

Smoke control of common escape routes by natural smoke ventilation

3.50 Except in buildings that comply with Diagram 3.9, the corridor or lobby next to each stair should have a smoke vent. The location of the vent should comply with both of the following.

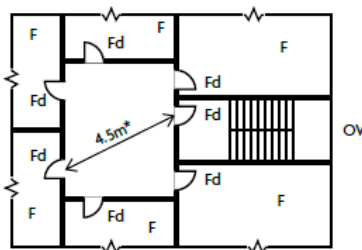
- Be as high as practicable.
- Be positioned so the top edge is at least as high as the top of the door to the stair.

3.51 Smoke vents should comply with one of the following.

- They should be located on an external wall with minimum free area of 1.5m².
- They should discharge into a vertical smoke shaft, closed at the base, that meets all of the following criteria.
 - The shaft should conform to the following conditions.
 - Have a minimum cross-sectional area of 1.5m² (minimum dimension 0.85m in any direction).
 - Open at roof level, minimum 0.5m above any surrounding structures within 2m of it horizontally.
 - Extend a minimum of 2.5m above the ceiling of the highest storey served by the shaft.
 - The free area of all the following vents should be a minimum of 1m² in the following places.
 - From the corridor or lobby into the shaft.
 - At the opening at the head of the shaft.
 - At all internal locations within the shaft (e.g. safety grilles).

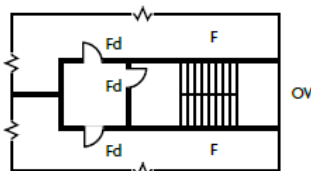
- Either of the following is provided for the fire and rescue service.
 - A high-level openable vent with a free area of at least 1m² at each storey.
 - A single openable vent with a free area of at least 1m² at the head of the stair, operable remotely at the fire and rescue service access level.

See para 3.28



a. SMALL SINGLE STAIR BUILDING

*If smoke control is provided in the lobby, the travel distance can be increased to 7.5m maximum (see Diagram 3.7, example b).



b. SMALL SINGLE STAIR BUILDING WITH NO MORE THAN TWO FLATS PER STOREY

The door between stair and lobby should be free from security fastenings.

If the flats have protected entrance halls, the lobby between the common stair and flat entrance is not essential.

NOTES:

- The arrangements shown also apply to the top storey.
- If the travel distance across the lobby in diagram (a) exceeds 4.5m, Diagram 3.7 applies.
- Where, in Diagram (b), the lobby between the common stair and the dwelling is omitted in small single stair buildings, an automatic opening vent with a free area of at least 1m² is required at the top of the stair, which is operated automatically on detection of smoke at any storey in the stair.
- For further guidance on the fire rating of the fire doors from the corridor to the flat and/or stairway refer to Appendix C, Table C1.

— Fire resisting construction

OV Openable vent at high level for fire service use (1.0m² minimum free area); see paragraph 3.28e

F Flat

Fd Fire doorset

Diagram 3.9 Common escape route in small single stair building

