Visual guide to emergency lighting and signage

Emergency lighting needs to be provided in many premises to allow occupants to leave the building or area when power to the normal lighting fails. If the premises need to be evacuated, then the occupants need to leave the place they are, find the nearest exit route and proceed to a final exit door from the building and then, possibly, to a safe place of assembly away from the building.

It is the responsibility of the building owner’s designated ‘responsible person’ to carry out a risk assessment to determine if and where emergency lighting is required. Then the emergency lighting and exit signage can be designed by someone with the experience and understanding of lighting (uniformity, glare etc.) and emergency lighting installations.

This guide provides a simple checklist of key points and is not meant to be a comprehensive guide to legislative requirements or standards. For a comprehensive guide to the design, testing and monitoring of emergency lighting and signage systems, please refer to SLL LG12: *Emergency lighting* (2015).

1 Key steps in the design process

Figure 1 Light open areas to 0.5 lux minimum to avoid panic amongst loose furniture and to aid in navigation in possibly complex spaces (© sylv1rob1/Shutterstock)

Figure 2 Light escape routes to 1 lux along centre line and 0.5 lux over central 50% of width
Figure 3  Light high-risk areas to 15 lux, or 10% of main lighting level lighting level if higher. This ensures dangerous or production processes can be safely and quickly shut down before people escape from the area (© (left) Guy Shapira/Shutterstock; (right) wavebreakmedia/Shutterstock)

Figure 4  Ensure any junctions and isolated steps along escape routes are directly lit

Figure 5  Ensure all firefighting equipment and break-glass call points are directly lit

Figure 6  Ensure dry and wet risers are directly lit

Figure 7  Light disabled people’s refuge areas, equipment and call points

Figure 8  Light all toilets for disabled people

Figure 9  Light all toilets with floor area over 8 m²
2 Use of spot style lights

Figure 10 Only use spot style emergency light to light down over large open areas

Figure 11 Do not place spot style lights at low-level or where they may dazzle escapees trying to find an exit

Figure 12 Do not place spot style units in shaded areas
3 Stair lighting

Figure 13 Light escape staircases well to ensure that people joining at each level can safely merge with those descending the stairs. Rescue services may need to go up the same stairways as evacuating people going down.

Figure 14 Ensure disabled peoples’ refuges on landings and their intercoms are directly lit.

Figure 15 General access stairs should be covered even if they are not designated as escape stairs.

Figure 16 Directly light final escape doors to ensure escapees can operate any opening mechanism or unusual security release buttons (© Mehmet Cetin/Shutterstock)
4 Exit signs

Exit signs need to be visible at all times, not just when the power to the normal lights fail. If a building needs to be evacuated under normal circumstances all the lights are on and people will look around for their nearest exit — the signs need to be the right size for the viewing distances and not be obscured.

Figure 17 Check that an exit signs can be seen from any point in a corridor or open space

Figure 18 Check that arrows on exit signs direct people from that space towards the final exit — avoid possible confusion

Figure 19 Check that exit signs are the correct size for their viewing distance. Large signs are available for big spaces

Figure 20 Ensure that exit signs are roughly along normal lines of sight and not installed too high above normal eye-line. In an emergency would you have seen the exit sign in this image?
Figure 21  Ensure exit signs are not obscured by other hanging lights or signs. There are two exit signs in the image here.

Figure 22  External exit signs may be needed for alleyways and divided routes leading towards place of safety.

5  Beyond the final exit

Once outside, escapees need to disperse safely or proceed to a safe assembly point. In an area-wide power cut there will be no lighting from streetlights or surrounding buildings.

Figure 23  Light areas outside of final exit doors to assist escapees in moving any external obstructions and to assist them move away from the doorway quickly and safely.

Figure 24  Exits with steps or slopes directly outside need to be well lit.
Continue emergency lighting and exit signage externally to a place of safety. All external stairways from exits need lighting.

Emergency lighting and signage are needed on rarely used external escape routes, which may be wet or covered in snow/ice.

Light areas along back routes and alley ways from final exit doors. There is a break-glass exit release on the gate here.

Provide lighting and signage along any escape routes over adjacent roofs.
Lighting for the built environment

LG12: Emergency lighting

The Society of Light and Lighting produces a comprehensive 65-page lighting guide to all aspects of emergency lighting, including the required uniformity and lighting levels for various areas; glare limits for luminaires and installation and maintenance requirements. Details of this and other SLL publication may be found here: https://www.cibse.org/society-of-light-and-lighting-sll/lighting-publications

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