

Emergency Evacuation of People with a Disability Options Matrix for Developing a PEEP

The following matrix includes most disability types and recommends options for their escape. The options can be used as a discussion tool in order to establish the options open to each person. These options will need to be considered within the overall context of the fire safety and evacuation features of the building.

Option	Type of escape	Electric Wheel-chair user	Wheel-chair user	Mobility impaired person	Asthma & other breathing/health issues	Visually impaired person	Hearing impaired person	Dyslexic/orientation disorders	Learning difficulty/autism	Mental Health problems	Dexterity problems
1	Use of lift	1	1	1	1						1
2	Meet assistance at refuge		1	1		1				1	
3	Meet assistance at work-station	1	1	1	1	1	1	1	1	1	1
4	Make own way down stairs slowly	1	1	1	1	1					
5	Move down stairs on bottom after main flow	1	1	1	1				1		
6	Use evacuation chair or similar	1	1	1	1						
7	Carry-down 2 people	1	1	1	1						
8	Carry-down 3 people	1	1	1	1						
9	Carry-down 4 people	1	1	1	1						
10	Travel down in own chair with support		1								
11	Cannot transfer readily	1	1								
12	Can get down stairs using handrails	1	1	1	1	1			1		
13	Needs assistance to walk down stairs 1 person	1	1	1	1	1			1	1	1
14	Needs assistance to walk down stairs 2 people	1	1	1	1	1			1		
15	Need orientation information					1	1	1	1	1	

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16	Needs tactile map of building					1					
17	Need colour contrasting on stairways					1		1	1	1	
18	Needs step edge markings			1		1	1	1		1	
19	Needs showing escape routes				1	1	1	1	1		
20	Needs assistance for person and dog				1	1					
21	Needs doors opening										1
22	Large print information					1		1	1		
23	Identification of escape route by reception/ security					1	1	1	1	1	
24	Provisions of flashing beacons						1				
25	Buddy system					1	1	1			
26	Provision of vibrating pagers	1	1	1			1				
27	Provision of alternative alarm	1	1	1		1	1				
28	Additional checks by fire wardens						1	1	1	1	
29	Horizontal evacuation	1	1								
30	Need for taped information					1		1	1	1	

1. Evacuation lifts

Evacuation lifts are those that have been modified to offer an evacuation facility in an emergency.

Lifts cannot be used in emergencies unless designated as a 'fire-fighting lift' or an 'evacuation lift'. The University Fire Safety Advisor will be able to tell you if and in what circumstances a lift may be used in the event of a fire.

If you believe that there is a suitable lift within the building then the Safety Office will advise on the correct procedure for using the lift and will also advise on the signage and training necessary.

When including evacuation lifts in an escape plan, there is a need to check that the cabin will comfortably accommodate larger mobility aids, such as electric wheel chairs, in addition to any accompanying persons.

Where suitable evacuation lifts are provided, disabled people should be advised to make their way to the lift point and use the lift in accordance with the prescribed instructions.

2. Meet assistance at refuge

Some disabled people will require assisted escape. In these cases it will be necessary to have a pre-arranged meeting place.

If the disabled person is likely to move around the building, a means of communication will be necessary between the escape volunteer and the disabled person. They can then arrange to meet at a particular refuge point during the escape.

People should never be left in a refuge point to wait for the Fire and Rescue Service. The refuge can be used as a safe resting place as well as a place to wait in a phased evacuation while the go-ahead for a full escape is established. A refuge must be equipped with a suitable means of communication.

Most refuges can accommodate only one wheelchair. This should not be a problem where there is more than one wheelchair user, provided that there is a suitable evacuation strategy in place. As one person progresses on their journey, the next person will take their place in the refuge.

Fire compartmentation can also provide a form of refuge. The refuge may play a part in the disabled person's escape journey (e.g. move horizontally through a door in a compartment wall).

3. Meet assistance at workstation

Some people will need to meet their assistant(s) at their own workstation. In this instance the allocated escape volunteer(s) should go straight to the disabled person's workstation at the beginning of the evacuation procedure.

The assistant(s) could be someone who works alongside the disabled person (buddy system), therefore they can set off on their escape journey together.

4. Make own way down stairs slowly

Some people who use wheelchairs may be able to make their own way down the stairs if they have a little mobility. It may be necessary to ensure that there are suitable handrails and step edge markings present.

The preferred solution is where the escape plan enables disabled people to leave the building by their own efforts. This reduces the chance of confusion and the chance of the plan breaking down. In these instances the person may rest along the way in refuges. Disabled people who choose this independent method of escape are likely to move slowly down the stairs and it may be better for them to wait for the main flow of people to

leave the building.

Escape stairs that are incorporated in a fire-resistant shaft should be safe for up to 30 minutes. This greatly enhances the escape time, especially when fire alarm systems incorporate advanced fire detection measures. This reinforces the importance of building occupiers keeping self-closing fire doors shut and observing good housekeeping practices when occupying buildings.

Where this escape method is chosen, it is important that it becomes part of the PEEP and is recorded and monitored should there be a problem during the escape. The fire warden should report to the Fire Safety Manager that a disabled person is slowly making their way out of the building. This information must be passed on to the Fire and Rescue Service on their arrival at the incident.

5. Move down stairs on bottom after main flow

While some people will prefer to take responsibility for their own escape by walking down the stairs, others may prefer to make their own way out by shuffling down the stairs on their bottom. Again, it will be best for this group of people to wait until after the main flow of people has evacuated.

Wherever possible, they should be monitored to ensure that there is no problem with their progress. The fire warden should report to the Fire Safety Manager as above. This information must also be passed on to the Fire and Rescue Service on their arrival at the incident.

6. Evacuation chairs

Where these are provided and this is the preferred method of escape of a visitor, the provision of evacuation chairs should always be accompanied by a full system of escape for disabled people as they are only a part of the solution. Regular training of staff in the use of evacuation chairs is essential.

7-9. Carry down

There are a number of types of carry-down techniques using two, three or four people. A disabled person may wish to be carried out either using their own wheelchair or by another method. A manual handling risk assessment should be undertaken and a suitable team should be assembled and trained to take them out safely.

The appointed people require regular training to use any provided equipment safely. When carry-down is the preferred method, specialist moving and handling training should also be provided.

10. Move down stairs in own chair with support

Some wheelchair users are strong and skilled enough to tip their chair on its axis and travel down the stairs in this way. Others can do this with assistance.

Where this method of escape is considered, expert training will be required and the technique should be practised regularly.

Again, the escape should take place after the main flow of people leaves the building. This method is only acceptable for short flights of stairs.

11. Cannot transfer readily

Some people will find it difficult or impossible to transfer from their chairs to an evacuation chair or other evacuation aid. In these circumstances it will be necessary to

consider the availability of evacuation lifts or restrict access to a floor that has horizontal escape available.

12. Move downstairs using handrails

Some people will be able to make their own escape but will require a handrail to support them to get out of the building. This will be to either the right or left of the stairs. Once you have established that they require a handrail, you will know from your previous assessment which staircases in your building are suitable. Where one is not available then assistance may be required.

13-14. Assistance from one or two people

Some people will require a buddy to assist them out of the building, if this is the case they must be made aware of locations of refuges where they can wait for the assistance to arrive, they should also be given instruction in the use of any communications equipment provided at the refuge point.

15. Orientation information

Where a person requires additional orientation information, it may be sufficient to give them a guided tour of the escape routes from the rooms they use. There are a number of disabilities where additional orientation information is required. Good orientation systems benefit all of them and could include colour coding, signage and defined routes (as explained in 16–18). People with cognitive impairments can benefit from a photographic record of the route.

16. Tactile maps of the building

Some people will need additional guidance information in the form of tactile maps. You should ensure that you have this information in advance.

17. Colour contrasting on stairways

To assist their orientation needs, some people will require an orientation strategy to assist way-finding within the building. This can be achieved through colour coding or contrasting the escape routes. An alternative might be to provide laminated paper signs with red triangles and yellow squares printed on them; these are used to identify the escape routes and supplement the regulated escape signs.

18. Step edge markings

Some people will be more confident about making their own way out of the building if there is sufficient contrast on the nosing's on the stairs. It may also be appropriate to allocate a working area. It would be advisable to provide contrasting nosing on all stairs in order to reduce the need for assistance.

19. Need to be shown the escape routes

Some people will only need the escape routes pointing out to them and this will be sufficient.

20. Assistance for the person and their dog

Where a person uses a guide dog, they may prefer the dog to assist them out of the building. The escape routes should be pointed out to them. Others will prefer to take the

responsibility (for means of escape) away from the dog and request a human assistant. In these cases, a buddy should be allocated to the person. It may also be necessary to provide a person to look after the dog. Again, this may be provided in an informal or formal manner.

21. Need doors to be opened

Some people may have difficulty negotiating self-closing fire-resisting doors. It should be ensured, therefore, that all such doors and their self-closing devices (including those that are normally held open by electromagnets linked to the fire alarm system) comply with the recommendations of the appropriate British Standard regarding opening and closing forces.

However, some people may still require assistance to open the doors, for example those with upper limb impairments. Again, this can be a formal or informal arrangement. Where a person may be alone in a building that has doors that may be difficult for them to open, it may be necessary to provide a more formal level of assistance.

22. Large print information

Some people will need fire evacuation information provided in large print. It is possible to produce large print information in-house. Ask the person what size of print is suitable for them. You should ensure that you have this information in advance.

23. Identification of escape routes by reception or security

Visitors to the building may need reception or security staff to show them the escape routes when they arrive at the building. This task should be allocated to the most suitable person for each building or department.

24. Flashing beacons

Hearing impaired or deaf people need to be made aware that an evacuation is taking place. Where they are likely to be alone in the building, it may be necessary to provide a flashing beacon or other similar device. Where one is not available, then a suitable buddy system will be required. Flashing beacons may not be appropriate in all buildings, for instance where other lighting conflicts with the beacons.

25. Buddy system

A buddy system may be the most suitable method for alerting a hearing impaired or deaf person to the operation of the fire alarm. This should not be done on an informal basis in case everyone assumes that someone else has given the warning.

26. Vibrating pagers

Vibrating pagers can alert hearing impaired and deaf people that there is an emergency and they need to leave the building. They can also be used to communicate with other people who are part of the assisted escape system.

27. Alternative alarm systems

There are other methods of contacting disabled people; these can be either through the telephone system or through the intranet. It is recommended that where a person cannot use the existing system or needs support to use it, all other communication options are explored.

28. Additional checks by fire wardens

In order to provide back-up wherever there is an assisted escape system in place, it is also necessary for the fire wardens or fire marshals in the building to be aware of who is present and what escape plans are in place. They should then be trained to provide suitable assistance where necessary.

29. Horizontal evacuation

In some buildings, it is possible to evacuate people horizontally through the building into another fire compartment and away from the emergency situation.

When the alarm goes off, people who cannot use stairs are directed to move into another fire compartment. Information about where to go is required in order for this system to work. Where horizontal evacuation is not immediately available on the affected floor, it may be available on a lower floor. This may be more acceptable than travelling all the way to the ground floor. The opportunity to do this should have been identified as part of the building fire safety risk assessment.

30. Taped information

Where a person cannot read the fire drill instructions, they may benefit from the provision in tape format. This should be produced in Plain English and in other languages where appropriate.