards & Engineering Division.*

*Thursday 27th June 2002*

Fire appliances now appear to fall outside of the Automotive EMC Directive regulations, and brigades could choose to use electronic/electrical equipment that is not “e” marked. However, Fire officers cars are not exempt and will need to comply with the Regulations.

Whatever the law says, it would seem to make good practical sense when Brigades go out to tender for new equipment, to request that it all complies with up to date EMC standards and is “e” marked accordingly. It is unlikely that brigades will run different tenders for on-board electrical/electronic equipment for appliances and fire officers cars.

## **9. Vehicle Installation**

The need to install new equipment in line with recognised procedures remains the same as for ongoing installation of legacy equipment, and it has been agreed that the Home Office will now develop a Fire Service Vehicle Installation Code of Practice, which will be validated by the DfT Technical Service to ensure that it meets the requirements of the Automotive EMC Directive.

**BRITISH STANDARDS**

**PD 7974-3:2003 APPLICATION OF FIRE SAFETY ENGINEERING PRINCIPLES TO THE DESIGN OF BUILDINGS –**

**Part 3: Structural response and fire spread beyond the enclosure of origin (Sub-system 3)**

Chief Officers will wish to be aware that this Standard was published on 30<sup>TH</sup> January 2003.

This Published Document (PD) is one of a series of documents and is a supporting document to BS 7974, Code of Practice on the Application of Fire Safety Engineering Principles to the Design of Buildings.

The PD includes no specific analysis of some aspects of fire spread beyond the enclosure of origin other than the performance of products based upon a fire resistance furnace test. In due time, as the knowledge and understanding is improved, these areas of uncertainty will be addressed. However in the meantime, a commentary is given on the particular issues that need to be considered and how these should be treated.

This Published Document considers the following issues:

- a. the conditions within a fire enclosure and their potential to cause fire spread by way of recognised mechanisms and routes;
- b. the thermal and mechanical responses of the enclosure boundaries and its structure to the fire conditions;
- c. the impact of these anticipated thermal and mechanical responses on adjacent enclosures and spaces;
- d. the structural responses of load-bearing elements and their effect on structural stability, load transfer and acceptable changes.

NOTE: The context of this Standard has not been checked with relative information may be found in fire service manuals. Brigades should ensure that personnel currently holding reference material, e.g. fire safety manuals are made aware of these changes in order that existing information can be updated as appropriate.

HMFSI contact: AIFS M Eady 020 7944 5587

## **BS 5588-4:1998 *Incorporating Amendment No. 1 and Corrigendum No.1* Fire precautions in the design, construction and use of buildings**

### **Part 4: Code of Practice for Smoke Control using Pressure Differentials.**

Chief Officers will wish to be aware that this Standard that was originally published and came into effect on 15<sup>th</sup> March 1998 has been amended and republished with effect from 4<sup>th</sup> December 2002.

There are a number of amendments throughout the standard that are identified by tags at the start and finish the amendment or addition to text. This is explained in the 5<sup>th</sup> Paragraph of the Foreword

NOTE: The context of this Standard has not been checked with relative information that may be found in fire service manuals. Brigades should ensure that personnel currently holding reference material, e.g. fire safety manuals are made aware of these changes in order that existing information can be updated as appropriate.

HMFSI contact: AIFS M Eady 020 7944 5587

## **BS 5839-9:2003 FIRE DETECTION AND FIRE ALARM SYSTEMS FOR BUILDINGS**

### **Part 9: Code of practice for the design, installation, commissioning and maintenance of emergency voice communication systems.**

Chief Fire Officers will wish to be aware that this new Standard was published on 10<sup>th</sup> February 2003.

Emergency Voice Communication (EVC) systems allow firefighters and others to communicate with one another during emergency situations in and around buildings and at sports and similar venues, such as entertainment centres. They also allow communication with disabled persons. Although such emergency communication systems have been in common use for many years, they have not been directly covered by any British Standard or code of practice. In recent years, this absence of standardisation has given rise to an anomaly, since fire detection and alarm systems and voice alarm systems, in the same buildings as EVC systems, are normally covered respectively by BS 5839-1 and BS 5839-8. EVC systems, as later defined in this code of practice, are used in connection with life safety and should therefore be subject to high standards of design, manufacture, installation and servicing, similar to those covering fire detection and alarm systems and voice alarm systems.

There is very restrictive reference to fire telephone as systems (a form of EVC systems), or similar emergency communications systems, in other standards or codes of practice. This code of practice has, therefore, been prepared to:

- a. give guidance to those who specify, design, manufacture, install, commission, service and use such EVC systems.
- b. ensure that high standards of reliability, safety and security are achieved, together with acceptable standards of performance.

It does not recommend whether or not an emergency voice communication system should be installed in a given premises.

As a code of practice, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it was a specification, and particular care should be taken to ensure that claims of compliance are not misleading.

This code of practice primarily relates to the use of EVC in assisting both firefighters and those responsible for evacuating buildings or sports stadia in fire emergency situations, including evacuation of disabled persons. Use, other than in fire emergency situations, by disabled persons and others, although not precluded, is not addressed in detail.

Other than in exceptional circumstances, EVC systems are not intended as the means of raising a fire alarm, in lieu of manual call points. Reference should be made to BS 5839-1 for guidance on fire detection and alarm systems.

In the context of this code of practice, an EVC system contains no portable parts. Mobile telephones and two-way radio sets are therefore not within its scope.

An EVC system should be:

1. restricted to a building, building complex or sports or similar venue;
2. continuously monitored for faults;
3. for use as described in this part of BS 5839.

The term emergency voice communication systems is therefore not intended to cover general-purpose intercom systems, lift intercom systems, local (internal) telephone systems for general use, or any external communication systems, such as the public switched telephone network.

Voice alarm systems are primarily intended for the automatic broadcasting of evacuation messages; they are covered by BS 5839-8 and are therefore excluded from this code of practice.

This part of BS 5839 does not cover systems combining electrically the functions of EVC systems with functions of other fire-related or non-fire-related systems. That is, for example, an EVC master station may mechanically share part of its enclosure with the control and indicating equipment of a fire alarm system, but recommendations for sharing a single mains-derived extra low voltage power supply are not within the scope of this standard. Recommendations for integrated systems are given in BS 7807.

This part of BS 5839 applies only to EVC systems for use in a temperate climate such that of the United Kingdom.

NOTE: The context of this Standard has not been checked with relative information may be cited in fire service manuals. Brigades should ensure that personnel currently holding reference material, e.g. fire safety manuals are made aware of these changes in order that existing information can be updated as appropriate.

HMFSI contact: HMI Geoff Bowles 020 7944 5527

# **BS EN 12259-1:1999 (incorporating Amendment No.1 and Corrigendum No 1) Fixed firefighting systems – Components for sprinkler and water spray systems**

## **Part 1: Sprinklers**

Chief Fire Officers will wish to be aware that the European Standard EN 12259-1:1999, with the incorporation of amendment A1: 2001, has been issued. The Standard, which has the status of a national standard, has amendments to the Standard, which was originally published and came into effect on the 15<sup>th</sup> September 1999.

The amendments are identified in the Standard by action lines and refer to the following sections:

1. Foreword and Scope.
2. Normative references.
3. Definitions.
4. Table 4, K-Factors.
5. Section 4 – Construction and performance
6. Section 5 – Marking
7. Section 8 – Evaluation of conformity.
8. Bibliography

Figure A1 – Summary test schedule for type approval testing.

Figure C1- Water flow test apparatus.

Figure D1-Lay out of water distribution test chamber (measurement area 20,25m<sup>2</sup>)

Figure D2 – Lay of water distribution test chamber (measurement areas 12,25m<sup>2</sup>)

Figure D3 – Lay of water distribution test chamber (measurement area 9m<sup>2</sup>)

Figure D4 – Lay out of water distribution test chamber (measurement area 6,25<sup>2</sup>)

Figure D5 – Lay out of water distribution test chamber for sidewall sprinklers.

Figure D6 – Sidewall sprinkler positioning for water distribution tests.

Figure D7 – Water discharge below the deflector test apparatus.

Figure D8- Flat spray sprinkler positioning for water discharge below the deflector tests.

Figure E1- Example of functional test oven.

Figure F1- Example of a tensile/compression test machine.

Figure K1- Typical vessel for sulphur dioxide corrosion test.

Figure N1- Standard orientation and unfavourable orientation.

Figure P1- Vibration test curve

Annex B (Normative) – Test to determine operating temperatures of fusible link sprinklers and glass bulb sprinklers.

Annex C (Normative) – Water flow test.

Annex G – (normative) – Strength of release elements test.

Annex I (normative) – Heat exposure.

Annex J (normative) – Glass bulb sprinkler thermal shock test.

Annex K (normative) – Corrosion tests.

Annex L (normative) – Sprinkler coatings assessment tests.

Annex M (normative) – Water hammer test.

Annex N (normative) – Thermal response tests.

Annex O (normative) – Heat-resistance test.

Annex P (normative) – Vibration test.

Annex Q (normative) – Impact test.

Annex R (normative) – Resistance to low temperature test.

Annex S (informative) – Notes on strength test for fusible link release elements.

Annex ZA (informative) – Clauses of this European Standard addressing the provisions of the EU Construction Products Directive.

NOTE: The context of this Standard has not been checked with relative information may be found in fire service manuals. Brigades should ensure that personnel currently holding reference material, e.g. fire safety manuals are made aware of these changes in order that existing information can be updated as appropriate.

HMFSI contact: AIFS M Eady 020 7944 5587

## **BS EN 12259-2:1999 (*Incorporating Amendment No. 1 and Corrigendum No.1*) Fixed firefighting systems – Components for sprinkler and water spray systems.**

### **Part 2: Wet alarm valve assemblies.**

Chief Fire Officers will wish to be aware that the European Standard EN 12259-2:1999, with the incorporation of amendment A1: 2001, has been issued. The Standard, which has the status of a national standard, has amendments to the Standard, which was originally published and came into effect on the 15<sup>th</sup> September 1999.

The amendments are identified in the Standard by action lines and refer to the following sections:

1. Contents.
2. Foreword.
3. Figure 1 – Clearances.
4. Annex ZA (informative) Attestation of conformity.
5. Bibliography.

NOTE: The context of this Standard has not been checked with relative information may be found in fire service manuals. Brigades should ensure that personnel currently holding reference material, e.g. fire safety manuals are made aware of these changes in order that existing information can be updated as appropriate.

## **BS EN 12259-3:2000 (*Incorporating Amendment No. 1 and Corrigendum No. 1*) Fixed firefighting systems – Components for sprinkler and water spray systems**

### **Part 3: Dry alarm valve assemblies**

Chief Fire Officers will wish to be aware that the European Standard EN 12259-3:1999, with the incorporation of amendment A1: 2001, has been issued on 24<sup>th</sup> October 2002. The Standard, which has the status of a national standard, has amendments to the Standard, which was originally published and came into effect on the 15<sup>th</sup> August 2000.

The amendments are identified in the Standard by action lines and refer to the following sections:

1. Contents.
2. Foreword.
3. Section 9 – Revaluation of Conformity.
4. Figure E1 – Rate of loss of pressure equivalent to that caused by a single sprinkler, for initial installation pressure 3,8 bar.
5. Annex ZA (informative) – Clauses of this European Standard addressing the provisions of the EU Construction Products Directive.
6. Bibliography.

NOTE: The context of this Standard has not been checked with relative information may be found in fire service manuals. Brigades should ensure that personnel currently holding reference material, e.g. fire safety manuals are made aware of these changes in order that existing information can be updated as appropriate.

HMFSI contact: AIFS M Eady 020 7944 5587

## **BS EN 12259-4:2000 (*Incorporating Amendment No.1 and Corrigendum No. 1*) Fixed firefighting systems – Components for sprinklers and water spray systems**

### **Part 4: Water motor alarms**

Chief Fire Officers will wish to be aware that the European Standard EN 12259-4:2000, with the incorporation of Amendment A1:2001, has been issued. The Standard that has the status of a national standard has amendments to the Standard that was originally published and came into effect on the 15<sup>th</sup> May 2001.

The amendments are identified in the Standard by action lines and refer to the following sections:

1. Contents
2. Foreword to amendment A1
3. Introduction
4. Section 8 – Evaluation of Conformity
5. Annex ZA (informative): Clauses of this European Standard addressing the provisions of the EU Construction Products Directive

NOTE: The context of this Standard has not been checked with relative information may be found in fire service manuals. Brigades should ensure that personnel currently holding reference material, e.g. fire safety manuals are made aware of these changes in order that existing information can be updated as appropriate.

HMFSI contact: AIFS M Eady 020 7944 5587

## **BS EN 12259-5: 2002 Fixed Firefighting System – Components For Sprinkler And Waterspray Systems –**

### **Part 5: Water Flow Detectors**

Chief Officers will wish to be aware that this Standard was published on 4<sup>th</sup> December 2002. The European Standard shall be given the status of a national standard by March 2003, and conflicting national standards shall be withdrawn at the latest by September 2005. The standard forms Part of EN 12259, covering components for automatic sprinkler systems.

This European Standard specifies requirements for construction and performance and tests for water flow detectors for use in wet pipe automatic sprinkler systems conforming to EN 12845, Fixed firefighting systems- Automatic Sprinkler Systems- Design and Installations.

Auxiliary components and attachments to water flow detectors are not covered by this standard.

NOTE: The context of this Standard has not been checked with relative information that may be found in fire service manuals. Brigades should ensure that personnel currently holding reference material, e.g. fire safety manuals are made aware of these changes in order that existing information can be updated as appropriate.

HMFSI contact: AIFS M Eady 020 7944 5587

## **BRITISH STANDARD**

### **BS 5839-1:2002 - Fire detection and fire alarm systems for buildings -**

#### **Part 1: Code of practice for system design, installation, commissioning and maintenance**

**Important information regarding publication and application of this new edition of BS 5839-1: 2002 was originally intended to be included with DCOL 4/2002. However, as this was not possible, the information was subsequently circulated by FINDS in December 2002, as an interim measure pending inclusion in the next available DCOL. That information is now included with this letter as follows:**

Chief Fire Officers will wish to be aware that this new edition of BS 5839-1 was published on 15<sup>th</sup> October 2002. The new edition takes into account changes in technology, custom and practice since the publication of BS 5839-1:1988. As there are some significant changes from the previous version, a transitional period has been introduced to allow the fire industry to adapt to the new recommendations, consequently, **the 1988 edition will not be withdrawn until 15 July 2003.**

#### **Application of the standard**

The effect of the transitional period is that both versions of the standard will be effective until the withdrawal of the 1988 edition. During this period, for the purpose of enforcing fire safety legislation, fire authorities should continue to accept Fire Detection and Fire Alarm Systems that are designed and installed to the 1988 edition of the standard. However, where practical, and by agreement with interested parties, fire authorities may wish to encourage design and installation of new systems in accordance with the new edition of the standard during the transitional period, with particular regard to the new recommendations on the avoidance of false alarms.

With effect from 15 July 2003, it is reasonable that fire authorities should no longer accept new systems that have been designed and installed to the old edition of the standard, unless specifications and contracts have been agreed prior to this date.

With regard to existing systems, it is unreasonable to expect that these should be generally upgraded to comply with the recommendations of the new edition of the standard. However, consideration should be given to encouraging the adoption of those recommendations from the new version that can easily be applied to existing systems, for example those which refer to the avoidance of false alarms and to maintenance.

The foreword of the standard contains further detailed information as to how the recommendations of the standard should be applied for legislative purposes.

**Attention is also drawn to the detail contained in the scope of this new edition of the standard.**

#### **Changes to the 2002 edition**

The principal changes made within the revision and detailed in the Foreword to the new edition are as follows:

- a) the term “Category” (of system) is now used instead of “type” in the description of system objective/area of coverage (e.g. a full property protection system was previously described as type P1, but is now described as Category P1); this is to distinguish this term from the less precise use of the term “type” to describe the principles of operation of the system (e.g. conventional, addressable, heat or smoke, etc.);
- b) the Categories (previously “types”) of system defined in this code of practice have been extended in number to give recognition to systems that are designed to satisfy specific fire safety objectives or enhance life safety, but that cannot be classified within the system types previously defined;
- c) the need for the level of protection to be based on a fire risk assessment by a competent person is recognised;
- d) the use of automatic fire detection as part of a fire engineering solution is recognised;
- e) the use of new technologies, such as multi-sensor detection, is addressed;
- f) new methods of fire detection, including carbon monoxide detection and video smoke detection, are taken into account;
- g) the minimum distance of travel to a manual call point has been increased;
- h) greater flexibility is recommended in respect of minimum sound pressure levels;
- i) a new section, devoted to the limitation of false alarms by appropriate system design, system management and improved technology has been added;
- j) the distinction between different categories of false alarms, particularly those that result from environmental influences or fire-like phenomena, and those that result from equipment faults, is recognised;
- k) two different levels of resistance of cables to damage during the course of a fire are recognised, and recommendations for application of each type are provided;
- l) the use of fire resisting cables is now recommended for all manual call point and automatic fire detector circuits. The use of fire resisting cables is also recommended for all mains power supply circuits;
- m) recommendations for networked systems, particularly in respect of cable types, are included;
- n) recommendations for fire warning systems for people with impaired hearing have been included.
- o) the code of practice has been simplified by the use of practice specification format, in which commentary on relevant principles is followed by short, succinct recommendations, and by the addition of diagrams. This is intended to make the code of practice less ambiguous; simpler for the non-specialist to apply and compliance of installations more straightforward to audit;
- p) recommendations for servicing and maintenance of systems, including the periods at which routine servicing should be carried out, have been revised;
- q) a new informative annex has been added to give advice on the Categories of system typically installed in a variety of occupancies;
- r) separate recommendations are no longer provided for control and indicating equipment and power supplies for small manual systems; such systems should comply with all recommendations of the code of practice;

- s) the term “deviation” has been replaced with the term “variation”, to avoid any negative connotation associated with the term used to describe an aspect of system design that, for sound reasons, does not comply with the recommendations of the standard;
- t) the single certificate of commissioning has been replaced with separate certificates of design, installation, commissioning, acceptance and verification.

### **Guidance to fire authorities**

Existing guidance to fire authorities refers to the recommendations of the previous edition of the standard. It is not expected that any significant conflict will occur with the introduction of this new version of the standard. However, a new suite of guidance to support the proposed reform of fire safety legislation is currently being drafted and any changes required will be taken in to account.

Contact: HMFSI      HMI Geoff Bowles    020 7944 5527

**The Building Regulations 2000**

**Amendments 2002 to Approved Document B (Fire safety)**

Chief Officers will wish to be aware that this publication has been published and comes into effect from the 1st March 2003.

The purpose of the amendments in the document is to provide visible recognition to the new European technical specifications and supporting fire test methods, which have been produced in support of the Construction Products Directive (CPD). These amendments will facilitate harmonisation between our existing national test procedures and those that have been produced in support of the CPD.

One practical issue that brigades should implement is that in any correspondence referring to acceptable fire resisting materials cannot be limited to a British Standard, e.g. BS476. Such references should state BS 476 or an equivalent European test standard.

The amendment document and all other Approved Documents can be found at:  
<http://www.safety.odpm.gov.uk/bregs/brads.htm>

HMFSI contact:      AIFS M Eady      020 7944 5587