



Department for
Communities and
Local Government

Approved Document B

Frequently Asked Questions



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March 2016

ISBN: 978-1-4098-4804-2

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Fire doors

Can I use a 30 minute rated fire door without intumescent seals where AD B asks for a 20 Minute fire door?

This is something that you should check with the Building Control Body. Many do accept this arrangement where they are satisfied that it will provide a sufficient level of protection to escape routes within dwellings. The Building Control Alliance [Technical Guidance Note 9](#) provides further advice.

Dealing with fire precautions in self catering holiday homes

Which volume of Approved Document B should I use when dealing with fire precautions in Self Catering Holiday Homes?

In many cases premises which are similar to a family home can be designed in accordance with Volume 1 (Dwelling houses). However, such premises are subject to the Regulatory Reform (Fire Safety) Order 2005 and it may be necessary to take account of the duties imposed under that Order in the design of the premises.

The Department's leaflet, [Do You Have Paying Guests?](#) provides some useful guidance on the application of the Fire Safety Order to B&Bs, guest houses and self catering properties. Regardless of the design guidance that is adopted it will still be necessary for Building Control Bodies to consult with Fire and Rescue Authorities on work relating to buildings where the Fire Safety Order is (or will be) applicable. This should ensure that any potential problems can be identified before building work is started.

Further guidance on the consultation process is given in the Department's publication, [Building Regulations and Fire Safety Procedural Guidance.](#)

Fire suppression systems in Requirement B3(3)

Does the inclusion of fire suppression systems in Requirement B3(3) mean that all buildings should have a sprinkler system fitted?

No. Requirement B3(3) requires, where reasonably necessary, subdivision of the building with fire resisting construction and/or the installation of a suitable automatic fire suppression system.

What is considered reasonable in any particular case will depend on the size and intended use of the building. In some cases either sprinklers or compartment walls and floors will be necessary and other cases it may be necessary to provide both or neither. Guidance on where sprinklers should be provided is given in the Approved Document.

BS 9999

Now that BS 9999 has replaced the BS 5588 series of standards which standard should I now use?

When an Approved Document makes reference to a named standard, the relevant version of the standard is the one listed at the end of the publication. However, if this version of the standard has been revised or updated by the issuing standards body, the new version may be used as a source of guidance provided it continues to address the relevant requirements of the Regulations.

Volume 2 of Approved Document B currently refers to the guidance in several of the BS 5588 series of standards as a means of showing compliance with the requirements of Part B (Fire safety) of Schedule 1 to the Building Regulations. Until such time as the Approved Document is amended, these references remain part of the guidance approved under section 6 of the 1984 Building Act. As such, compliance with the guidance referred to would confer a legal presumption of conformity with the relevant requirements of Part B. Following any other guidance would not confer that legal presumption.

Where designers elect to follow the relevant guidance in BS 9999 they will need to satisfy themselves and the building control body that this guidance adequately addresses the requirements of Part B. It is strongly recommended in such cases that designers discuss their proposals with the building control body before starting work.

Withdrawn BS standards are readily available from:

The BSI Knowledge Centre
British Standards Institution
389 Chiswick High Road
London, W4 4AL
Email: knowledgecentre@bsigroup.com
Tel: +44 (0)20 8996 7004

Requirement B1 Means of Warning and Escape

Paragraph 1.3 asks for all new dwellinghouses to be provided with smoke alarms in accordance with the BS 5839-6:2004 to at least a Grade D category LD3 standard. However, table 1 of the BS recommends Grade D Category LD2?

For the purposes of Part B of the Building Regulations an LD3 system is considered to be adequate. The system itself should therefore be installed in accordance with the guidance for LD3 systems in BS 5839-6:2004.

Now that door closers are no longer necessary within dwellings do I need them in a HMO?

The Housing Act 2004 replaced the previous housing fitness standard with a statutory framework for assessing and tackling hazards in housing - including fire hazards.

Within a house designated as a 'House in Multiple Occupation' such devices may still need to be provided between the private areas (ie bedrooms) and the common parts (ie circulation spaces, living room, kitchen etc).

When providing a protected stairway in a dwellinghouse, do I need to fit fire-resisting doors on the cupboards and bathrooms?

A protected stairway should be enclosed with fire resisting construction and fire resisting doors in order to protect people escaping down the stairs from a fire in the accommodation.

It may not always be necessary to provide fire doors on cupboards if they are small and the fire risk is low. An alternative to providing a fire door on a bathroom is to include the bathroom within the stair enclosure, thus removing the need for a fire door.

With reference to the guidance on loft conversions, when providing new fire-resisting doors in an existing dwellinghouse, is it also necessary to replace the existing internal door frames?

A fire-resisting door should be regarded as a complete installed assembly. Thus the door, the frame and any ironmongery should be considered when assessing its suitability. In most cases, however, it should be possible to retain the existing frame. If in doubt, the test report for the door being installed will include details of the door frame in which it was tested.

Fire doors are often thicker and much heavier than other internal doors. Where existing frames are retained it may be necessary to replace or relocate the door stops and to install additional fixings back to the structure. The joint between the frame and the surrounding structure should be adequately sealed and the operating gap between the door and the frame should be kept to a minimum (usually 3-4mm).

Requirement B3 Internal Fire Spread (structure)

Is it acceptable for a 110mm uPVC stack pipe to pass through a floor between an attached garage with a room above without being enclosed in a 30 minute fire-resisting casing?

Item 2 of Table 3 (Maximum nominal internal diameter of pipes passing through fire separating element) now makes it clear that a uPVC pipe, up to 110mm in diameter, can pass through a wall or floor separating a dwellinghouse from an integral garage. The pipe should, however, still be fire stopped in accordance with paragraph 7.8. This would involve

sealing around the pipe where it penetrates the wall or floor using a suitable material or a proprietary system as described in Paragraph 7.14.

Requirement B5 Access and facilities for the fire service

Is the 45m rule for firefighting access in paragraph 11.2 measured from the outside or from the front door?

Guidance in both Volumes of the Approved Document Part B states there should be vehicle access for a pump appliance to within 45m of all points within dwellings. This is to take account of the actual distance that the fire fighters need to carry kit and lay hoses from the vehicle to reach a potential fire.

If the 45m rule for firefighting access in paragraph 11.2 cannot be achieved to all points within the dwellinghouse would the provision of a private fire hydrant directly outside the dwelling be a suitable alternative approach?

Provision of water supplies does not, on its own, reduce the physiological impact on firefighters of travelling long distances whilst carrying heavy equipment. Water from private hydrants may still need to be pumped before it can be used for firefighting.

Where it is proposed to adopt an alternative approach to meeting requirement B5 (Access and facilities for the fire service). It would be advisable to seek the advice of the fire and rescue service who can advise on the practicalities of fire fighting.

Requirement B1 Means of Warning and Escape

Paragraph 1.4 asks for all new flats to be provided with smoke alarms in accordance with the BS 5839-6:2004 to at least a Grade D category LD3 standard. However Table 1 of the BS recommends Grade D Category LD2.

For the purposes of Part B of the Building Regulations an LD3 system is considered to be adequate. The system itself should therefore be installed in accordance with the guidance for LD3 systems in BS 5839- 6: 2004.

Should a fire alarm be provided throughout a block of flats?

The guidance in B1 Section 1 of the Approved Document (fire alarm and fire detection systems) is not intended to be applied to the common parts of blocks of flats and does not include a provision to interconnect installations in separate flats.

Fire detection devices may need to be provided in some blocks to actuate automatic smoke control systems in the common parts of the building in accordance with paragraph 2.25. Such devices are not expected to be linked to a common alarm system.

For small blocks of flats with no common lobbies, are door closers required for the protected entrance halls?

Door closers are not required for internal fire doors in flats, when they are being used to provide lobby protection for a common stair.

However, the requirement for the provision of fire-resisting doors remains as does the advice to householders that doors should be kept shut, especially at night.

In multi-storey flats with protected internal stairways, is the 7.5m vertical distance (Paragraph 2.16 c) measured from the entrance storey of the building or the entrance storey of the flat?

The vertical distance referred to in paragraph 2.16 c. should be measured from the entrance storey of the flat, not the entrance floor of the building.

Why do we say 1 bed and not 1 person for care homes?

Paragraph 3.49 in Volume 2 of AD B states; Bedrooms should not contain more than one bed (this includes a double bed). This is for a design, without sprinklers, relying upon fire resisting construction to protect occupants that are remote from the seat of fire.

The research report Sprinkler Effectiveness in Care Homes has shown that people who are in intimate contact with a fire, for example where clothing or bed linen is alight, are unlikely to benefit from the operation of sprinklers. However, where sprinklers are provided, people who may be in the same room but not in intimate contact with the fire (for instance in another bed) will have an increased chance of survival.

It is not the intention of the Approved Document to separate couples who happen to live in a care home by insisting that they sleep in separate beds.

Requirement B3 Internal Fire Spread (structure)

Are lift landing doors which have been tested and classified in accordance with the European standard EN 81-58 an adequate alternative to Doors tested and classified to BS 476 part 22?

The Department has commissioned some comparative testing of doors using these two standards. The conclusions of this work are that for the purposes of Item 2.d of Table B1 (provisions for fire doors) of Approved Document B (Vol2), results from EN 81-58 tests can be accepted as equivalent to BS 476 part 22.

In due course, the Department intends to publish the report from this work and amendments to the Approved Document necessary to meet the requirements of the Lifts Directive.

Diagram 30b (Junction of compartment wall with roof) places restrictions on double skinned insulated roof sheeting with a thermoplastic core, asking for the provision of a 300mm band of material of limited-combustibility. Can panels with combustible thermosetting cores be used instead?

In low-rise residential, office or assembly buildings to which Diagram 30b applies, panels with thermosetting cores can be used without any additional protection.

However, fire-stopping must be provided to seal the joint between the compartment wall and the underside of the panel. Any voids above the panel (such as where an additional roof covering is provided) should also be adequately fire-stopped.

Diagram 30a (Junction of compartment wall with roof) places restrictions on double skinned insulated roof sheeting, asking for the provision of a 300mm band of material of limited-combustibility. Can panels with combustible thermosetting cores be used instead?

Diagram 30a applies a more onerous standard than Diagram 30b, any combustible (including thermosetting) core panels should incorporate a band of material of limited combustibility 300mm wide centred over the wall.

However, an alternative approach might be to use a panel system which has been shown in a large scale test to resist internal and external surface flaming and concealed burning.

If an existing single storey shop is extended so that it exceeds the maximum 2000m² compartment size, Is it necessary to install a sprinkler system?

Regulation 4 of the Building Regulations 2000 states that "building work" should comply with the applicable requirements contained in Schedule 1. Regulation 4(2)a then goes on to state that, *"after the work is completed, the building as a whole should comply with the applicable requirements of Schedule 1 or, where the building did not previously comply with any such requirement, is no more unsatisfactory in relation to that requirement than before the work was carried out."*

Where an existing shop is extended such that the final floor area is greater than 2000m² (whether it exceeded this value previously or not) then the building as a whole may be less satisfactory in relation to requirement B3(3) than before the work was carried out.

Therefore, the building would have to be either subdivided to limit the compartment size, fitted with sprinklers or some other solution would be necessary in order to satisfy regulation 4(2) in relation to requirement B3.

Regulation 4(2) must be judged against the requirements set out in Schedule 1 rather than the Approved Document. B3(3) requires sub-division of the building *"to an extent appropriate"* to its size and intended use and it may be that some buildings will still comply with B3(3) by virtue of its intended use even though they have been extended without further capitalisation.

Paragraph 8.14, ask for blocks of flats over 30m to be sprinklered, do all flats need to be sprinklered or just those above 30m?

In blocks which are taller than 30m in height all the individual flats throughout the building should be sprinklered. However it would not be necessary to provide them in the common areas such as stairs, corridors or landings.

Paragraph 8.14 asks for a sprinkler system in accordance with BS 9251 for blocks of flats over 30m, but the scope of BS 9251 states that it should not be used in buildings over 20m in height.

For the purposes of meeting the provisions of Paragraph 8.14 the limit on the scope of BS 9251 to buildings below 20m can be ignored. However, the other limits such as the number of sprinkler heads per room should be observed.

If I provide sprinklers in a block of flats can I reduce other fire protection measures?

This would be a matter for the designer and the relevant building control body to consider. However, any such proposal may result in the need to upgrade the specification of the sprinkler system and the duration of water supplies.

Could increasing the period of fire resistance to walls and floors in a block of flats be a reasonable alternative to providing a sprinkler system in blocks of flats over 30m high in accordance with paragraph 8.14?

Increasing the period of fire resistance of the compartment walls between flats beyond that specified in the Approved Document is unlikely to have any significant impact on the safety of occupants of the building and would have no discernable benefit to persons in the flat where the fire has started.

It is estimated that the provision of a BS 9251 sprinkler system within a dwelling will reduce fire related casualties by around 70%. Whilst it would be desirable to install such systems in all dwellings it was decided that it would only be reasonable to impose this on larger buildings.

This was following analysis of the costs and benefits in the research report: [The effectiveness of sprinklers in residential premises](#) and consideration of the increased hazards for fire-fighters and other persons associated with fires in tall buildings, as discussed in the Regulatory Impact Assessment: [Changes to Part B \(Fire safety\) of the Building Regulations 2000 \(as amended\) and Approved Document B](#).

The 30m trigger height is considered to be a logical provision which aligns with the provisions for sprinkler protection for other building uses.

There may be alternative fire suppression systems that could be used where it can be demonstrated that that a similar level of performance as would be provided by a BS 9251 sprinkler system can be achieved.

Where water mist systems are proposed the guidance contained in the BRE publication [An Independent Guide on Water Mist Systems for Residential Buildings](#) may assist Building Control Bodies in assessing such systems.

Para 9.12 of the Volume 2 of the 2006 version of Approved Document Part B states "Where the concealed space is an undivided area which exceeds 40m (this may be in both directions on plan) there is no limit to the size of the cavity if.....". However the comparable paragraph in Part B 2000 edition states (para 10.13) "Where the concealed space is over an undivided area which exceeds 40m (this may be in both directions on plan) there is no limit to the size of the cavity if.....". Is the omission of the word "over" in the comparable paragraph of the current Part B deliberate?

No, this is a printing error. The word "over" should be retained as for the 2000 edition of Approved Document Part B, and so paragraph 9.12 of Volume 2 of Approved Document Part B 2006 should read: *"Where the concealed space is over an undivided area which exceeds 40m (this may be in both directions on plan) there is no limit to the size of the cavity if....."*.

Cavity barriers are provided to reduce the risk from unseen fire spread within concealed spaces in accordance with requirement B3(4) of the Building Regulations. The principle of paragraph 9.12 is that it relates to a concealed space over a single undivided room (such as an open plan office). Because the room below the space is undivided, the occupants will be able to see a fire develop and react to the changing hazard, thus cavity barriers within the space above are less important than with a cellular layout. The conditions in paragraph 9.12 are intended to reduce the risk of a fire starting/spreading in the undivided void and to prevent fire entering the void from outside the room which is not visible to its occupants.

Requirement B5 Access and facilities for the fire service

Why is the maximum hose distance in paragraphs 16.2 & 16.3, 45m? Our local Fire and Rescue Service appliances are fitted with hoses which are much longer than 45m.

The 45m criterion is based on the physiological demands on firefighters engaged in search and rescue and on the restrictions that may be imposed by their equipment..

When considering hose length it is important to appreciate that, in practice, hoses have a tendency to "snake" when charged thus limiting their effective length. It is also common practice to trim the ends of hoses where they become damaged. The time and effort it takes to lay out a hose may also be an important factor.

Is the 45m rule for fire fighting access in buildings not fitted with fire mains measured from the outside or from the front door?

Guidance in both volumes of the Approved Document Part B states there should be vehicle access for a pump appliance to within 45m of all points within dwellings. This is to take account of the actual distance that the Fire & Rescue Service need to carry kit and lay hoses from the vehicle to a potential point of fire.

Why does paragraph 16.6 say that the connection point for dry fire mains should, typically, be on the face of the building?

Guidance in Approved Document Part B states that there should be vehicle access for a pump appliance to within 18m of the dry main connection point. This is to take account of the actual distance that the fire fighters need to carry kit and lay hoses from the vehicle to the building and the time it takes to charge the main.

In some situations where the 18m distance cannot easily be met, it may be acceptable to extend the connection point beyond the face of the building to reduce the distance. However this will not, on its own, reduce the physiological impact on firefighters of travelling long distances whilst carrying heavy equipment.

Where it is proposed to adopt an alternative approach to meeting requirement B5 (Access and facilities for the fire service) it would be advisable to seek the advice of the fire and rescue service who can advise on the practicalities of fire fighting.