BS 8644-1:2022

BSI Standards Publication

Digital management of fire safety information

Part 1: Design, construction, handover, asset management and emergency response – Code of practice

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Published by BSI Standards Limited 2022

ISBN 978 0 539 06602 9

ICS 13.220.01, 35.240.67; 91.010.01; 93.010

The following BSI references relate to the work on this document:
Committee reference FSB/1/1
Draft for comment 21/30403065 DC

Amendments/corrigenda issued since publication

Date	Text affected

Contents

Summary of pages
This document comprises a front cover, an inside front cover, pages I to VI, pages 1 to 72, an inside back cover and a back cover.

Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 July 2022. It was prepared by Subcommittee FSB/1/1, *Digital management of fire safety information*, under the authority of Technical Committee FSB/1, *Fire safety and built environment task group*. A list of organizations represented on these committees can be obtained on request to the committee manager.

Relationship with other publications

BS 8644 is expected to be published in the following parts:

- Part 1: *Design, construction, handover, asset management and emergency response – Code of practice*;
- Part 2: *Development and use of fire strategies – Code of practice*[1)].

Information about this document

The defining concept leading to the development of this part of BS 8644 originates from the lack of availability of accessible and relevant fire safety information for assets across the built environment. This part of BS 8644 has been developed under the principles of the following three strategic objectives:

a) provide a safer built environment that is appropriate for the intended end users;

b) reduce disruption to business operations and property loss from fire; and

c) enable relevant, accurate and accessible fire safety information to be made available to the right people at the right time.

The use of digital applications to facilitate the management of fire safety information provides several advantages that are further explored throughout this part of BS 8644.

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Users may substitute any of the recommendations in this British Standard with practices of equivalent or better outcome. Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations.

1) To be developed in due course.

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

Presentational conventions

The provisions in this standard are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is "should".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

The word "should" is used to express recommendations of this standard. The word "may" is used in the text to express permissibility, e.g. as an alternative to the primary recommendation of the clause. The word "can" is used to express possibility, e.g. a consequence of an action or an event.

Notes and commentaries are provided throughout the text of this standard. Notes give references and additional information that are important but do not form part of the recommendations. Commentaries give background information.

Where words have alternative spellings, the preferred spelling of the Shorter Oxford English Dictionary is used (e.g. "organization" rather than "organisation").

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Attention is drawn to regulatory requirements in respect of the following principal stages in the lifetime of an asset:

- planning – type, size, use, appearance, access and location of a proposed asset;
- works on existing assets, including change of use, material alterations and extensions of existing assets – selection of materials, products, nature and extent of active and passive fire safety features within and external to the asset, and proximity to other assets; changes in fire risk and/or fire safety provisions;
- construction works – correct installation of all fire safety features, and fire safety arrangements to deal with a fire incident during construction;
- use – occupants and their activities, including storage and use of materials, provision of first strike fire-fighting equipment and fire safety training of persons with fire safety duties, and maintaining means of escape and other fire safety systems and equipment;
- end of life – fire safety arrangements during demolition work; and
- vacant or derelict assets – fire safety arrangements and risk presented to persons and assets in the vicinity.

0 Introduction

0.1 General

The management of fire safety information during an asset's life cycle has traditionally been conducted in isolation, with dutyholders responsible for the relevant stage of the development working independently of each other when considering fire safety risk and legislative duties. Asset owners have rarely defined and structured the fire safety information for their assets, or planned the digitization, update and handover of that information at key identifiable stages.

Equally, practices to facilitate the handover of fire safety information to enable the safe and effective management of an asset have been proven to be generally substandard, with a varying degree of standardization across the built environment. Furthermore, such information has traditionally been analogue, largely paper-based, and managed using manual processes, making it difficult for the information to be accessed and updated.

This has led to the management of fire safety information being applied inconsistently, with valuable information being overlooked, miscommunicated or forgotten, in turn preventing the effective, dynamic and active management of fire safety information across the built environment. A digital process to manage fire safety information is an essential part of overcoming these challenges.

The development and management of fire safety information using defined digital processes will, for large parts of the built environment, represent a transformative shift in practice, although some participants already use digital processes to manage this information.

A phased approach to digital management of fire safety information is required, which in turn will enable a pragmatic cultural shift, assisted by interpretable guidance that participants can apply to their practices. There are many practices for digital management of fire safety information, and this part of BS 8644 does not recommend one over the other. Digital platforms, the software used, and the technology deployed to manage fire safety information are at the discretion of the user of this standard.

An information exchange for fire safety information, FIREie, is proposed for the purpose of exchanging predetermined and structured fire safety information. Further information on FIREie is given in **0.4**.

0.2 Relationship to the golden thread

Following the Grenfell Tower tragedy in June 2017, where 72 lives were lost, Dame Judith Hackitt published the *Independent review of building regulations and fire safety: Final report* [1]. Dame Judith concluded that there was "unanimous concern surrounding the ineffective operation of the current rules around the creation, maintenance and handover of building and fire safety information". She made four recommendations in relation to developing a "golden thread of building information" for higher risk buildings.

Central to these recommendations was the need to create a "digital standard of record-keeping for the design, construction and during the occupation of new High-Risk Residential Buildings (HRRBs)".

NOTE High-risk residential buildings are now referred to as higher-risk buildings.

The principles of the golden thread, within the context of legislation applicable to higher risk buildings, are set out in the Building Regulations Advisory Committee (BRAC) golden thread working group report, which can be found at https://www.gov.uk/government/publications/building-regulations-advisory-committee-golden-thread-report/building-regulations-advisory-committee-golden-thread-report.

