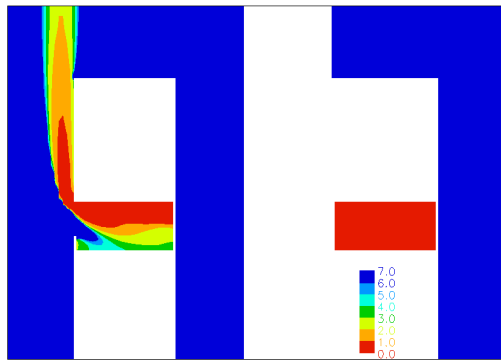


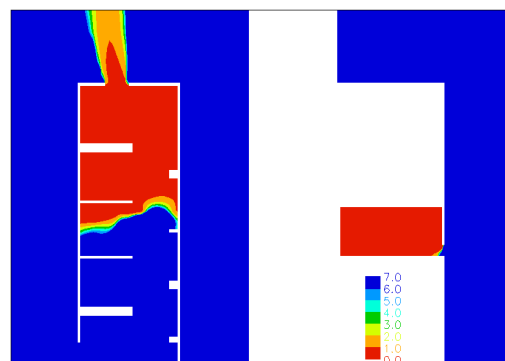


Smoke Ventilation of Common Access Areas
of Flats and Maisonettes
Appendix Eii – Selected 'visibility distance'
contours for CFD 'corridor & lobby'
scenarios; 0.25 MW fire, 0.1 m dwelling
door gap and 0.78 m lobby & stair door
openings

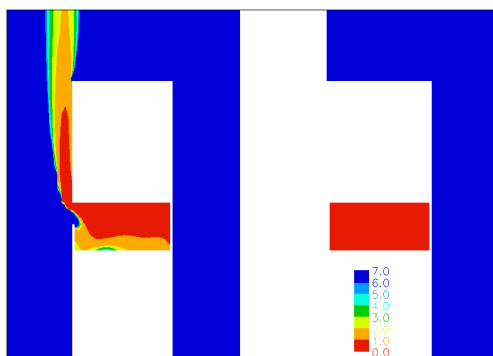
The authors of this report are employed by BRE. The work reported herein was carried out under a Contract placed by the ODPM. Any views expressed are not necessarily those of the ODPM.



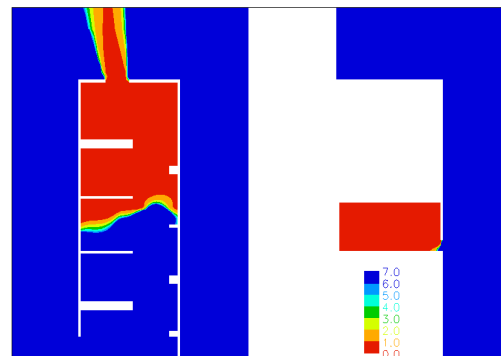
Lobby: L: 1.5m high-level wall vent
 R: No vent
Mean temp in occupied space = 24°C



Stair: Top and bottom

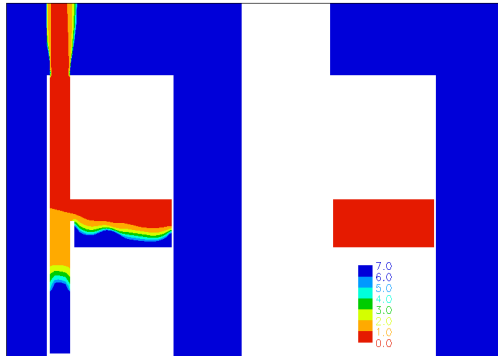


Lobby: L: 1m high-level wall vent
 R: No vent
Mean temp in occupied space = 26°C



Stair: Top and bottom vent

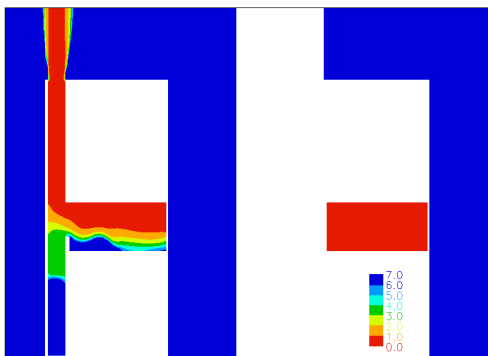




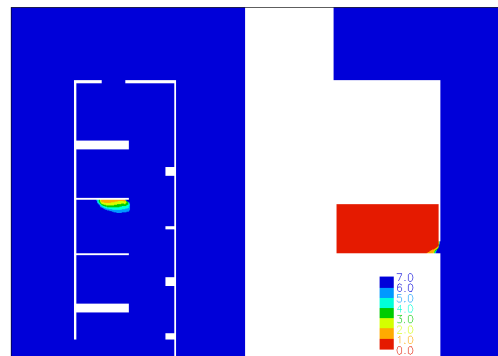
NO SMOKE IN STAIR

Lobby: L: Natural closed-base, **1m²** shaft
 (1 m² high-level vent to lobby)
 R: No vent
Mean temp in occupied space = 24°C

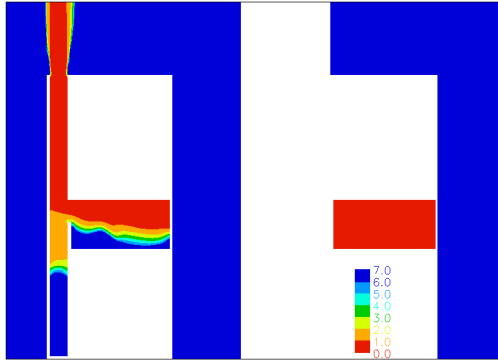
Stair: Top and bottom vent



Lobby: L: Natural closed-base, **0.75m²** shaft
 (1.3 m² high-level vent to lobby)
 R: No vent
Mean temp in occupied space = 25°C



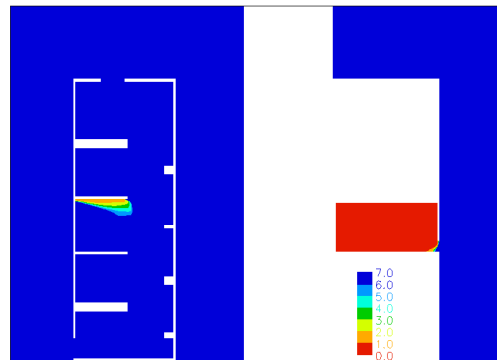
Stair: Top and bottom vent



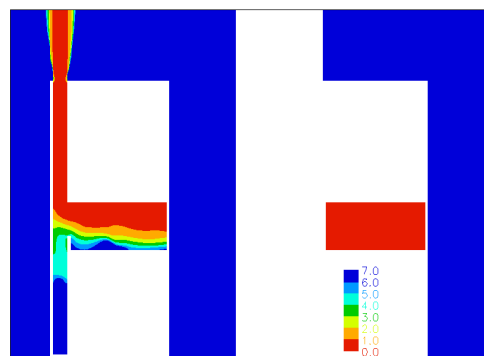
Lobby: L: Natural closed-base, **0.75m²** shaft
(0.85 m² high-level vent to lobby)

R: No vent

Mean temp in occupied space = 24°C



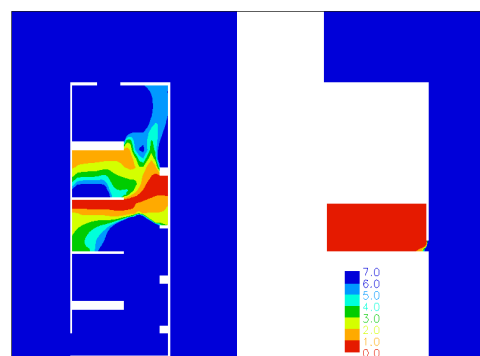
Stair: Top and bottom vent



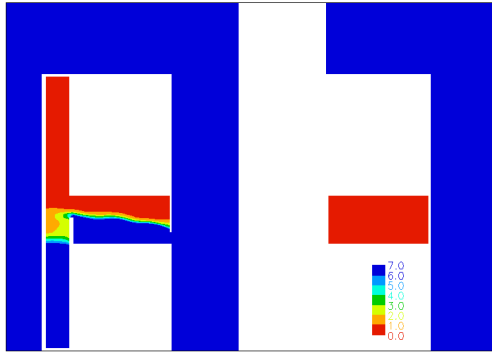
Lobby: L: Natural closed-base, **0.5m²** shaft
(1.1 m² high-level vent to lobby)

R: No vent

Mean temp in occupied space = 24°C

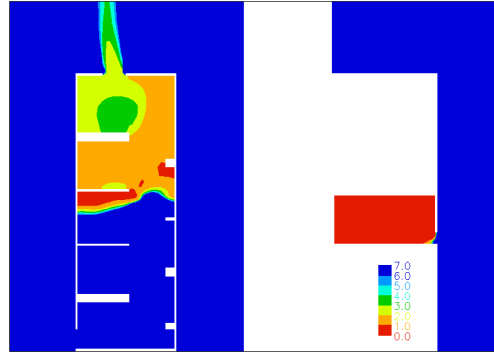


Stair: Top and bottom vent

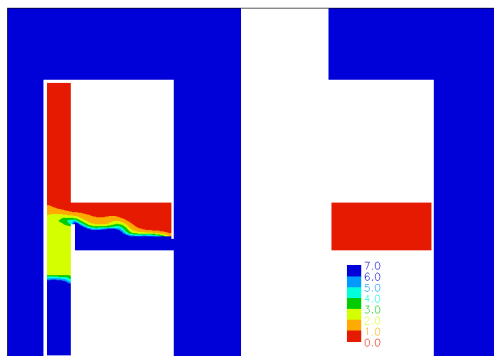


Lobby: L: Mechanical closed-base, **1.5m²** shaft
(**80 ach⁻¹** (0.6 m³s⁻¹) and
1m² high-level vent to lobby)
R: 0.5m² low-level vent

Mean temp in occupied space = 23°C
Closed door ΔP = 2Pa; open door vel = 0.3ms⁻¹

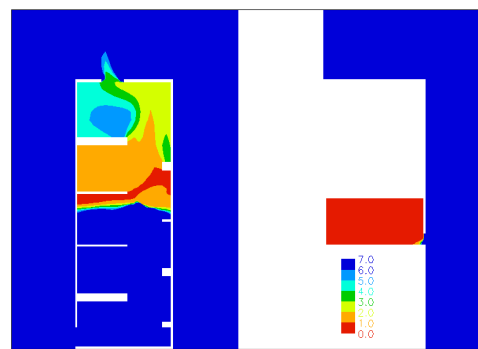


Stair: Top and bottom vent



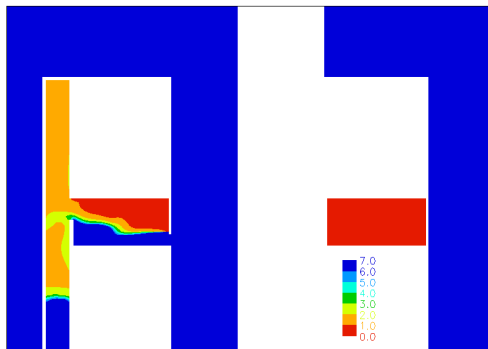
Lobby: L: Mechanical closed-base, **1.5m²** shaft
(**160 ach⁻¹** (1.2 m³s⁻¹) and
1m² high-level vent to lobby)
R: 0.5m² low-level vent

Mean temp in occupied space = 24°C
Closed door ΔP = 6 Pa; open door vel = 0.5ms⁻¹



Stair: Top and bottom vent

bre



Lobby: L: Mechanical closed-base, **1.5m²** shaft
(**320 ach⁻¹** ($2.4 \text{ m}^3\text{s}^{-1}$) and
1m² high-level vent to lobby)
R: 0.5m² low-level vent

Stair: Top and bottom vent

Mean temp in occupied space = 25°C
Closed door $\Delta P = 25 \text{ Pa}$; open door vel = 1.0ms^{-1}