

RISK ASSESSMENT

The purpose of emergency lighting risk assessment is to help to determine whether the existing provisions, as part of the fire precautions, are adequate, and, if not, how to improve them. A judicious design with the right emergency lighting and fire detection and alarm system can often reduce high-risk premises to normal risk. The specification should of course be based on equipment that meets the appropriate standards, correctly installed in accordance with verified performance data, regularly tested and maintained as specified.

The objective of risk assessment is to protect people from fire, to warn people of fire, and to allow them to escape to safety. Emergency lighting plays a critical role in assisting the escape to safety. The risk assessment will include deciding on the necessary action to comply with the

Workplace Regulations within the framework of a seven-stage process:

- 1 Identification of the fire hazards.**
- 2 Consideration of the fire risk, reducing the fire hazards where possible.**
- 3 Assessments of the means of escape, reducing the escape time if necessary.**
- 4 Assessment of the need for a fire detection and alarm system.**
- 5 Recording the findings and the action taken.**
- 6 Preparation of an emergency plan, and arranging practices.**
- 7 Carrying out regular checks and maintenance to ensure safety. Safety equipment such as emergency lighting should be checked to ensure it operates as intended and is correctly maintained.**

You should understand how they apply to specific buildings. As far as new premises are concerned, the designer should have provided

adequate emergency lighting according to the Building Regulations and the designated code of practice for such installations. The employer, or responsible person, must however still carry out risk assessment to verify that other procedures such as testing, maintenance and training are followed.

For existing premises or for premises subject to a change of use, compliance with the Fire Precautions (Workplace) Regulations 1999 is a legal necessity, and may involve some enhancement to the emergency lighting installation and safety procedures.

For premises in which 5 or more persons are employed, there is a legal requirement to document significant findings, together with details of measures taken to deal with the risks identified. If there are fewer than 5 people, there is still a requirement to carry out a risk assessment, although it may not be formally recorded.

Certain buildings are exempt from the requirements, such as workplaces used only by the self-employed and private dwellings. Other workplaces are covered by their own specific requirements, such as mine shafts, sports grounds under the Fire Safety and Safety of Places of Sport Act 1987, construction sites that apply to the Construction (Health Safety and Welfare) Regulations 1996, ships, within the Docks Regulations 1988.

When you are considering a risk assessment report, look at some of the simple ways that can reduce the risk. For example, if the incoming mains electrical supply to the premises is not in an area of low risk, then staff may be exposed to unacceptable risk from lighting failure, and emergency should be provided in areas other than the escape routes to reduce that risk. If there are potential obstructions on the escape route, such as stair treads, barriers and walls at right angles, then

BS5266 advises that they should be light in colour against a contrasting background. This contrast may not be appropriate, therefore higher emergency illuminances of at least 1 Lux can be used to reduce this risk.

All emergency lighting systems should be regularly inspected and tested. The data obtained and details of any corrective action should be entered into a log book, which is held on site. We can supply you on request with a full chart showing the procedures in accordance with the recommendations of the Fire Precautions (Workplaces) Regulations.

To provide a risk assessment evaluation you will need to know about the most appropriate choice of product and design for both emergency lighting and fire protection. You will need to consider the legal requirements, the standards, any local requirements, and determine the

escape routes, the type of emergency lighting required, the mode of operation and emergency duration of the system, and the positioning of the equipment.

We have covered some of this information in these briefing notes. We can also supply you on request with a comprehensive Risk Assessment document. It includes familiarisation with the latest Signs Directive, comprehensive definitions and calculations, the suitability of different systems, and practically all you need for completing an emergency lighting design. Similar information is available in the Fire Protection document.

It also includes a detailed checklist, which can be used to ensure that every requirement is met, and logged, and a definitive list of the standards and references relating to emergency lighting and fire protection.

Reducing the risk

SITUATION	RISK	REQUIREMENTS			
		EMERGENCY LIGHTING	MAINTAINED EMERGENCY LIGHTING	HIGHER EMERGENCY LUMINANCE ≤1UX*	INCREASE EMERGENCY LIGHTING
If incoming mains electrical supply is not in an area of low risk	Staff exposed to risk from lighting failure	✓			
If lighting circuits do not correspond with the fire compartmentation	Non-maintained emergency lighting may not operate when required	✓	✓		
If older or disabled or partially sighted people are likely to be in the building	They may obstruct escape routes	✓		✓	
If there are potential obstructions on the escape route, then BS5266 and IS3217 advise that they should be lit in colour against a contrasting background	This contrast may not be appropriate	✓		✓	
If there is likely to be a presence of high physical risk	Rapid response time increased	✓			✓
If the length of the escape route is excessive	Escape time is increased	✓		✓	✓
If people such as the public or temporary workers unfamiliar with the layout of the building are likely to be present	Escape time is increased	✓		✓	✓
If the escape route passes through open areas	Escape time is increased	✓			✓
If an area is larger than 60m²	Escape time is increased	✓			✓
If 5 or more people are employed on the premises	Staff exposed to risk from lighting failure	✓	✓		