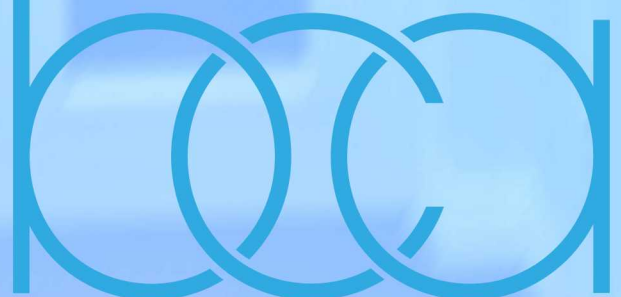


**Stairwell lobby
sizing in single stair
blocks of flats
exceeding 11m in
height**

27

**Issue 01.00
October 2019**

**Fire Safety:
Flat blocks 11m+**



Building Control Alliance

Purpose | BCA Technical Guidance Note 27

BCA technical guidance notes are for the benefit of it's members and the construction industry, to provide information, promote good practice and encourage consistency of interpretation for the benefit of our clients. They are advisory in nature, and in all cases the responsibility for determining compliance with the Building Regulations remains with the building control body concerned.

This guidance note is based upon information available at the time of issue and may be subject to change. The Approved Documents should be consulted for full details in any particular case.

Status | BCA Technical Guidance Note 27[illegible]

Notes on issue status:

A minor amendment is issued as an incremental point on the original and is in the form of 09.01.01, where the first number is the TGN number, the second is the issue and the third is the minor revision to the issue.

A major rework or change in guidance is given a new issue number, this would be in the form of 09.**02**.00 for a full re-issue.

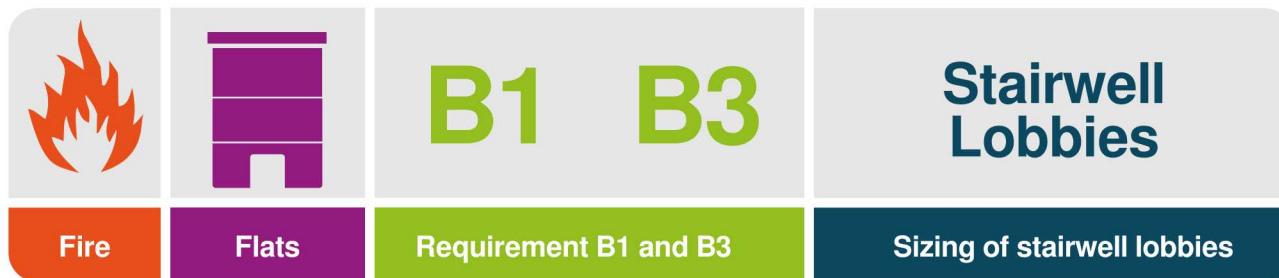
Minor revisions are issued retaining the main issue number with a sequential revision number, this would be for updating standards or correction of errors. This would be in the form of 09.01.**01** for the first minor revision to the first issue

Always ensure you are using the most recent Guidance Note, these can be referenced at the BCA website:

Conventions used within this document:

- Websites and links are shown in dark **blue underlined bold text**.
- Standards and referenced documents are shown in **bold text**.
- Defined terms within the glossary are shown in **light blue bold text**.
- Section and diagram references are shown in **purple text**.

Subject Area | BCA Technical Guidance Note 27



Introduction | BCA Technical Guidance Note 27

Guidance within [Approved Document B, Volume 1 \(ADBv1\)](#) and [BS9991](#) allows single direction travel distances of up to 7.5m measured from the furthest flat entrance door to either the stairwell door or a door to an intervening ventilated and fire sterile lobby.

Inevitably, although provided solely for the purposes of smoke control, the addition of an intervening lobby makes for an overall travel distance in excess of 7.5m between the stairwell and the furthest flat entrance door.

This guidance note addresses the need to keep the lobby as small as possible to avoid it being used as a means of extending travel distances to unreasonable limits.

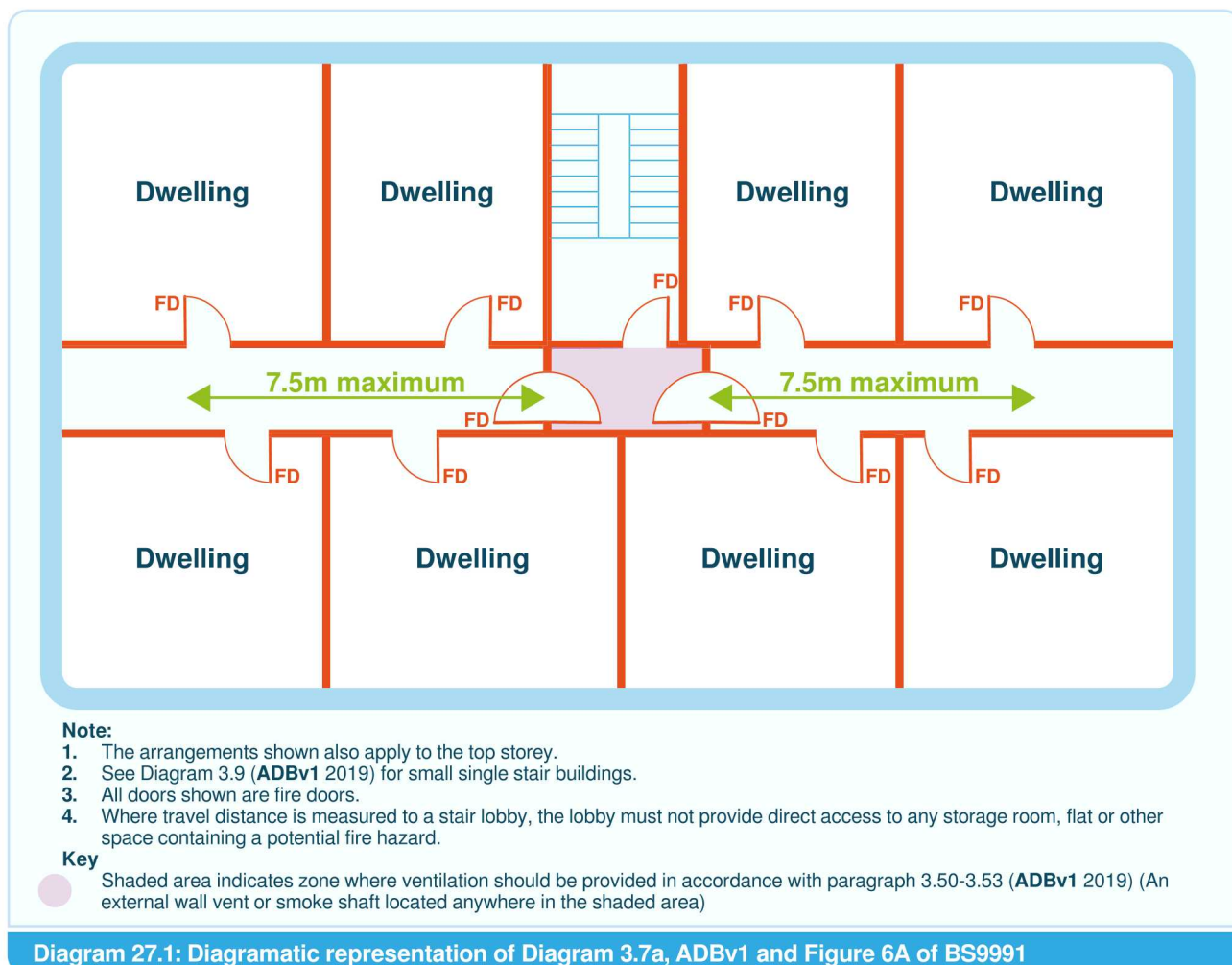
Key Issues | BCA Technical Guidance Note 27

Requirement B1 states that 'the building shall be designed and constructed so that there are appropriate means of escape from fire from the building to a place of safety outside the building capable of being safely and effectively used at all material times'.

In the case of single horizontal direction escape routes in blocks of flats exceeding 11m, [ADBv1](#) and [BS9991](#) interpret this requirement as below:

The travel distance between the exit doors from the dwellings and a smoke-free area should be limited, and the amount of smoke and other combustion products in the internal corridor or lobby kept to a minimum by providing cross-corridor fire doors and ventilation.

One acceptable solution (Diagram 3.7a of [ADBv1](#) and Figure 6A of [BS9991](#)) is represented diagrammatically on the next page in Diagram 27.1.



It is understood that the components of Diagram 3.7a came about from BRE research project BD2410 'Smoke Ventilation of Common Access Areas of Flats and Maisonettes'. This research project was primarily looking at various options for reducing the amount of smoke affecting zones outside of the fire zone and wasn't directly linking this with travel distances within common parts. However, the research noted (amongst other things) that the following items play a pivotal role in the overall smoke management for flats and maisonettes:

- Good compartmentation including smoke-rated doors
- Limiting travel distances and preferably providing two ways of escape

Given that a 7.5m travel distance is an established distance through which occupants can escape during the means of escape phase, as well as a means of limiting the time in which fire fighters would be expected to remain in dangerously hot and smoky conditions, it is clear that any increase on this dimension will have an adverse impact. This is particularly true in the fire fighting phase when doors are likely to be open to accommodate hoses etc, and so conditions within the entire length of the combined lobby and corridor may be at the upper end of tenability with no means for the fire service to open additional vents to improve them.

On this basis, and in the absence of any measures to improve tenability in these areas (such as the provision of sprinklers or mechanical extract smoke ventilation) the travel distance across the lobby needs to be kept as small as possible whilst still being of a practical size.

Guidance | BCA Technical Guidance Note 27

Code guidance states that a maximum travel distance of 7.5m is allowed between the furthest flat entrance door or the door to the vented lobby. In this case, it is expected that the overall travel distance to the stairwell door will exceed 7.5m but it should be ensured that inclusion of a lobby does not lead to excessive travel distances overall to the stair door.

The following criteria should be applied when determining whether Diagram 3.7a/Fig.6a is appropriate to the proposed layout (see diagram 27.2 below):

1. The lobby should be free of any potential fire risks and not give access to any flat or ancillary accommodation. Therefore, the lobby should **only** give access to:
 - A. The stairwell
 - B. The lifts
 - C. The corridor
 - D. Service risers (unless the risers contain electrical equipment, motors etc which pose a higher ignition risk than cables alone)
2. The travel distance across the lobby should be kept as short as possible **and in no cases exceed 7.5m**.

Any layout which cannot fulfil the above criteria is not considered to be suitable for the application of the above guidance and, instead, should be addressed via a fire engineering justification, possibly including mechanical smoke ventilation system and/or sprinkler and smoke ventilation system (see BS9991:2015 Clause 11, Table 2, 14.1.3 and Annex A, together with the Smoke Control Association 'Guidance on Smoke Control to Common Escape Routes in Apartment Buildings (Flats and Maisonettes) - Revision 2: October 2015')

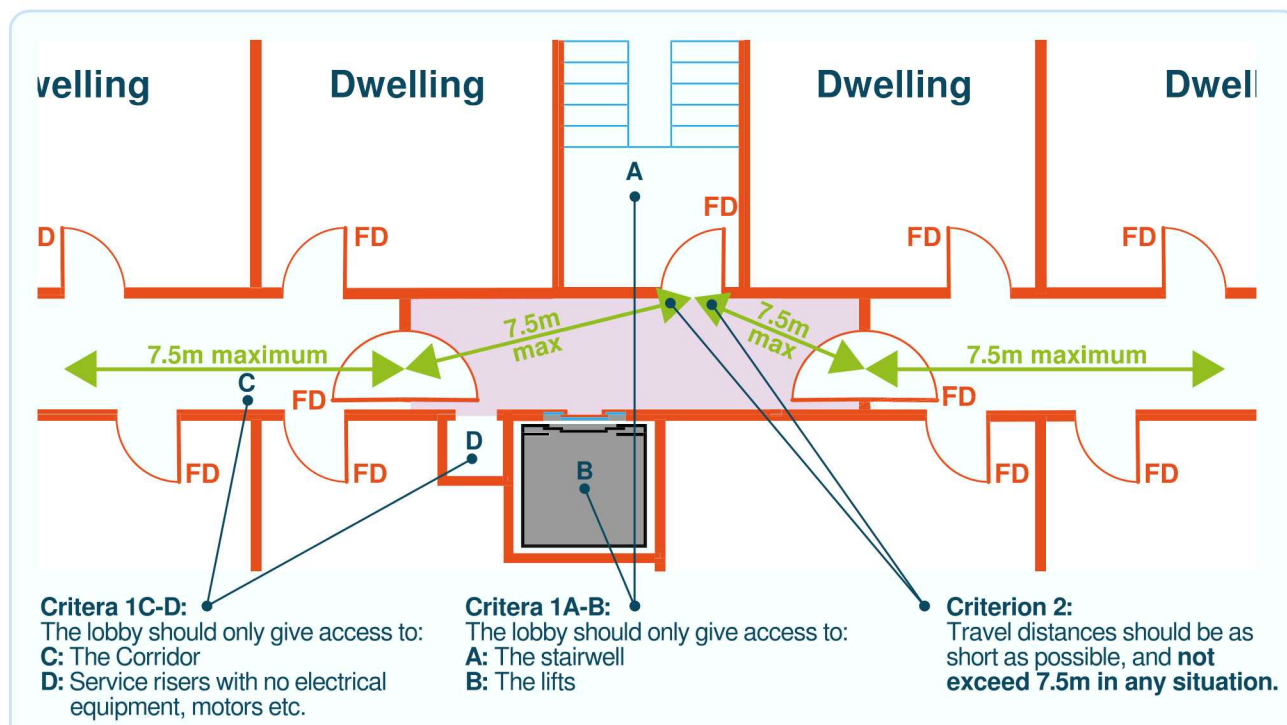


Diagram 27.2: Maximum lobby travel distances and acceptable adjoining spaces

Glossary of Terms | BCA Technical Guidance Note 27

BRE

Building Research Establishment, www.bregroup.com

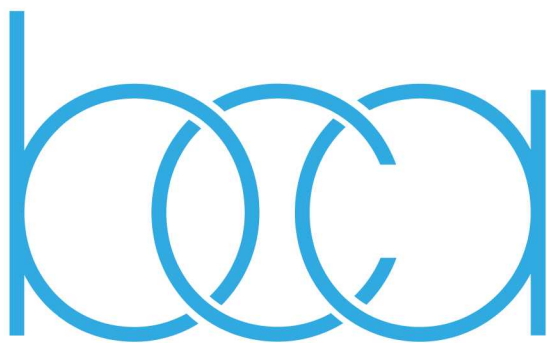
References | BCA Technical Guidance Note 27

Approved Document B, Volume 1 or ADBv1

HM Government (2019) Approved Document B Volume 1 – Dwellings: 2019 Edition. London: RIBA Books. Also Available from www.gov.uk.

BS9991

BS 9991:2015 (Incorporating Corrigendum No. 1). Fire safety in the design, management and use of residential buildings - Code of Practice. London: British Standards Institution. www.bsigroup.com



Building Control Alliance

The Building Control Alliance is a unique industry group made up of representatives from clients, stakeholders and all the organisations directly involved in building control in England and Wales.

It includes the organisations supporting the many thousands of building control professionals –

- Chartered Institute of Building
- Chartered Association of Building Engineers
- Royal Institution of Chartered Surveyors

and the professional associations promoting public and private sector building control –

- Local Authority Building Control
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