Expert Commentary

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BS 5839-6:2019 Fire detection and alarm systems for buildings – Part 6:

Code of practice for the design, installation, commissioning and maintenance of fire detection and fire alarm systems in domestic premises

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Summary

In May 2013 BSI published BS 5839-6:2013, a code of practice for the design, installation, commissioning, and maintenance of fire detection and fire alarm systems in domestic premises. It superseded BS 5839-6:2004, which was hence withdrawn. However, the 2013 version did not constitute a full revision of the 2004 edition of the code. A fuller revision of the code was started in 2017 and has led to the 2019 edition, the subject of this commentary.

As with the previous editions, **BS 5839-6:2019** gives recommendations for the planning, design, installation, commissioning, and maintenance of fire detection and fire alarm systems in domestic premises. The standard is primarily intended for designers, manufacturers and suppliers of fire detection and alarm systems; architects and other building professionals; the fire/health and safety industries; regulators and inspectors; installers; and others responsible for implementing fire precautions in domestic premises.

It gives the latest specifications for fire detection and fire alarm systems in both new and existing domestic premises, including premises designed to accommodate a single family, houses in multiple occupation that comprise a number of self-contained units, and sheltered housing, including both the dwelling units and the common areas.

This latest edition of the standard also gives recommendations for routine servicing and maintenance of installed systems.

The recommendations given in this standard refer principally to fire detection and fire alarm systems installed for the purpose of saving life. However, recommendations are given for systems that are also intended to protect property.

The new code comprises 27 clauses, which address the various aspects of the design of systems up to the point of handover to users. A new clause, Clause 27, covering logbooks, has been included. The latest version of the standard also contains nine annexes, of which six are informative and three normative.

The grades into which systems are classified have been overhauled, with some grades having been removed and others added. However, the revised code still includes options to classify systems into eight possible grades.

Relationship with other publications

BS 5839-6 is part of a series of British Standard codes of practice that apply to fire detection and fire alarm systems in buildings:

- **BS 5839-1:2017**, Fire detection and fire alarm systems for buildings – Part 1: *Code of practice for design, installation, commissioning and maintenance of systems in non-domestic premises;*
- **BS 5839-8:2013**, Fire detection and fire alarm systems for buildings – Part 8: *Code of practice for the design, installation, commissioning and maintenance of voice alarm systems;*
- **BS 5839-9:2011**, 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;*
- **BS 5446-2:2003**, Fire detection and fire alarm devices for dwellings – Part 2: *Specification for heat alarms;*
- **BS 5446-3:2015**, Detection and alarm devices for dwellings – Part 3: *Specification for fire alarm and carbon monoxide alarm systems for deaf and hard of hearing people;*
- a new British Standard, **BS 5446-4**, covering smoke alarms based on multi-sensor-type detectors is currently being drafted (expected to be available in 2020); and
- **BS 9991:2015**, Fire safety in the design, management and use of residential buildings – *Code of practice.*

Significant changes introduced in BS 5839-6:2019 clause by clause

Clause 1 Scope (MODIFIED)

Paragraphs 5 and 6 of Clause 1, Scope, have been modified to specify more precisely the applications that are covered by the revised code.

In particular, the Scope confirms that the code does not apply to hostels, caravans or boats. However, it clarifies that the code covers premises used for self-catering holidays as well as premises with short-term paying guests, with limitation on occupancy.

Clause 2 Normative references (MODIFIED)

Clause 2 has been updated to refer to the 2017 edition of BS 5839-1. References to the standard have been updated throughout the document.

References to BS EN 54-3, Fire detection and fire alarm systems – Part 3: Fire alarm devices – Sounders, and BS EN 54-23, Fire detection and fire alarm systems – Part 23: Fire alarm devices – Visual alarm devices, have been removed for not being relevant to applications in domestic environments.

A reference to BS EN 54-10, Fire detection and fire alarm systems – Part 10: Flame detectors – Point detectors, has been added, and the possible use of this type of detector is considered in Clause 10, Types of fire detector and their selection.

Clause 3 Terms and definitions (MODIFIED)

The terms and definitions in BS 5839-1:2017 and BS EN ISO 13943 apply.

The following definitions relevant to the revision of the code have been added:

- alarm receiving centre (ARC), in 3.2;
- aspirating smoke detection system, in 3.3;
- audibility, in 3.4;
- automatic fire detection and fire alarm system, in 3.5;
- circuit, in 3.6;
- commissioning, in 3.8;
- designer, in 3.11;
- fire engineering solution, in 3.23;
- fire alarm signal, in 3.25;
- flame detector, in 3.27;
- heat detector, in 3.30;
- installation, in 3.32;
- installer, in 3.33;
- line detector, in 3.34;
- maintenance, in 3.36;
- manual call point, in 3.37;
- mimic diagram, in 3.39;
- multi-sensor fire alarm, in 3.43;
- point detector, in 3.46;
- protection, in 3.48;
- purchaser, in 3.49;
- radio-linked system, in 3.50;
- repair, in 3.51;
- servicing, in 3.52;
- smoke detector, in 3.57;
- storey, in 3.60;
- tamper-proof battery, in 3.62;
- supported housing, in 3.61;
- telecare-enabled fire detection and fire alarm system, in 3.63;
- user, in 3.64;
- visual alarm device, in 3.66; and
- voice alarm system, in 3.67.

Clause 5 System components (MODIFIED)

The reference to BS ISO 7240-8 has been replaced with a reference to BS EN 54-30, which is the published European standard for multi-sensor detectors using carbon monoxide and heat sensors.

The reference to BS ISO 7240-15 has been replaced with a reference to BS EN 54-29, which is the published European standard for multi-sensor detectors using smoke and heat sensors.

The reference to LPS 1265 has been replaced with a reference to BS EN 54-26, which is the published European standard for carbon monoxide fire detectors.

In **Subclause 5.2**:

- Item m) has been removed as Grade B is no longer an available option;
- Item k) has been added, which recommends that fire alarm devices for Grade C systems should produce a frequency no greater than 3 500 Hz; and
- Item l) recommends that where flame detectors are used they should conform to BS EN 54-10.