

Functional Standard: 2.9 Non-Domestic

Standard 2.9 states: "Every building must be designed and constructed in such a way that in the event of an outbreak of fire within the building, the occupants, once alerted to the outbreak of the fire, are provided with the opportunity to escape from the building, before being affected by fire or smoke."

Issue

Provide occupants with opportunity to escape

Verifier

Aberdeen City Council

Technical Context

The building complex concerned comprises three parts. Each part is fire separated from the other parts by 120 minutes fire resistance:

- A five storey car park building located between the Level 00 and Level 04
- A seven storey newly completed office building above the car park between Level 05 and Level 11
- A four storey former cinema building between Level -01 and Level 03

The proposals include fitting out areas of the newly completed office building which has a top storey height of 39.33 m above ground level. The subject of the view is a proposed alteration to form an unenclosed accommodation stair between Levels 06 and 07 which will be in the same occupation. The means of escape strategy is based on vertical phased evacuation.

Because tall buildings take longer to evacuate, vertical phased evacuation can be adopted to allow occupants most at risk to be evacuated first. This allows the additional time it may take to evacuate a building or part of a building. Every storey should be a compartment storey (clause 2.9.31 to Standard 2.9). In addition, where buildings have a storey height of more than 18m above the ground, each floor should normally be a compartment floor (clause 2.1.6 to Standard 2.1). As such, any openings in compartment floors should be fire protected to prevent fire passing from one compartment to another.

The proposed stair opening between Levels 06 and 07 will result in the two existing compartments becoming a new single compartment.

The newly completed office building has a phased evacuation strategy that is supported by the following fire safety measures:

- Fire separation of 120 minutes from the two attached buildings
- Fire separation of 60 minutes to places of special fire risk
- L1 automatic fire detection and alarm system to BS 5839-1
- A voice alarm system to BS 5839-8
- A protected lobby entry to escape stairs
- Every floor, with the exception of Level 07, is a compartment floor with a fire resistance of 120 minutes
- Automatic life safety sprinkler system to LPC Rules, incorporating BS EN 12845

The phased evacuation strategy has been reassessed in relation to the proposals to take account of the combined occupant load of the Levels 06 and 07 single compartment, plus the occupant load of compartment floor Level 08 above. In the event of a fire at Level 06 or 07, the sequence of evacuation would be as follows:

- Phase 1 – Evacuate Level 06, Level 07 and Level 08
- Phase 2 – Evacuate Level 09 and Level 10
- Phase 3 – Evacuate Level 11 and rooftop plant
- Phase 4 – Evacuate Level 01 to Level 04 and Level 05

The view of Scottish Ministers

On behalf of Scottish Ministers, the Building Standards Division has considered all the information submitted in this case and their view is set out below.

In the event of an outbreak of fire on Levels 06 or 07, the fire detection and voice alarm system will give early warning of fire to occupants on Level 06, Level 07 and Level 08 with phase 1 of the evacuation strategy commencing at once to these areas. All fire safety measures provided in support of the phased evacuation strategy are considered sufficient to reduce the risk of combining compartments at Level 06 and 07.

Having carefully considered all the information submitted in this case, it is the view of Scottish Ministers that the proposals do meet the requirements of Standard 2.9.