

Egress for people with disabilities

The New Zealand Building Code has no specific accessible egress requirements for people with disabilities. It's a complex issue, and changes are needed.



A 2006 SURVEY FOUND that approximately 660,000 people identified as having a disability, which corresponds to 17% of the New Zealand population. This figure may not include people who were temporarily injured, pregnant women and

parents with prams, even though their mobility may be similar to those with disabilities.

With the increasing number of aged people who are susceptible to mobile and sensory impairments, the potential number of people with disabilities is expected to grow.

Safe egress in regulations, not Code

Building Code clause D1 *Access routes* does not explicitly require egress routes out of buildings that are suitable for people with disabilities. However, it does include requirements for accessible routes to and within buildings.

Accordingly, the Acceptable Solutions do not comprehensively cover the need to provide safe egress for people with disabilities.

Safe egress tends to be handled by the Fire Safety and Evacuation of Buildings Regulations 2006. These require that relevant buildings - most public buildings - have an approved evacuation scheme with provision made for people with disabilities.

Consequently, evacuation provisions for people with disabilities generally use 'soft' factors, for example, an emergency evacuation

plan or fire warden system, rather than 'hard' factors, such as enhanced notification and way-finding systems or hardened elevators.

Concerns with current safety strategies

Egress-related concerns of people with disabilities can be largely categorised by three problematic egress steps:

- Alarm and notification - sounders may not be an effective means of notifying hearing-impaired occupants compared to strobes or shakers.
- Way finding - vision-impaired occupants may have difficulty finding their way to safe exits as typical signage may not work for them.
- Movement - without hardened elevators, people in wheelchairs may need to use exit stairs and, without assistance from others, they are unlikely to be able to self-rescue.

These are simple cases, but the concerns become complex once building use and a more detailed level of disabilities are considered.

Personal experiences aid understanding

People with disabilities, caregivers, building facility managers, disability advisors and Fire Service personnel attended six workshops held around New Zealand. The aim was to collect New Zealand-specific data to understand the egress strategies participants had considered or used in real or practice emergency situations.

Egress strategies identified in workshops

Research participants identified several occupant strategies and responses:

- Take any alarm seriously even if it is thought to be a fire drill.
- Want more information about what is going on and where to go soon after the alarm sounds.

-
- Have major concerns about how to identify the nearest, safest and quickest egress route, especially in an unfamiliar place or complex environment such as a shopping mall.
 - May need assistance to evacuate in an emergency (although many participants expressed a desire to be as self-reliant as possible).
 - Unlikely to use elevators for egress (but there were concerns about the lack of alternative means of escape from upper levels).
 - Rely on the guidance of a fire warden, emergency staff or someone with a level of authority.
 - Wait in the refuge area for further assistance, for example, from firefighters. Others nearby are also likely to offer assistance. (However, there were misperceptions about what is an area of refuge and uncertainty about where they are located in buildings.)

Some physically impaired participants said that they would get out of the way and wait for everyone else to leave first, as they would not want to slow others down.

Some participants said that they would wait for assistance while others would actively seek assistance - especially if they were more severely impaired.

Some pointed out the need for training and practical experience for both operators and themselves in using an evacuation chair on stairs.

Ideas for changes

Suggestions were also made:

- There needs to be multi-sensory and more informative alarm and notification systems for people with disabilities.
- Stair landing areas should be designed for people with disabilities to wait for assistance.
- There should be protocols for the provision, operation, training and practice of evacuation chairs or other equipment used to assist evacuation.
- Awareness needs to be raised and training provided for fire wardens and other safety personnel and central and local government about the needs of people with disabilities in emergency egress.

Complex issue that needs more work

Providing accessible means of egress for people with disabilities - the hard factor approach - is a complex problem and difficult to solve. Factors such as human rights, societal values and potentially high costs are all inter-related with it.

While comprehensive fire safety design solutions can be developed, there is currently no agreed protocol established or detailed guidance material available. More research would be useful. ◀

Note ▶ This article draws on research by Dr Amanda Robbins of Jensen Hughes Consulting Canada Ltd and Julie Warren of Julie Warren and Associates in a project funded by the Building Research Levy.

More details are available in BRANZ Study Report SR338 *Accessible egress pilot workshops summary* available from www.branz.co.nz/shop.