11.1.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. The provision of an Accessible Means of Escape should be an integral part of the building design, construction and fire safety management process. The full range of people who might use the building needs to be considered and in particular the needs of vulnerable users. High rise buildings present particular problems with respect to the evacuation of mobility-impaired people. The use of appropriately designed fire evacuation lifts should be considered for Stage 1 evacuation.
2. Designers should note that BS 9999: 2008 takes an approach that is highly end user and use specific. For complex projects where the use of BS 7974: 2001 is considered appropriate, designers should consider the appointment of a qualified fire safety engineer.
3. It should be recognised that mobility-impaired people constitutes a larger group than just wheelchair users. The population is ageing, there is increased obesity and reduced fitness levels. There may therefore be users who are able to use stairs but will be unable to reach a place of safety within the required evacuation timescale. The following features should be considered in the design of an accessible escape route:

   a) Horizontal evacuation to a different fire compartment

   b) Making all escape routes accessible

   c) The use of lifts

   d) Installing additional handrails and edge markings
4. Horizontal evacuation to the outside of the building or another fire compartment is the preferred method of evacuation for vulnerable users with mobility impairments if an evacuation lift is not provided. Carrying people up or down stairs, with or without assistive devices is not ideal and should be avoided in high rise buildings. It is unlikely that one solution will fit all circumstances and therefore evacuation strategies should be flexible enough to respond to a wide variety of situations.
5. Although Building Emergency Evacuation Plans should be developed with reference to the specific building type, use, occupancy etc they should be supplemented by Personal Emergency Action Plans (PEEPs) in order to respond to the specific needs of vulnerable users. PEEPs include both person-specific and standard plans.

   a) Standard PEEPs are generic and applicable to buildings such as shopping malls, leisure and entertainment venues, where visitors will not generally make themselves known to the building management. In these circumstances the PEEP should anticipate the needs of as wide a range of users as possible. Information about emergency evacuation procedures, escape routes, the location of emergency evacuation lifts, refuges and the provision of assistance should be clearly displayed throughout the building in statutory Fire Action Notices. Staff should fully understand the PEEP and sufficient trained staff should be available to implement the evacuation plan.

   b) Visitor PEEPs are person-specific but are only discussed and agreed with building management once the visitor has made themselves known e.g a disabled hotel guest. The staff responsible for discussing a visitor PEEP should be trained to anticipate the needs of a wide range of users, be fully conversant with the support services available and be able to discuss the user's needs sensitively. In the event of an emergency staff should be able to implement the agreed evacuation plan.

   c) Individual PEEPs are person-specific plans prepared for members of staff and regular visitors to a building. The PEEP will therefore be developed in conjunction with the individual and respond to their specific needs.
6. In circumstance where evacuation may not be possible within the evacuation refuges may be used to provide a place of safety. Two way communication between the occupants of the refuge and the team organizing the building evacuation should be provided to give reassurance to users.

EVACUATION USING LIFTS

1. A lift used for the evacuation of vulnerable users should be either a fire-fighting lift of an evacuation lift constructed in accordance with Annex G of BS 9999: 2008. The lift manufacturer to confirm whether their products is compliant with the BS standard or equivalent. There may be circumstances, subject to risk assessment, when a non-evacuation lift could be used in the initial stages of a fire e.g. where automatic sprinklers are installed and there is significant compartmentalisation and / or smoke control.

STAIRWAYS

1. Building evacuation via stairways is highly reliant on flow rates and maintenance of an unobstructed stair. People falling on the stairs can become a significant hazard. People with mobility or sensory impairments are at increased risk and therefore unnecessary evacuation should be avoided. Staff training is critical to this process as they need to understand both how to provide assistance to a variety of vulnerable users and evaluate risks.

TRAINING AND TEST EVACUATIONS

1. Staff designated to assist vulnerable users should be fully trained in evacuation techniques and equality awareness so that they are confident in the required techniques and communicating with vulnerable users. Test evacuations should be carried out at least once a year. It should be recognised that some evacuation procedures will carry a higher degree of risk for some vulnerable users so the number of test evacuations and the potential for false alarms should be assessed accordingly.