

**Society of Fire Safety NSW Chapter**

# **Lifts for Evacuation and Refuge in High Rise Buildings**

**Open Forum Discussion**

**Chaired by**

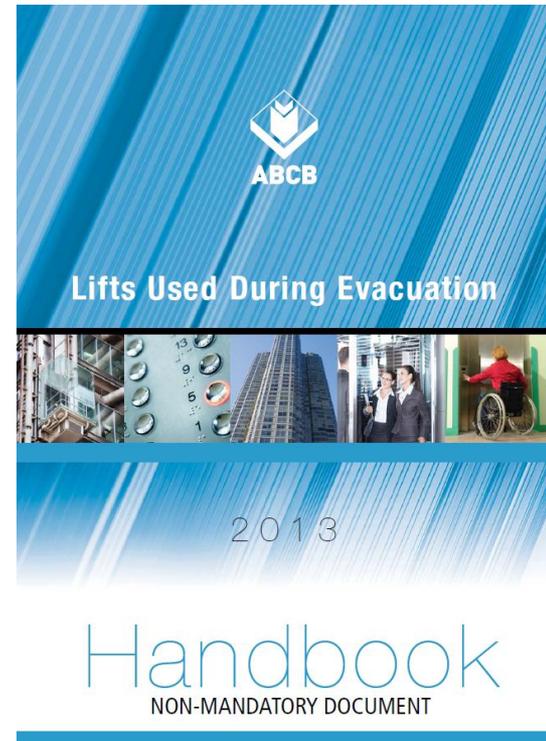
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# Lifts for Evacuation

- How often are they used?
- Effective Operation?
- Lessons learnt?

Metropolitan Fire & Emergency Services Board Community Safety Directorate			Guideline No: <b>GL-31</b>
<b>GUIDELINE</b> Use of lifts for evacuation			Prepared By: MFESB Community Safety Advisory Group
			Authorised By: Director Community Safety
First Issued: 13 December 2005	Version No: 2 12 April 2010	Reviewed: 12 April 2010	Page 1 of 5



# Refuge in high rise - reasons

- relief for evacuating occupants
- sub-base for fire-fighting
- commend point by rescue personnel to organize an orderly evacuation
- safe haven for disabled or people with low mobility to wait for assistance
- refuge vs. stay in place ?

# Refuge in high rise - Design

- No more than 20 levels apart
- Accommodate 50% of total population of all upper and lower levels at 0.3m<sup>2</sup>/person
- Mechanical pressurisation or open sides
- Accessible from fire stairs, emergency lifts
- No interior decoration, furniture or combustible materials
- Maybe part of a service level

# Summary of Comments - Lifts in Evacuation

- Lifts for evacuation and refuge levels/areas in high rise have been used in Europe and Asia for 10-20 years.
- Despite increase of high rise development and publications of the ABCB and MFB guidelines, lifts are rarely used for evacuation in Australia.
- Lifts have been used in Australia for assisting occupants with disability to evacuate. (Sydney Olympic Park project).
- The need for using lifts in evacuation is particularly imminent for occupants of low mobility such as the disabled, aged or very young children. They would also assist in reducing fatigue and overall evacuation time in super high rise buildings.
- Lifts currently manufactured in Australia are not suitable for use in evacuation.
- Lifts are operated differently in emergency; they are shuttled and do not stop at every level. Safe refuge has to be provided for queuing to enter lifts.
- Mindset of not to use lifts in an emergency may hinder occupant cooperation.
- Lifts should be supplementary to and must not replace fire isolated stairs that are required.
- Cost and perceived risk in approval have deterred developers from using lifts for evacuation.
- Cost benefit study should be carried out (by the ABCB?).

# Summary of Comments – Refuge in high rises

- Refuge levels/areas provide a path from a contaminated stair to a safe stair.
- It is important to provide a safe haven for people traveling many levels in the stair to have a break.
- In Europe public corridors are designed to provide a place of intermediate safety.

## Refuge Levels

- Natural ventilation via open sides can be a drawback for aesthetics.
- Is fire separation enough to permit combustibles in the enclosure?
- Refuge levels are compulsory in some countries / regions.
- (If not compulsory), Developers would be reluctant to provide dedicated refuge area, which can be seen as a waste of space. Consider dual usage e.g. as a gathering place.
- On the other hand the increased level of safety could be a selling point.
- If it can be done in Europe and Asia, why can't it be done in Australia?