

# **Fire Protection Log Books And Completion records**

**These log records and guidance notes have been developed from the relevant British Standards for the systems but their use should be confirmed by a competent engineer and checked as being in accordance with the instructions of the system supplier**

**It is important that any changes in use of the systems or site should also be referred to the appropriate service organisation in case they impact on the equipment installed**

**This logbook must be kept on site for use of service engineers and for auditing by the fire authority or any other relevant persons.**

**1 Site details**

Company name .....

Address.....

.....

Postcode.....

Use of Premises.....

Tel No .....

**Fire risk assessment**

Written document needed for premises of 5 or more occupants to-

- 1 Identifying the hazards
- 2 Identifying people at risk
- 3 Evaluate, remove, reduce and protect from risks
- 4 Record, plan, inform, instruct and train.
- 5 Review.

Has a risk assessment been carried out? Yes.....No.....

If yes where is the document kept.....

**Responsible person**

Name ..... Dept..... Tel No.....

Supporting competent person(s)

Name ..... Dept..... Tel No.....

Name ..... Dept..... Tel No.....

Name ..... Dept..... Tel No.....

## 2 Staff Instructions and training in Fire Precautions

Instructions should be given by a competent person and the following topics, where appropriate, should be included in each training session with practical exercises where possible:-

1. The Action to take on Discovering a Fire.
2. How to Raise the Alarm and the Procedures this sets in motion.
3. The action to be taken upon hearing the Fire Alarm.
4. The procedure for alerting members of the Public.
5. The Arrangements for Calling the Fire Brigade.
6. The Evacuation Procedure for the premises to an assembly point at a place of safety.
7. The Location and use of Fire Fighting Equipment.
8. The Location of Escape Routes.
9. The reason for not using lifts other than those specifically provided or adapted for use by people with disabilities in accordance with BS 5588 : Part 8.
10. General Fire Precautions and Good Housekeeping
- 11 New employees should be trained in these items as part of their induction process



## **Means of escape**

Fire safety legislation requires that premises have adequate means of escape for occupants in the event of an emergency

## **Initial evaluation**

As part of the risk assessment the escape routes should be evaluated to ensure they are adequate for the numbers of occupants taking particular consideration the needs of any disabled people.

Guidance on the escape routes is given in the Government guides to the fire safety legislation and also part B of the Building Regulations

**Regular inspections** should also be conducted to ensure that original design requirements of the escape routes have not changed

These typically would include

- 1 Ensuring there are no obstructions on the escape route
- 2 That the integrity of fire compartments have not been prejudiced by unstopped penetrations
- 3 That the smoke and intumescent seals on fire doors in good condition, that self closing devices work correctly and that the gap around doors is correct.
- 4 That there is no accumulation of flammable material at exit doors that could represent an arson hazard
- 5 Any activities that might generate additional hazards or possible false alarms.

Specific inspections of safety equipment as required

(details are defined in the test records)

- 6 Extinguishers
- 7 Fire alarm panel, call points and detectors
- 8 Emergency Lighting charge indicators and the condition of any test systems
- 9 Fire safety Signs are visible and in good condition.





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## Maintenance of portable fire extinguishers

British Standard 5306 is the Code of Practice:  
Extinguishing Installations and Equipment on premises.  
Part 3: Maintenance of Portable Fire Extinguishers.  
Part 8: Selection and installation of Portable Fire Extinguishers.

### **ROUTINE INSPECTION BY THE USER**

The Standard recommends the frequency of inspection should be not less than quarterly, and preferably at least monthly.

1. All Appliances are in their proper position.
2. No Appliances have been discharged or suffered obvious damage.
3. All Appliances are free from obstruction.
4. In the case of extinguishers fitted with a pressure indicator. No loss of pressure is shown on dials.

### **ANNUAL INSPECTION, SERVICE AND MAINTENANCE BY A COMPETENT PERSON**

The Standard also recommends an annual service and maintenance and should be carried out by a Competent Person capable of conducting maintenance according to the recommendations of the code and preferably employed by a company accredited to ISO 9000:2000 Quality System.

(Normally carried out by servicing contractor).

### **Service Contract Details**

Maintenance provider

Address.....

.....

Postcode.....

Contact Name.....Tel No.....

Site Reference .....Call out time.....

Emergency call out number.....

Site specific details.....

.....

7a

Type and Location of Portable fire extinguishers and type			
	Type	Location	Date installed
1			
2			
3			
4			
5			
6			
7			
8			
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11			
12			
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Fixed Extinguisher systems  
**Sprinkler systems**

British Standard 5306: Part 2 and BS EN 12845 recommends the following procedures in order to properly maintain Sprinkler Systems.

**Weekly**

The following shall be checked and recorded

- A) All water and air pressure gauge readings on installations.
- B) All water levels in storage tanks including pump priming water tanks and pressure tanks.
- C) Fire Brigade Remote Central Station Alarm.
- D) Water Motor Alarm Gong Test. Each Water Motor Alarm shall be sounded for not less than 30 seconds.

**AUTOMATIC PUMP STARTING TEST**

Tests on automatic pumps shall include instructions to:

- A) Check the fuel and engine oil levels in Diesel engines.
- B) Reduce water pressure on the starting device, thus simulating the condition of automatic starting.
- C) When the pump starts record the starting cut-in pressure and check that this is correct.
- D) On Diesel pumps, check the Oil Pressure Gauges where fitted, and the flow of cooling water.
- E) Diesel engine to be test run for 30 min.

Tests carried out either by the occupier or maintenance contractor.

**Quarterly Test**

See  
British

Standard 5306: Part 2 specification for Sprinkler Systems and BS EN 12845.

**Results of all inspections and tests should be recorded on appropriate sheets**

**Other Fixed extinguishing systems should be maintained and tested in accordance with the manufacturer's instructions and appropriate records should be kept.**



## Fire Alarm systems - User responsibilities

### Responsible Person/Duty Holder

The user should appoint a single, named responsible person to supervise all matters pertaining to the fire alarm system. The role of the responsible person should be to ensure that the system is tested and maintained in accordance with the recommendations of this part of BS 5839, that appropriate records are kept and that relevant occupants in the protected premises are aware of their roles and responsibilities in connection with the fire alarm system. It should also be the duty of the responsible person to ensure that necessary steps are taken to avoid situations that are detrimental to the standard of protection afforded by the system and to ensure that the level of false alarms is minimised.

### Daily attention by the user

A check should be made every day to ascertain the following:

- That either the panel indicates normal operation or, if not, that any fault indicated is recorded in the log book and that the other actions recommended have been taken.

NOTE: In program controlled systems, failure to correctly execute software is indicated either on an event counter, or on an automatic reset indicator.

- That any fault warning recorded the previous day has received attention. If any connection to the public fire brigade or other remote manned centre is not continuously monitored then it should be tested daily in accordance with the supplier's instructions.

NOTE: On 1 day each week, the daily test will be incorporated in the weekly test.

### Weekly attention by the user

The following recommendations are applicable:

- a) In premises in which the location of control and indicating equipment is such that the audible fault warning signal could go unnoticed for longer than 24 hours, a special check should be carried out each day to confirm that either the equipment indicates normal operation or that any fault indication is receiving necessary action. This inspection need not be recorded.
- b) Every week, a manual call point should be operated during normal working hours. It should be confirmed that the control equipment is capable of processing a fire alarm signal and providing an output to fire alarm sounders and to ensure that the fire alarm signal is correctly received at any alarm receiving centre to which the fire alarm signals are transmitted. It is not necessary to confirm that all fire alarm sounder circuits operate correctly at the time of this test.

## Fire Alarm systems - User responsibilities

NOTE: It is essential that any alarm receiving centre is contacted immediately before, and immediately after, the weekly test to ensure that unwanted alarms are avoided and that fire alarm signals are correctly received at the alarm receiving centre.

- c) The weekly test should be carried out at approximately the same time each week; instructions to occupants should then be that they should report any instance of poor audibility of the fire alarm signal. In systems with staged alarms incorporating an 'Alert' and an 'Evacuate' signal, the two signals should be operated sequentially in the order they would at the time of a fire (i.e. 'Alert' and then 'Evacuate').
- d) In premises in which some employees only work during hours other than that at which the fire alarm system is normally tested, an additional test( should be carried out at least once a month to ensure the familiarity of these employees with fire alarm signal(s).
- e) A different manual call point should be used at the time of every weekly test, so that all manual call points in the building are tested in rotation over a prolonged period. There is no maximum limit for this period (eg in a system with 150 manual call points, the user will test each manual call point every 150 weeks). The result of the weekly test and the identity of the manual call point used should be recorded in the system log book.
- f) The duration for which any fire alarm signal is given (other than solely at control and indicating equipment) at the time of the weekly test by the user should not normally exceed 1 minute, so that, in the event of a fire at the time of the weekly test, the occupants will be warned by the prolonged operation of the fire alarm devices.
- g) Voice alarm systems should be tested weekly in accordance with the recommendations of BS 5839-8

## Fire Alarm systems - User responsibilities

### Monthly attention by the user

#### Only applicable to generator supplied systems

The following recommendations are applicable:

- a) If an automatically started emergency generator is used as part of the standby power supply, it should be started up once each month by simulation of a failure of the normal power supply and operated on-load for at least 1 hour. The test should be carried out in accordance with the instructions of the generator manufacturer, including instructions on the load that should be operated. At the end of the test, the fuel tanks should be left filled, and the oil and coolant levels should be checked and topped up as necessary.

#### Only applicable to those systems with vented batteries

- b) If vented batteries are used as a standby power supply, a visual inspection of the batteries and their connections should be made to ensure that they are in good condition. Action should be taken to rectify any defect, including low electrolyte level.

NOTE: Care should be taken to ensure that any person undertaking this task is competent to do so safely.

#### Action to be taken by the user following finding a fault

If a fault has been shown to exist, either by the system's own monitoring or by any other method, then the responsible person should ensure that the following actions are taken:

- Determine the area affected by the fault and decide whether special action (such as fire patrols) are needed in the area.
- If possible, determine the reason for the fault, or note the activities immediately prior to the fault in the area affected.
- **Record the fault in the log book, inform the organisation responsible for servicing and arrange for repair.**

## Fire Alarm systems - User responsibilities –False alarms

### Action by the user after any False Alarm

False alarms can be a major hazard to any fire alarm system since they lead to a loss of confidence in the system. It is important that any alarm from the system is treated as an alarm of fire until it can be proved false, rather than being treated as false until proved to be a fire. Where an alarm has been found to be false the following immediate actions should be taken by the responsible person

- a) Where possible, identify the particular detector or call point which has initiated the alarm. If detectors having individual indicator lamps are in use, any indicators will be cancelled by resetting, and hence it is important that the detectors are examined before the system is reset.
- b) Where possible, establish the cause of the false alarm. It is possible the actual cause of the alarm will have been lost in the operations resulting from the alarm; where this is so a note should be kept of any events or activities near the detector immediately prior to the alarm.
- c) Record the false alarm and categorise the type of alarm in the log book and inform the organization responsible for servicing.

### Recommendations

The following recommendations are applicable:

- a) In systems that incorporate more than 40 automatic fire detectors, the user should instigate an in-depth investigation by suitable specialists if any rolling period of 12 months, either:
  - 1) the average rate of false alarms exceeds one false alarm per detectors per annum; or
  - 2) more than two false alarms are initiated by any single manual call point or automatic fire detector (or detector location).
- b) In systems that incorporate 40 or fewer automatic fire detectors, an in depth investigation, as described above, should be instigated by the user if, in any rolling 12 month period, more than two false alarms occur.

In addition to ensuring that the system is routinely maintained in line with the requirements of BS 5839- 1 :2013; the responsible person should also consider the need for any 'non-routine' maintenance that may become necessary.

This may include:-

- Repair of faults or damage
- Cleaning or calibration of detectors
- Modification of the system to take account of extensions, alterations, changes in occupancy
- Action to address an unacceptable rate of false alarms
- Inspection and test of the system following a fire
- Special inspection of the system following the appointment of a new maintenance contractor (as detailed in BS 5839-1 :2013; section 46.2)

**NB: Any of these activities should be recorded within the Log Book.**

## Maintenance / service contract Details

Maintenance Provider.....

Address .....

.....

Post Code .....

Contact name .....

Tel No .....

Required Response Time .....

Site Reference No .....

Emergency Callout No .....

Site specific details .....

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## Fire Alarm system - Overview Details

### Control Panel

Manufacturer.....

Type..... Location .....

System type  Addressable  Non-addressable

Number of Loops (where applicable) .....

### Devices

Call Points: Manufacturer .....Model..... Quantity.....

Sounders: Manufacturer .....Model.....Quantity .....

### Detectors

Ionisation Manufacturer.....Model..... Quantity.....

Optical Manufacturer.....Model..... Quantity.....

Heat Manufacturer.....Model..... Quantity.....

CO Manufacturer.....Model..... Quantity.....

Other Manufacturer.....Model.....Quantity.....

### Ancilliary Devices

Manufacturer.....Model.....Quantity.....

Manufacturer.....Model..... Quantity.....

### Power Supply Units

Manufacturer.....Model..... Quantity.....

Manufacturer.....Model.....Quantity.....

Date Installed.....

This report was completed by .....date.....

Location of full System records.....

## System certification

Category of system: **M L1 L2 L3 L4 L5 P1 P1/M P2 P2/M**

Certification of system Certificate number      Date

(BS 5839 Cert G1)

System Designed by:

.....

(BS5839 Cert G2)

System Installed by

.....

(885839 Cert G3)

System Commissioned by

.....

(BS5839 Cert G4)

System Accepted by

.....

(BS5839 Cert G5 -optional)

System Verified by

.....

(BS5839 Cert G7)

Modification by:

.....

Above Certificates are stored in: .....

## Guide to Recording Data

The *Responsible Person* should ensure the following 'event' data is recorded in the Log Book:

- dates and times of genuine alarms (with location of trigger device and cause, if known)
- dates, times and categories of false alarms (with location of trigger device and cause, if known)
- dates and times of practice alarms dates and times of test alarms
- dates, times and types of all defects and faults, and related remedial work dates and types of all tests
- dates and types of all servicing (routine or special), with brief note of work carried out and outstanding
- dates and times of all periods of disablement or disconnection all alterations to the system
- event counter reading, where the control equipment incorporates an event counter

Alterations to the system include temporary alterations made to reduce the likelihood of false alarms, for example due to contractors' works which generate dust, fumes or smoke. Temporary alterations may include:

- replacement of smoke detectors with heat detectors (if system suitable)
- provision of temporary screening between work areas and detectors
- provision of temporary covers, e.g. plastic bags, to prevent ingress of contaminating matter

The effectiveness of the system will be affected to some extent by any of these alterations and manual surveillance may be required.

All matters relating to such temporary alterations should be recorded, as should reinstatement of the system upon completion of the work (e.g. checking that covers or plastic bags have been removed from the detectors).

The 'Record of Events' sheets contained in this Log Book require data to be entered in one of three sections - either:

Events other than false alarms or maintenance work - e.g.: Fire Activations, faults, etc  
False Alarms - As categorised below

Maintenance work - Activations caused by testing of the system (other than weekly tests)

Categories of false alarms are:

UNWANTED alarms - due to environmental influences, fire-like phenomena, inappropriate action by people, accident

EQUIPMENT false alarms - arising from malfunction of equipment

MALICIOUS false alarms - arising from malicious actions

GOOD INTENT false alarms - involving genuine belief of a person that there is a fire

## Causes of False Alarms

False alarms from fire-detection and fire-alarm systems can arise from many different causes, most of which can be dealt with by careful planning.

- Typical causes of false alarms are:
- pollutants in the air setting off smoke detectors
- extremely high temperatures setting off heat detectors
- vandalism or malicious acts
- mistakes in using the system
- the equipment being faulty or not being maintained properly
- fire detectors or red 'break glass' boxes being in the wrong place; and
- the fire-detection system not being appropriate for the building or how it is used

False alarms can come from three main devices - smoke detectors, heat detectors and 'break glass' boxes.

### **Smoke detectors**

Smoke detectors respond to smoke and any similar pollutants in the air. If you have smoke detectors in your building, you must make sure the people in the building know about them.

False alarms triggered by smoke detectors are often caused by:

- cooking
- making toast
- insects, particularly in the summer months
- welding, soldering or similar activities
- candles and open fires
- steam
- dust
- aerosols
- a lack of effective maintenance

## Causes of False Alarms

### Heat Detectors

These are generally used in kitchens, boiler rooms and similar areas where smoke detectors may be too sensitive and cause false alarms. They are set to allow for expected temperature levels in the protected area, and will trigger an alarm if the temperature goes above the expected level. False alarms may be caused by high temperatures in the protected area, or sudden increases in temperature.

### Manual Call Points

Manual Call Points do not usually cause false alarms as a result of faulty equipment. However, the glass can be broken deliberately or by accident. If you think there is a high risk of this because of vandalism or where the box is, they can be fitted with a transparent flap or cover that has to be lifted before the glass can be broken.

Note that this must be recorded as a variation to BS5839 and all relevant enforcing authorities informed.

The actual cause of a false alarm may be easily identified and corrected, For example, if the cause is something someone has done (such as dust coming from maintenance work), you can take action to prevent this from happening again. However, you may need to take a more formal approach to analysing cause of the false alarm.

BS 5839-1 Model certificates

**G.1 Design certificate**

Certificate of design for the fire alarm system at:

Address: .....

.....

.....

I/ we being the competent person(s) responsible (as indicated by my/our signatures below) for the design of the fire alarm system, particulars of which are set out below, CERTIFY that the said design for which I/we have been responsible complies to the best of my/our knowledge and belief with the recommendations of Section 2 of BS 5839-1:2013 for the system Category described below, except for the variations, if any, stated in this certificate.

Name (in block letters): ..... Position: .....

Signature: ..... Date: .....

For and on behalf of: .....

Address: .....

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.....

Postcode: .....

The extent of liability of the signatory is limited to the system described below.

System Category (see BS 5839-1, Clause 5):

.....

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Variations from the recommendations of Section 2 of BS 5839-1 (see BS 5839-1, Clause 7):

Extent of system covered by this certificate:

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Brief description of areas protected (not applicable for Category M, L1 or P1 systems):

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BS 5839-1 Model certificates

## G.2 Installation certificate

Certificate of installation for the fire alarm system at:

Address:

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I/we being the competent person(s) responsible (as indicated by my/our signatures below) for the installation of the fire alarm system, particulars of which are set out below, CERTIFY that the said installation for which I/we have been responsible complies to the best of my/our knowledge and belief with the specification described below and with the recommendations of Section 4 of BS 5839-1:2013, except for the variations, if any, stated in this certificate.

Name (in block letters): ..... Position: .....

Signature: ..... Date: .....

For and on behalf of: .....

Address: .....

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..... Postcode:

.....

The extent of liability of the signatory is limited to the system described below.

Extent of installation work covered by this certificate

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Specification against which system was installed:

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.....

Variations from the specification and/or Section 4 of BS 5839-1 (see BS 5839-1.

Clause 7):

Wiring has been tested in accordance with the recommendations of Clause 38 of BS 5839-1:2013.

Test results have been recorded and provided to:

.....

.....

(Unless supplied by others, the "as fitted" drawings have been supplied to the person responsible for commissioning the system.)

BS 5839-1 Model certificates  
**G3 commissioning (Page 1)**

Certificate of commissioning for the fixed alarm system at:

Address:

.....  
.....

I/we being the competent person(s) responsible (as indicated by my/our signatures below) for the commissioning of the fire alarm system, particulars of which are set out below, CERTIFY that the said work for which I/we have been responsible complies to the best of my/our knowledge and belief with the recommendations of Clause 39 of BS 5839-1:2013, except for the variations, if any, stated in this certificate.

Name (in block letters): .....Position: .....

Signature: .....Date:.....

For and on behalf of:.....

Address:

.....  
.....

.....Postcode:.....

The extent of liability of the signatory is limited to the systems described below.

Extent of system covered by this certificate

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Variations from the recommendations of Clause 39 of BS 5839-1:2013 (see BS 5839-1:2013. Clause 7):

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BS 5839-1 Model certificates  
**G3 commissioning (Page 2)**

All equipment operates correctly.

- Installation work is, as far as can reasonably be ascertained, of an acceptable standard.
- The entire system has been inspected and tested in accordance with the recommendations of 39.2c) of BS 5839-1:2013
- The entire system performs as required by the specification prepared by :.....a copy of which I/we have been given.
- Taking into account the guidance contained in Section 3 of BS 5839-1:2013, I/we have not identified any obvious potential for an unacceptable rate of false alarms.
- The documentation described in Clause 40 of BS 5839-1: 2013 has been provided to the user.

The following work should be completed before/after (delete as applicable) the system becomes

operational:.....

The following potential causes of false alarms should be considered at the time of the next service visit

Before the system becomes operational, it should be soak tested in accordance with the recommendations of 30.2.6 of BS 5839-1:2013 for a period of:

..... (Enter a period of either one week. Or such a period as required by the specification, or such period as recommended by the signatory to this certificate whichever is the greatest, or delete if not applicable.)

BS 5839-1 Model certificates  
**G4 Acceptance certificate**

Certificate of acceptance for the fire alarm system at Address-

.....  
.....  
.....Postcode.....

I/we being the competent person(s) responsible(as indicated by my/our signatures below) for the acceptance of the fire alarm system particulars of which are set out below, ACCEPT the system on behalf of

.....  
.....Name(in block letters).....Position.....  
Signature.....Date.....

For and on behalf of.....  
Address.....  
.....Postcode

The extent of liability of the signatory is limited to the system described below.....

Extent of system covered by this certificate

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- All installations appear to be satisfactory
- The system is capable of giving a fire signal
- The facility for remote transmission of alarms to an alarm receiving centre operates correctly(delete if not applicable)
- The following documents have been provided to the purchaser or user
- 'As fitted' drawings
- Operating and maintenance instructions
- Certificates of design, installation and commissioning
- A log book
- Sufficient representatives of the user have been properly instructed in the use of the system, including at least all means of triggering fire signals, silencing and resetting the system and avoidance of false alarms.
- All relevant tests defined in the purchasing specification have been witnessed.(Delete if not applicable)

The following work is required before the system can be accepted

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BS 5839-1 Model certificates

### G.5 Verification certificate (optional)

Certificate of verification for the fire alarm system at:

Address:

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I/we being the competent person(s) responsible (as indicated by my/our signatures below) for the verification of the fire alarm system, particulars of which are set out below, CERTIFY that the verification work for which I/we have been responsible complies to the best of my/our knowledge and belief with the recommendations of Clause 43 of BS 5839-1:2013.

Name (in block letters): ..... Position: .....

Signature:.....Date:.....

For and on behalf of:.....

Address:

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Postcode:.....

The extent of liability of the signatory is limited to the system described below.  
Extent of system covered by this certificate

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Scope and extent of the verification work:

.....  
.....  
.....

- In my/our opinion, that as far as can reasonably be ascertained from the scope of work described above, the system complies with, and has been commissioned in accordance with, the recommendations of BS 5839-1:2013, other than in respect of variations already identified in the certificates of design, installation or commissioning.
- In my/our opinion, there is no obvious potential for an unacceptable rate of false alarms.

The following non-compliances with the recommendations of BS 5839-1:2013. have been identified (other than those recorded as variations in the certificates of design, installation or commissioning):

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BS 5839-1 Model certificates

### G.6 Inspection and Servicing certificate

Certificate of servicing for the fire alarm system at:

Address:

I/we being the competent person(s) responsible (as indicated by my/our signatures below) for the servicing of the fire alarm system, particulars of which are set out below, CERTIFY that the said work for which I/we have been responsible complies to the best of my/our knowledge and belief with the recommendations of Clause 45 of BS 5839-1:2013 quarterly inspection of vented batteries/periodic inspection and test/inspection and test over a 12 month period (delete as applicable), except for the variations, if any, stated in this certificate.

Name (in block letters): ..... Position:.....

Signature: ..... Date:.....

For and on behalf of: .....

Address: .....

.....Postcode:

The extent of liability of the signatory is limited to the system described below.  
Extent of system covered by this certificate

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Variations from the recommendations of Clause 45 of BS 5839-1 :2013 for periodic or annual inspection and test (as applicable)

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Relevant details of the work carried out and faults identified have been entered in the system log book

During the past 12 months,.....false alarms have occurred.

The above number of false alarms equates to.....false alarms per 100 automatic fire detectors per annum

(for Category M systems enter "Not applicable").

The following work/action is considered necessary

:.....  
.....  
.....  
.....

BS 5839-1 Model certificates

**G.6 Inspection and Servicing certificate (cont.)**

Measures incorporated to limit false alarms. Account has been taken of the guidance contained in section 3 of BS 5839-1:2013 and more specifically (tick as appropriate)

- The system is manual. Type and siting of manual call points takes account of the guidance contained in section 3 of BS 5839-1
- The system incorporates automatic fire detectors, and account has been taken of reasonably foreseeable causes of unwanted alarms, particularly in the selection and siting of detectors
- An appropriate analogue system has been specified
- An appropriate multi-sensor systems has been specified
- A time –related system has been specified. Details -
- .....
- .....
- .....
- Fire alarm signals from automatic fire detectors result initially in a staff alarm, which delays a general alarm/transmission of signals to an alarm receiving centre(delete as applicable)for.....min.
- Appropriate guidance has been provided for the user to enable limitation of false alarms.
- Other measures as follows

Installation and Commissioning

It is strongly recommended that installation and commissioning be undertaken in accordance with the recommendations of section 4 and section 5 of BS 5839-1:2013 respectively

Soak test

In accordance with the recommendations of 35.2.6 of BS 5839-1:2013 it is recommended that following the commissioning, a soak period of.....should follow(enter a period of not less than one week)

As the system incorporates no more that 50 automatic test no soak test is necessary to satisfy the recommendations of BS 5839-1:2013

Verification

Verification that the system complies with BS 5839-1:2013 should be carried out, on completion in accordance with Clause 43 of BS 5839-1

Yes  No  (To be decided by the purchaser or user)

Maintenance

It is strongly recommended that after completion the system is maintained in accordance with section 6 of BS 5839-1:2013

User responsibilities

The user should appoint a responsible person to supervise all matters pertaining to the fire alarm system in accordance with the recommendations of section 7 of BS 5839-1:2013

BS 5839-1 Model certificates

### G.7 Modification certificate

Certificate of modification for the fire alarm system at:

Address: .....

.....

I/we being the competent person(s) responsible (as indicated by my/our signatures below) for the modification of the fire alarm system, particulars of which are set out below. CERTIFY that the said modification work for which I/we have been responsible has to the best of my/our knowledge and belief been carried out in accordance with the recommendations of 46.4 of BS 5839-1:2013, except for the variations, if any, stated in this certificate.

Name (in block letters): ..... Position: .....

.....

Signature: ..... Date: .....

For and on behalf of: .....

.....

Address: .....

.....

..... Postcode: .....

The extent of liability of the signatory is limited to the system described below.

Extent of system covered by this certificate

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Variations from the recommendations of 46.4 of BS 5839-1:2013

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Following the modifications, the system has been tested in accordance with the recommendations of 46.4.2 of BS 5839-1:2013

Following the modifications "as fitted" drawings and other system records have been updated as appropriate.

I/we the undersigned confirm that the modifications have introduced no additional variations from the recommendations of BS 5839-1:2013, other than those recorded below:

Signed: .....

Capacity: .....

(e.g. maintenance organization, system designer, consultant or user representative)











## Evaluation of the emergency lighting

### New Premises

The emergency lighting is required to provide adequate illumination automatically in the event of supply failure to the normal lighting this is necessary not only to enable occupants to use the escape routes but also to enable safety operations to be conducted in the event of a supply failure

BS 5266:1 2016 provides advice and guidance to assist engineers to provide satisfactory systems

Consultation between the owner/developer and/or occupier of the premises, the architect, the lighting engineer, the installation contractor, the enforcing authorities (e.g. the building control and fire authorities), assist the user to produce an appropriate risk assessment for the premises. In addition to the recommendations of BS 5266-1, it is important that the specific requirements of the premises are considered.

Decisions should include –

The required duration

The way the system works covering the mode of operation of the luminaires

The areas of the building to be covered

The installation should be detailed in the completion documentation which should include –

- A declaration from the designer that BS 5266-1 2016 has been complied with this declaration should include verification that the emergency lighting levels will be achieved
- A declaration from the installer that the system has been installed in accordance with the designer's specification
- A declaration from the system verifier that the installation works correctly and that the testing log book is available.

### Existing premises

Many old premises do not have completion certificates either because they were never provided or have got lost with time

The new issue of BS 5266-1 now includes a short form declaration and advice on compliance which can be used for small installations when a single engineer performed system design, installation and verification this form can also be used as a report form on an existing premises where the original completion documentation is not available.

Typical areas that need to be checked are –

- The use of the building can have changed; equipment that was satisfactory for a warehouse would not be likely to still be adequate if the premises are turned into a bar.
- Small premises that previously did not require a fire certificate now need to be safe for their occupants
- Equipment ages and no longer performs as well as it should. Correct design builds in reasonable degradation factors but these can be exceeded.
- With improved knowledge and understanding of risks safety standards have improved. Emergency lighting levels now highlight specific hazard areas and equipment requirements take advantage of improved products such as fluorescent luminaires and the use of fire resistant cables.

## Emergency lighting testing procedures

The testing of emergency lighting system consists of –

Monthly tests – check that when the supply is interrupted the emergency lamp operates this is only conducted for a short time so that the battery is not significantly discharged so the duration available after the test is still adequate.

This test may be conducted by the user but it is important that the system has appropriate test facilities so that when operated other services are not put at risk.

The operator has to be trained to observe any conditions that could reduce the effectiveness of the emergency lighting system such as-

1. The introduction of obstructions that will obscure the illumination or the visibility of exit signs
2. The effect of excessive dirt that will reduce light output
3. The effect of aging of the light source typically by the tubes 'black ending'

Annual full rated discharge test –

This test should be conducted by a competent engineer the test should be conducted in such a way as to minimise the risks to the premises caused by the emergency luminaires being fully discharged typical procedures are –

1. To only conduct the test when the premises will be empty for 24 hours to allow the luminaires to recharge.
2. To conduct the test early in the morning maximising the time before supply failure would be dangerous (note care must be taken to ensure no parts of the escape routes particularly stairwells are without natural lighting)
3. To test alternate luminaires with time to recharge before testing adjacent luminaires.

Note in addition the charge healthy indicator of Central Battery systems should be inspected daily

A log book should be kept on the premises for inspection by the fire authorities it should contain a full record of both annual full duration and monthly functional tests. Any faults should be recorded together with any action needed to protect occupants until repairs are complete and also the action to get the repairs conducted.

### Action to be taken on finding a failure

- The supplier of the system or a competent engineer should be contacted to rectify the fault.
- A risk assessment of the failure should be conducted; this should evaluate the people who will be at increased risk and the level of that risk. Based on this data and, if necessary, advice from the Fire Authority, the appropriate action should be taken.
- Action may be:
  - To warn occupants to be extra vigilant until the system is rectified
  - To initiate extra safety patrols
  - To issue torches as a temporary measure
  - In a high risk situation, to limit use of all or part of the building

# H1 Model completion certificate

Serial Number:.....

## EMERGENCY LIGHTING COMPLETION CERTIFICATE For New Installations

Occupier/owner.....

Address of premises .....

### Declaration of Conformity

In consequence of acceptance of the appended declarations, I/we\* hereby declare that the emergency lighting system installation, or part thereof, at the above premises conforms, to the best of my/our\* knowledge and belief, to the appropriate recommendations given in BS 5266-1:2016, *Emergency lighting – Part 1: Code of practice for the emergency lighting of premises*, BS EN 1838:2013 *Lighting applications – Emergency lighting* and BS EN 50172:2004, *Emergency escape lighting systems*, as set out in the accompanying declarations, except as stated below/overleaf.

\* Delete as appropriate.

Signed, on behalf of owner/occupier .....

Name.....

### Deviations from standards

Declaration (Design, installation or verification)	Clause number	Details of deviation

***This Certificate is only valid when accompanied by current:***

- a) Signed declaration(s) of design, installation and verification, as applicable (see overleaf).
- b) Photometric design data. This can be in any of the following formats but in all cases appropriate de-rating factors must be used and identified to meet worst case requirements.
  - Authenticated spacing data such as ICEL 1001 registered tables\*\*.
  - Calculations as detailed in Annex G and CIBSE/SLL Guide LG12\*\*\*.
  - Appropriate computer print of results.
- c) Test log book.

\*\*Available from Industry Committee for Emergency Lighting, Stafford Park 7 Telford TF3 BQ.

\*\*\*Available from Chartered Institution of Building Services Engineers, Delta House, 222 Balham High Road, London SW12 9BS.

**Note The general declaration shown in H.1 is to be completed by the responsible person, after the separate design, installation and verification certificates shown in H.2, H.3 and H.4 have been completed by the competent person who carried out the work.**

**Figure 1 – Model completion certificate – Design – Declaration of conformity**

BS 5266-1 : 2016	Recommendations Any failures of conformity should be covered by a deviation	System conforms		
		YES	NO	N/A
4.2	<b>D1</b> Accurate plans available showing escape routes, fire alarm control panel, call points and fire extinguishers			
5.2.9	<b>D2</b> Escape route signs in accordance with BS EN ISO 7010 and BS 5499-4 and other safety signs in accordance with BS EN ISO 7010 and BS 5499-10, clearly identifiable and adequately illuminated			
6.7	<b>D3</b> The luminaires conform to BS EN 60598-2-22			
5.2.8.1	<b>D4</b> Luminaires located at following positions: NOTE Near means within 2 m horizontally. a) At each exit door intended to be used in an emergency b) Near stairs so each tread receives direct light c) Near any other change in level d) externally illuminated escape route signs, escape route direction signs and other safety signs needing to be illuminated under emergency lighting conditions e) At each change of direction f) at intersections of corridors g) Near to each final exit and outside the building to a place of safety h) Near each first aid post i) Near each piece of fire-fighting equipment and call point j) Near escape equipment provided for disabled people k) Near refuges and call points, including include two-way communication systems and disabled toilet alarm call position l) Near manual release controls provided to release electronically locked doors			
6.3	<b>D5</b> At least two luminaires illuminating each compartment of the escape route			
5.2.8.3	<b>D6</b> Additional emergency lighting provided where needed to illuminate: a) Lift cars b) Moving stairways and walkways c) Toilet facilities larger than 8 m <sup>2</sup> floor area or without borrowed light, and those for disabled use d) Motor generator, control and plant-rooms e) Covered car parks			
5.2.8.4				
5.2.8.5				
5.2.8.6				
5.2.8.7				
6.7.3	<b>D7</b> Design duration adequate for the application			
10.6; 10.7; Clause 11	<b>D8</b> Operation and maintenance instructions and a suitable log book produced for retention and use by the building occupier			
5.2.5; 5.2.6; 5.2.7	<b>D9</b> At least the minimum illuminance provided for escape routes, open areas and high risk task areas <b>D10</b> At least the minimum illuminance provided for emergency safety lighting			
5.3.2				
<b>Deviations from standards (to be entered on Completion Certificate)</b>				
<b>Clause number</b>		<b>Details of deviation</b>		
Signature of person making design conformity declaration.....				
For and on behalf of ..... Date.....				

**2 – Model completion certificate – Installation – Declaration of conformity**

Serial Number:.....

**Installation – Declaration of conformity**

BS 5266-1: 2016 clause reference	Recommendations	System conforms (if NO, record a deviation)		
		YES	NO	N/A
Clause 5	<b>IN1</b> The system installed conforms to the agreed design			
<b>6.1</b>	<b>IN2</b> All non-maintained luminaires fed or controlled by the final circuit supply of their local normal mains lighting			
<b>6.4</b>	<b>IN3</b> Luminaires mounted at least 2 m above the floor			
<b>6.4</b>	<b>IN4</b> Luminaires mounted at a suitable height to avoid being located in smoke reservoirs or other likely area of smoke accumulation			
<b>5.2.9</b>	<b>IN5</b> Safety signs provided as follows:			
<b>5.2.9.1</b>	a) Escape route signs in accordance with BS EN ISO 7010 and BS 5499-4, adequately illuminated and identifiable			
<b>5.2.9.2</b>	b) Other safety signs in accordance with BS EN ISO 7010 and BS 5499-10, adequately illuminated and identifiable			
<b>8.2</b>	<b>IN6</b> The wiring of central power systems has adequate fire protection and is appropriately sized			
<b>8.3.5</b>	<b>IN7</b> Output voltage range of the central power system is compatible with the supply voltage range of the luminaries, taking into account supply cable voltage drop			
<b>8.2.12</b>	<b>IN8</b> All plugs and sockets protected against unauthorized use			
<b>8.3.3</b>	<b>IN9</b> The system has suitable and appropriate testing facilities for the specific site			
Clause 11	<b>IN10</b> The equipment manufacturers' installation and verification procedures satisfactorily completed			
Clause 8	<b>IN11</b> The system conforms to BS 7671			

**Deviations from standards**  
(to be entered on Completion Certificate)

Clause number	Details of deviation

Signature of person making installation conformity declaration.....

For and on behalf of ..... Date.....

### 3 – Model completion certificate – Verification – Declaration of conformity

Serial Number:.....

#### Verification – Declaration of conformity

BS 5266-1: 2016 clause reference	Recommendations	System conforms (if NO, record a deviation)		
		YES	NO	N/A
4.2	V1 Plans available and correct			
8.3.3	V2 System has a suitable test facility for the application			
5.2.9	V3 All escape route safety signs and fire-fighting equipment location signs, and other safety signs identified from risk assessment, visible with the normal lighting extinguished			
Clause 5	V4 Luminaires correctly positioned and oriented as shown on the plans			
6.7.1 and Annex F	V5 Luminaires conform to BS EN 60598-2-22			
6.7.1 and Annex F	V6 Luminaires have an appropriate category of protection against ingress of moisture or foreign bodies for their location as specified in the system design			
Clause 12	V7 Luminaires tested and found to operate for their full rated duration			
Clause 12	V8 Under test conditions, adequate illumination provided for safe movement on the escape route and the open areas, paths under emergency safety lighting, and operations within high risk task areas NOTE This can be checked by visual inspection and checking that the illumination from the luminaires is not obscured and that minimum design spacings have been met.			
Clause 12	V9 After test, the charging indicators operate correctly			
8.2	V10 Fire protection of central wiring systems satisfactory			
8.2.6	V11 Emergency circuits correctly segregated from other supplies			
10.6; 10.7; Clause 11	V12 Operation and maintenance instructions together with a suitable log book showing a satisfactory verification test provided for retention and use by the building occupier			

#### Deviations from standards (to be entered on Completion Certificate)

Clause number	Details of deviation

Signature of person making verification conformity declaration.....

For and on behalf of ..... Date.....

**I 1– Model certificate for completion of small new installations – General declaration**

Serial Number:.....

**EMERGENCY LIGHTING SMALL\* NEW INSTALLATIONS AND EXISTING SITE COMPLIANCE CERTIFICATE**

**For Small New Installations up to 25 Self-contained luminaires**

Occupier/owner.....

Address of premises .....

.....

**Declaration of Conformity**

In consequence of acceptance of the appended declarations, I/we\* hereby declare that the emergency lighting system installation, or part thereof, at the above premises conforms, to the best of my/our\* knowledge and belief, to the appropriate recommendations given in BS 5266-1:2016, *Emergency lighting – Part 1: Code of practice for the emergency lighting of premises*, BS EN 1838:2013 *Lighting applications – Emergency lighting* and BS EN 50172:2004, *Emergency escape lighting systems*, as set out in the accompanying declarations, except as stated below/overleaf.

\* Delete as appropriate.

Signed, on behalf of owner/occupier .....

Name.....

**Deviations from standards**

<b>Declaration</b> (Design, installation or verification)	<b>Clause number</b>	<b>Details of deviation</b>

***This Certificate is only valid when accompanied by current:***

- a) Signed declaration(s) of design, installation and verification, as applicable (see overleaf).
- b) Photometric design data. This can be in any of the following formats but in all cases appropriate de-rating factors must be used and identified to meet worst case requirements.

Authenticated spacing data such as ICEL 1001 registered tables\*\*.

Calculations as detailed in Annex G and CIBSE/SLL Guide LG12\*\*\*.

Appropriate computer print of results.

- c) Test log book.

\*New works are deemed to be small when involving installations of up to 25 new emergency lighting luminaires

\*\*Available from Industry Committee for Emergency Lighting, Ground Floor, Westminster Tower, 3 Albert Embankment, London, SE1 7SL.

\*\*\*Available from Chartered Institution of Building Services Engineers, Delta House, 222 Balham High Road, London SW12 9BS.

**Note The general declaration shown in I.1 is to be completed by the responsible person, after the separate design, installation and verification certificate shown in I.2, has been completed by the competent person who carried out the work.**

#### 4 – Model certificate for completion of small new installations – Checklist /report

Site Address		Responsible Person			
<b>BS 5266-1: 2016 clause ref.</b>	Engineer Function D-Designer, I-Installer, V-Verifier		Inspection Date		
	D,I,V	<b>Check of categories and documentation</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>
4.2	D,V	Are plans of the system available and correct?			
6.7	D,V	Has the system been designed for the correct mode of operation category?			
6.7	D,V	Has the system been designed for the correct emergency duration period?			
Clause 11	D,V	Is a completion certificate available with photometric design data?			
Clause 11	D,I,V	Is a test log book available and are the entries up to date?			
<b>Check of design</b>					
4.1; 5.2.8	D,I,V	Are the correct areas of the premises covered to meet the risk assessment?			
5.2.8	D,I,V	Are all hazards identified by the risk assessment covered?			
5.2.8	D,I,V	Are there luminaires sited at the "points of emphasis"?			
5.2.2	D,I,V	Is the spacing between luminaires compliant with authenticated spacing or design data?			
5.2.9	D,I,V	Are the emergency exit signs and escape route direction signs correct and the locations of other safety signs to be illuminated under emergency conditions identified?			
6.1	D,I,V	Do all non-maintained luminaires operate on local final circuit failure?			
6.3	D,V	Is there illumination from at least two luminaires in each compartment?			
6.4	I,V	Are luminaires at least 2 m above floor and avoiding smoke reservoirs?			
5.8.2.5; 5.8.2.6	D,V	Are additional luminaires located to cover toilets, lifts, plant rooms, etc.?			
<b>Check of the quality of the system components and installation</b>					
6.7	D,I,V	Do the luminaires conform to BS EN 60598-2-22?			
6.7	D,I,V	Do any converted luminaires conform to BS EN 60598-2-22?			
6.7	D,I,V	Do luminaires have a suitable degree of protection for their location?			
Clause 8	I,V	Does the installation conform to the good practice defined in BS 7671?			
8.2.12	D,I,V	Are any plugs or sockets protected against unauthorized use?			
<b>Test facilities</b>					
8.3.3	D,V,I	Are the test facilities suitable to test function and duration?			
8.3.3	D,I,V	Are the test facilities safe to operate and do not isolate a required service?			
8.3.3	D,I,V	Are the test facilities clearly marked with their function?			
8.3.3	D,I,V	If an automatic test system is installed, does it conform to BS EN 62034?			
10.7	D,V	Are the user's staff trained and able to operate the test facilities and record the test results correctly?			
<b>Final acceptance to be conducted at completion</b>					
Clause 12	D,I,V	Does the system operate correctly when tested?			
10.7	D,I,V	Has adequate documentation been provided to the user?			
10.7	D,I,V	Is the user aware of action they should take in the event of a test failure?			
Action recommended or deviation to be reported:					
Name of competent person making the declaration of conformity (please print)					
.....					
Signature of the competent person .....					
For and on behalf of.....Date.....					

**5 – Model certificate for completion of existing installations – General declaration**

Serial Number:.....

**EMERGENCY LIGHTING EXISTING SITE COMPLIANCE CERTIFICATE  
For Verification of Existing Installations**

Occupier/owner.....

Address of premises .....

.....

**Declaration of Conformity**

In consequence of acceptance of the appended declarations, I/we\* hereby declare that the emergency lighting system installation, or part thereof, at the above premises conforms, to the best of my/our\* knowledge and belief, to the appropriate recommendations given in BS 5266-1:2016, *Emergency lighting – Part 1: Code of practice for the emergency lighting of premises*, BS EN 1838:2013 *Lighting applications – Emergency lighting* and BS EN 50172:2004, *Emergency escape lighting systems*, as set out in the accompanying declarations, except as stated below/overleaf.

\* Delete as appropriate.

Signed, on behalf of owner/occupier .....

Name.....

**Deviations from standards**

<b>Declaration</b> (Design, installation or verification)	<b>Clause number</b>	<b>Details of deviation</b>

***This Certificate is only valid when accompanied by current:***

- d) Signed declaration(s) of design, installation and verification, as applicable (see overleaf).
- e) Photometric design data. This can be in any of the following formats but in all cases appropriate de-rating factors must be used and identified to meet worst case requirements.

Authenticated spacing data such as ICEL 1001 registered tables\*\*.

Calculations as detailed in Annex G and CIBSE/SLL Guide LG12\*\*\*.

Appropriate computer print of results.

Site test light readings

- f) Test log book.

\*New works are deemed to be small when involving installations of up to 25 new emergency lighting luminaires

\*\*Available from Industry Committee for Emergency Lighting, Ground Floor, Westminster Tower, 3 Albert Embankment, London, SE1 7SL.

\*\*\*Available from Chartered Institution of Building Services Engineers, Delta House, 222 Balham High Road, London SW12 9BS.

**Note** The general declaration shown in K.1 is to be completed by the responsible person, after the separate design, installation and verification certificate shown in K.2, has been completed by the competent person who carried out the work.

6 – Model certificate for verification of existing installations – Checklist and report					
Site Address			Responsible Person		
<b>BS 5266-1: 2016</b> clause ref.	Engineer Function D-Designer, I-Installer, V-Verifier		Inspection Date		
	D,I,V	<b>Check of categories and documentation</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>
4.2	D,V	Are plans of the system available and correct?			
6.7	D,V	Has the system been designed for the correct mode of operation category?			
6.7	D,V	Has the system been designed for the correct emergency duration period?			
Clause 11	D,V	Is a completion certificate available with photometric design data?			
Clause 11	D,I,V	Is a test log book available and are the entries up to date?			
<b>Check of design</b>					
4.1; 5.2.8	D,I,V	Are the correct areas of the premises covered to meet the risk assessment?			
5.2.8	D,I,V	Are all hazards identified by the risk assessment covered?			
5.2.8	D,I,V	Are there luminaires sited at the “points of emphasis”?			
5.2.2	D,I,V	Is the spacing between luminaires compliant with authenticated spacing or design data?			
10.3; 10.7	D,I,V	If authenticated spacing data is not available for existing installations, are estimates attached and acceptable?			
5.2.9	D,I,V	Are the emergency exit signs and escape route direction signs correct and the locations of other safety signs to be illuminated under emergency conditions identified?			
6.1	D,I,V	Do all non-maintained luminaires operate on local final circuit failure?			
6.3	D,V	Is there illumination from at least two luminaires in each compartment?			
6.4	I,V	Are luminaires at least 2 m above floor and avoiding smoke reservoirs?			
5.8.2.5,,6	D,V	Are additional luminaires located to cover toilets, lifts, plant rooms, etc.?			
<b>Check of the quality of the system components and installation</b>					
6.7	D,I,V	Do the luminaires conform to BS EN 60598-2-22?			
6.7	D,I,V	Do any converted luminaires conform to BS EN 60598-2-22?			
6.7	D,I,V	Do luminaires have a suitable degree of protection for their location?			
Clause 8	I,V	Does the installation conform to the good practice defined in BS 7671?			
8.2.1	D,I,V	For centrally powered systems, is the wiring fire-resistant?			
8.2.12	D,I,V	Are any plugs or sockets protected against unauthorized use?			
7.2	D,I,V	If a central power supply unit is used, does it conform to BS EN 50171?			
8.3.3	D,V,I	Are the test facilities suitable to test function and duration?			
8.3.3	D,I,V	Are the test facilities safe to operate and do not isolate a required service?			
8.3.3	D,I,V	Are the test facilities clearly marked with their function?			
8.3.3	D,I,V	If an automatic test system is installed, does it conform to BS EN 62034?			
10.7	D,V	Are the user’s staff trained and able to operate the test facilities and record the test results correctly?			
Final acceptance to be conducted at completion					
Clause 12	D,I,V	Does the system operate correctly when tested?			
10.7	D,I,V	Has adequate documentation been provided to the user?			
10.7	D,I,V	Is the user aware of action they should take in the event of a test failure?			
10.7	D,I,V	Are any deviations fully documented and are they still acceptable?			
Action recommended or deviation to be reported:					
Results of the inspection .....			Signed.....		
.....			.....		

## Annex A (informative)

### Additional guidance on the compliance checklist and report for an existing site

#### A.1 General

Responsible persons are required to demonstrate that emergency lighting is appropriate to protect occupants. New buildings are well provided for; the checklist and report in Annex G covers existing premises where current valid documentation is not available.

Typical reasons for use of this substitute system documentation include the following.

- a) The use of the building might have changed, for example, equipment that was satisfactory for a warehouse would probably not be adequate if the premises were turned into a bar, so the original documentation would not be relevant.
- b) Small premises that previously did not require a fire certificate might now need to be assessed as safe for their occupants.
- c) Equipment ages and no longer might no longer perform as well as it needs to. Correct design builds in reasonable degradation factors but these can be exceeded.
- d) With improved knowledge and understanding of risks, safety standards have improved. Emergency lighting levels now highlight specific hazard areas, and equipment requirements take advantage of improved products such as fluorescent luminaires and the use of fire-resistant cables.
- e) The original documentation might never been provided or could have become lost.

The following sections give advice on the procedures to be used to fill in the checklist report.

#### A.2 Design

The location of escape routes has to conform to guidance given in the relevant risk assessment guide.

Prior to this edition of BS 5266-1, a reduced light level of a minimum of 0.2 lx on the centreline of escape routes was allowable for routes that were permanently unobstructed. They now need to be reported to the responsible person to assess if they are acceptable or if they need to be upgraded to the current value of 1 lx.

Prior to 1988, open areas were not clarified as needing coverage. However, since then BS 5266-1 has recommended that rooms should have emergency lighting if:

- a) they are larger than 60 m<sup>2</sup>;
- b) they have an escape route passing through them; or
- c) they have a hazard that is identified by the site risk assessment.

If these routes and areas are not provided with adequate emergency lighting, the report needs to recommend that this omission be defined in the risk assessment.

Safety signs have to be adequately illuminated, either as an internally illuminated sign or by having an emergency luminaire within 2 m (measured horizontally) of an externally illuminated sign.

*NOTE Attention is drawn to the Health and Safety (Safety Signs and Signals) Regulations 1996 [37].*

Emergency luminaires have to be located at specific hazard and safety locations, i.e. "points of emphasis".

The original site design data will ideally contain the design spacing calculations, which can be checked against the installation. In practice, getting the data for existing installations can be difficult. If authenticated spacing tables are not available, the nearest luminaire format with a similar battery voltage/A.H. capacity and diffuser type can be used to estimate acceptability. Authenticated spacing tables are produced by test houses and the products checked for

conformity under BS EN ISO 9000; this is preferable to verifying actual levels on site, which is difficult and time consuming. Failures or estimations in this area need to be reported and, depending on the site, the installation rectified by adding luminaires or replacing them with better performing units.

Care has to be taken when testing units that do not have approved luminaires installed, as they often ignore derating factors and can therefore fail prematurely.

### **A.3 Quality of the system components and installation**

If the non-maintained luminaires are not supplied from the final lighting circuit, a failure of the lighting circuit will not activate the emergency lighting. In this case, either the wiring needs to be corrected or the fittings changed for the maintained type.

If the central system wiring does not offer adequate fire resistance, either the cable can be supplied with additional fire protection, or the cores of a conduit system can be withdrawn and replaced by appropriate silicon insulated cable.

If self-contained luminaires fail to reach their rated duration, they or their batteries need to be replaced. It is essential that replacement batteries are of the correct type, or they could cause sudden premature failure. Central battery systems need to be checked first, to see that the system has not been overloaded. If this is not the case, the battery needs to be replaced.

If luminaires are dirty, they need to be cleaned. If the diffusers are badly discoloured (i.e. yellow or brown), this is likely to be a result either of ageing or of excessive exposure to ultra violet light; modern diffusers use plastics that are highly UV stable, so it tends to apply to old-style luminaires. Either the diffuser or the complete luminaire needs to be replaced.

If a luminaire fluorescent lamp shows signs of serious blackening at the tube ends, this is either because it is old and needs replacing, or it can be a sign that the luminaire is subject to excessive switching. Either condition needs rectifying.

### **A.4 Records, test facilities and training**

If site plans and test log records (see **4.2** and **4.3**) are not available, blank record sheets can be used. If site plans cannot be provided, blank drawings can be marked up.

It is important that testing and maintenance is carried out regularly to identify any possible faults at an early stage (see **8.3.3** and **12.3**).

The test facilities recommended in **8.3.3** might not be available in existing sites. If the procedures do not enable the system to be tested completely and safely, additional facilities will be needed.

Operators need to be trained to:

- a) perform their testing function;
- b) keep the premises safe; and
- c) obtain action to rectify any faults found.

### A.1 – Model emergency lighting inspection and test certificate

<b>Emergency Lighting Inspection and Test Certificate</b> For systems designed to BS 5266-1 and BS EN 50172/BS 5266-8			
<b>WARNING</b> <b>Full duration tests involve discharging the batteries, so the emergency lighting system will not be fully functional until the batteries have had time to recharge. For this reason, always carry out testing at times of minimal risk, or only test alternate luminaires at any one time.</b>			
System manufacturer Contact phone number			
System installer Contact phone number			
Competent engineer responsible for verification and annual tests			Phone number
<b>Site address</b>			
Responsible person			
Date the system was commissioned			
Details of system mode of operation		Non-maintained	
		Non-maintained luminaires, maintained signs	
		Maintained	
		Other	
Duration of system		..... Hours	
		Is automatic test system fitted?	
		Y/N	
<b>Details of additions or modifications to the system or the premises since original installation</b>			
<b>Addition or modification</b>			<b>Date</b>
<b>Action to be taken on finding a failure</b>			
<ul style="list-style-type: none"> <li>• The supplier of the system or a competent engineer should be contacted to rectify the fault.</li> <li>• A risk assessment of the failure should be conducted; this should evaluate the people who will be at increased risk and the level of that risk. Based on this data and, if necessary, advice from the Fire Authority, the appropriate action should be taken.</li> <li>• Action may be:               <ul style="list-style-type: none"> <li>To warn occupants to be extra vigilant until the system is rectified</li> <li>To initiate extra safety patrols</li> <li>To issue torches as a temporary measure</li> <li>In a high-risk situation, to limit use of all or part of the building</li> </ul> </li> </ul>			
NOTE Test programs for identifying early failures can reduce the chances of failure of two adjacent luminaires at the same time.			

## M2 Model emergency lighting inspection and test record

Emergency Lighting Inspection and Test Record		Sheet number:		
Site:				
Test types: C = Commissioning and verification test				
M = Monthly test (see BS EN 50172:2004/BS 5266-8:2004, 7.2.3)				
A = Annual test (see BS EN 50172:2004/BS 5266-8:2004, 7.2.4)				
Date of test	Test type	Result – Test Passed No action needed	Result – Test Failed see M3	
		Sign below *	Need for repair of system notified	Need for safeguarding of premises notified
		Sign below *	Sign below*	Sign below*
	C			
	M – 1st month			
	M – 2nd month			
	M – 3rd month			
	M – 4th month			
	M – 5th month			
	M – 6th month			
	M – 7th month			
	M – 8th month			
	M – 9th month			
	M – 10th month			
	M – 11th month			
	A – 1st year			
	M – 1st month			
	M – 2nd month			
	M – 3rd month			
	M – 4th month			
	M – 5th month			
	M – 6th month			
	M – 7th month			
	M – 8th month			
	M – 9th month			
	M – 10th month			
	M – 11th month			
	A – 2nd year			
	M – 1st month			
	M – 2nd month			
	M – 3rd month			
	M – 4th month			
	M – 5th month			
	M – 6th month			
	M – 7th month			
	M – 8th month			
	M – 9th month			
	M – 10th month			
	M – 11th month			
	A – 3rd year			

