KCC Health and Safety Procedure
Fire Evacuation Equipment Considerations

Introduction

Unlike fire safety equipment, there is no recognised standard for evacuation equipment, however the Regulatory Reform (Fire Safety) Order 2005 (RRFSO) states that the responsible person must 'take such general fire precautions as will ensure, so far as is reasonably practicable, the safety of any of their employees', and 'take such general fire precautions as may reasonably be required in the circumstances of the case to ensure that the premises are safe' for visitors.

When the RRFSO is cross-referenced against the Equality Act 2010, it should also be in conjunction with Building Regulations Approved Document B Vol 2 – Requirement B1: Means of warning and escape and BS 9999: 2017, part 45 Evacuation of disabled people, it is even clearer that the means of evacuation for limited mobility and disabled people must be accounted for.

When considered as a whole, the legislative guidance can be broken down to the following key points:

- Anyone permitted entry to a building must be assured that there is a suitable plan and equipment is in place to evacuate them.
- The escape route must be always clear and available so that all people can escape to a place of safety without external assistance.
- Any auxiliary evacuation aids that can reasonably be foreseen as necessary should be provided – failure to do so is discriminatory.

Therefore, a safe and effective means of escape must always be available to all building users.

Considerations

The main challenge, when evacuating people with limited mobility, is putting in place a system to safely manage the descent of stairs. The use of lifts is usually restricted (unless a fire lift is in place) in the event of a fire.

Therefore, any building which is open to the public and which requires the use of a lift to change level, will need access to evacuation equipment and an alternative escape route, this is even if no employees or service users identify with mobility limitations, this is usually facilitated by some sort of evacuation equipment.

When considering the most appropriate emergency evacuation equipment there are some key factors to be considered including:

- Fire Risk Assessment / Fire Strategy / Building layout
- Personal / Generic Emergency Evacuation Plan (P/G EEPs)
- practicality
- ease of use
- nature of the impairment, disability
- location and number of person (s) needing assistance
- number of trained staff available
- level of training required
- maintenance
- cost

Types of Emergency and Evacuation Equipment

Below are some of the different types of emergency evacuation equipment available and some of their characteristics:

Evacuation chair

The most common type of emergency evacuation equipment is an evacuation chair. This device is generally folded flat and mounted on a wall in a designated refuge area. The evacuation chair has two ‘skis’ that have friction-controlled bolts that allow for, in most instances, one trained person to transport the mobility-impaired person down the stairs.

Manual stairway tracked evacuation chair

- Requires user to self-transfer to the evacuation chair.
- Not suitable for travel up stairways.
- Requires physical output by helper
- Can be used for downward and horizontal evacuation.
- Possibly requires two operators to assist with evacuation.
- Can have two-wheel manoeuvrability, or 4 wheels making horizontal travel easier for the handler.

Powered stairway evacuation chair

- Requires user to self-transfer to the evacuation chair
- Some models require manual pushing when traveling on the level.
- Possibly requires two operators.
- Can be used for both upward and downward evacuations.
- Narrow staircase turning areas to be considered

Powered Stair climber

- San be used for bariatric evacuations.
- Single operator use.
- Has speed settings for ease of use.
- Can be broken down for portability.
- Requires user to self-transfer onto chair.

Powered wheelchair stair climber

- Basic models travel on stairs only, advanced models also travel on the level.
- User can remain in their wheelchair.
- Narrow staircase turning areas to be considered.
- Can be used for vertical up and down evacuation.
- Built in tilting sensor.
- Less strain for operator
- Single operator use.

Mobile powered stair climber – for powered wheelchairs

- User can remain in their wheelchair.
- Narrow staircase turning areas to be considered.
- Can be used for bariatric evacuation.
- Can be used in and outdoors.
- For vertical up and down evacuations
- Single operator use

Evacuation sheet/sledge

Evacuation sheet/mat/ provide a solution used generally within care, An evacuation sheet is used in conjunction with the bed mattress and can be placed permanently underneath on the bed frame, this is particularly useful for people that are bed-bound. These can be either for static (foam or spring mattresses) or dynamic (air mattresses) and you must ensure that you use the correct one.

- Universal design for single mattress
- Two safety belts to hold in person in place.
- Good load carrying
- Machine washable
- Left in place so always available.
- At least two-person operation
- Horizontal or downstair evacuation

A fire evacuation mat/sledge/stretcher is typically made of a lightweight, durable material that is easy to slide on. These can be stored in a central location and usually requires the user to self-transfer on to it. The mat has handles on either side so that it can be easily transported. An evacuation sledge differs from a mat in that the sledge includes a foam base for support but is not designed to offer pressure relief and can be used for less mobile or anyone prone to seizures.

- Lightweight and compact for easy storage and handling
- Ideal for evacuating bedridden persons.
- Requires mattress/sledge to be physically dragged.
- Require two or more helpers depending on user weight.
- Intended for horizontal or “downstairs” travel.
- Can be used through narrow doorways and fire escapes.
- Virtually maintenance free.

It is also essential to remember that having suitable and sufficient equipment is just one part of the process. In addition to the Fire Risk Assessment and fire strategy, it is also a requirement that there are number of suitably trained staff who must be available at all times of the building being open to operate the equipment in the event of an evacuation, and the initial training should be followed by periodic (at least annually) refresher training, this can be a mixture of face-to-face and e-learning and maintenance of equipment is required to meet both legislative requirements and the Provision and Use of Work Equipment Regulations (PUWER)1998.

Most types of equipment will need to be inspected at least annually to meet requirements of PUWER Class 1 Medical Device; The supplier will be able to provide details of maintenance and inspection requirements, and records should be kept and made available for any inspection.

Note: - Health professionals are to be consulted when considering suitability of equipment for a user.