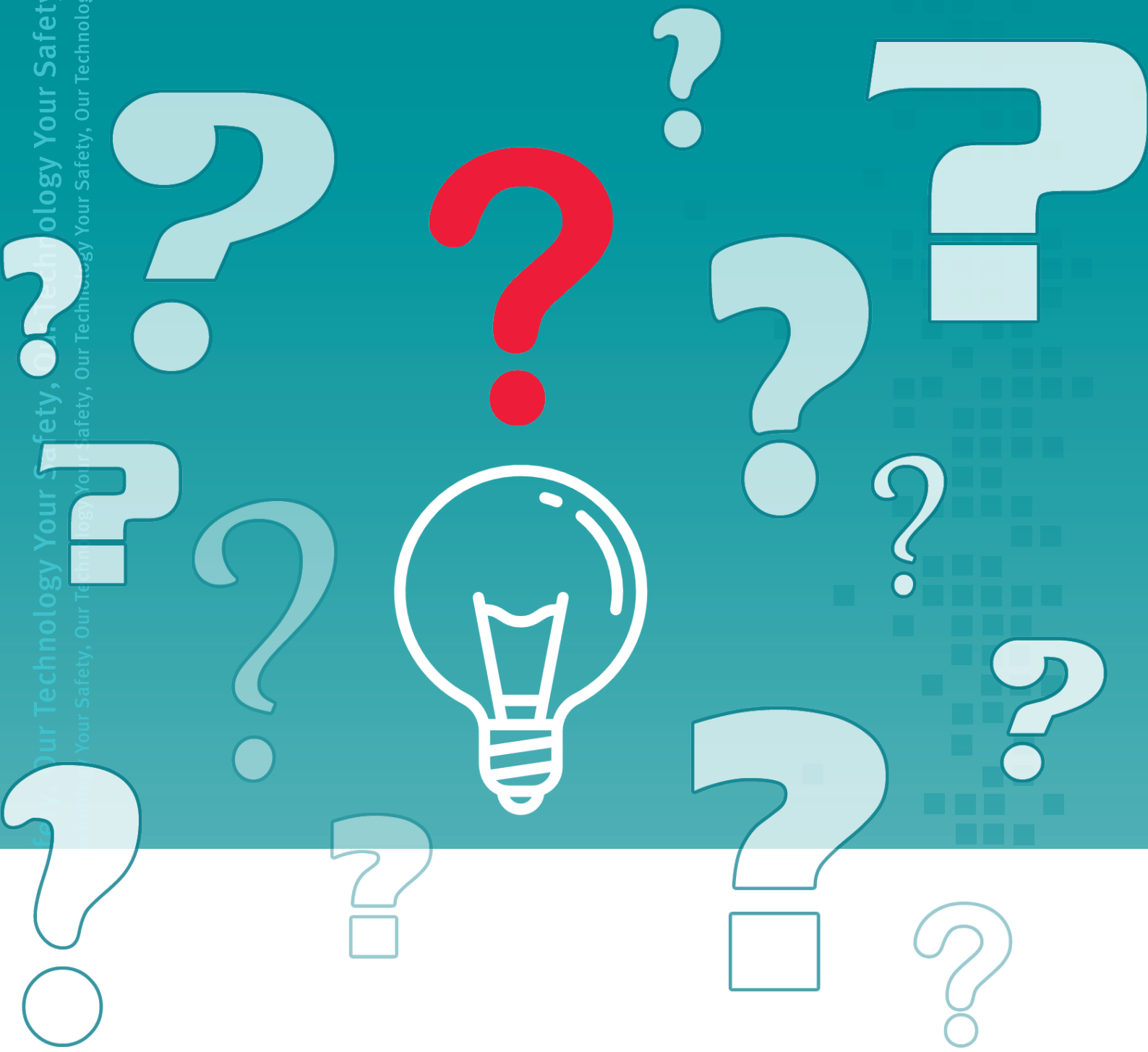
HOCHIKI



Emergency Lighting : Selecting and Installing a System

+44 (0)1634 260133 info@hochikieurope.com www.hochikieurope.com @HochikiEurope

Overview

This document will explain the importance of an Emergency Lighting System and provide you with a basic understanding of the key points to consider when selecting and installing one at your premises.

SECTION 1

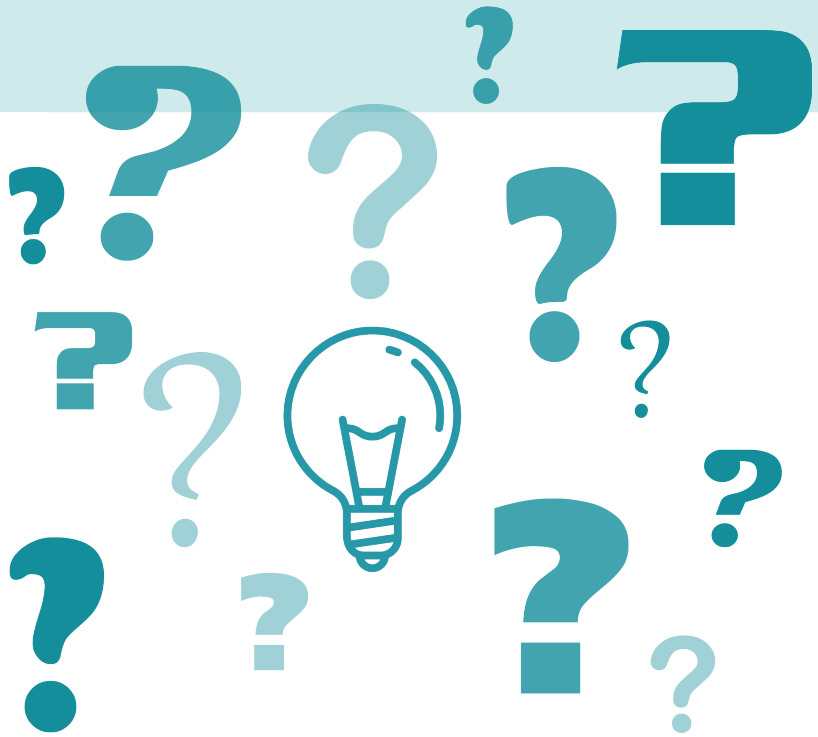
- Why is Emergency Lighting Important?
- What could happen if we do not have sufficient Emergency Lighting?

SECTION 2

- We need a new Emergency Lighting System, where do we start?
- Do I need to be aware of any standards?
- Does BS 5266 provide all the information I require on this subject?
- What counts as a point of emphasis?
- Are there specific requirements for a building primarily used for disabled people?
- What are the minimum lux levels that need to be achieved?
- What are the key things to consider when locating the luminaires?

SECTION 3

- Energy efficient and cost effective Emergency Lighting Solution.
- Where can I find further information?



SECTION 1

WHY IS EMERGENCY LIGHTING IMPORTANT?

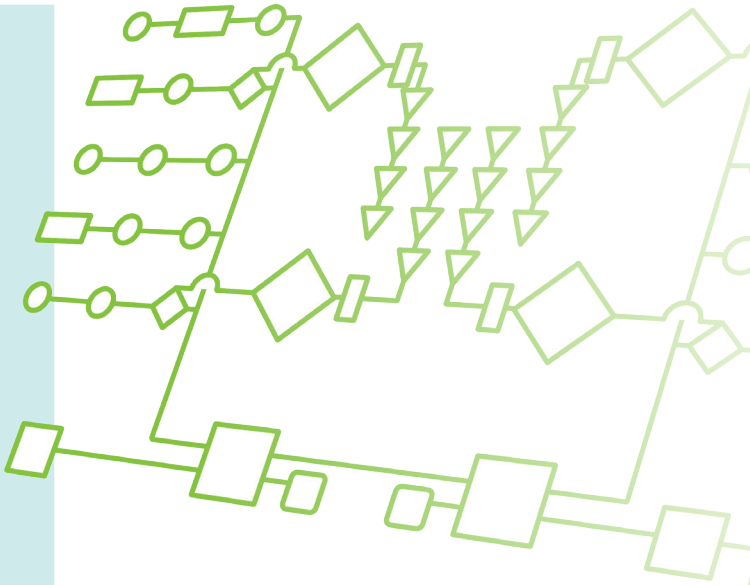
Emergency Lighting is an important life safety feature that is essential to modern day living. In case of an emergency, it is this illumination that enables people to see clearly, avoid obstacles, move quickly and find an exit. Without Emergency Lighting people are far more likely to lose their lives in a crisis.

WHAT COULD HAPPEN IF WE DO NOT HAVE SUFFICIENT EMERGENCY LIGHTING IN OUR BUILDING?

Regulations now require that in every organisation there is a responsible person for emergency lighting who has to risk assess their premises and obtain third party assurance for the fire safety equipment. Any failure that leads to loss of life, personal injury or damage to property exposes responsible persons, and possibly installers too, with criminal prosecution and damages claims through civil courts. Insurance policies may not cover them if inferior, non-compliant equipment has been used.

SECTION 2

WE NEED A NEW EMERGENCY LIGHTING SYSTEM IN OUR BUILDING, WHERE DO WE START?



1. Selecting your Emergency Lighting system

This is an important decision, and you will want to consider reliability, compliance to standards, energy efficiency and you may want to make a quick calculation of total cost of ownership. You may wish to employ a consultant to help you with this decision.

2. Choosing your installer

Once you have decided upon the system you would like to install then you need to ensure you choose a reputable firm who are suitably qualified to install your system.

3. Maintaining your system

A good Emergency Lighting system should last for years if it is maintained correctly. The installation company should be able to provide you with a maintenance programme, but you must still ensure that your organisation's Responsible Person carries out regular assessments and especially if there has been a change of use in parts of the building.

DO I NEED TO BE AWARE OF ANY STANDARDS?

UK fire safety legislation states that people in premises must be able to find their way to a place of total safety if there is a fire, by using escape routes that have sufficient illumination.

The regulations, standards and guidance on this issue are comprehensive and designed to ensure that each building's particular needs are thoroughly examined and understood.

BS 5266, the code of practice for the emergency lighting of premises, offers guidance on the positioning of luminaires, minimum light levels, acceptable glare levels and minimum routine testing schedules. It states that in open areas larger than 60m2 emergency lighting and signage should be installed.

SO DOES BS 5266 PROVIDE ALL THE INFORMATION I NEED ON THIS SUBJECT?

Not exactly. What it does do is provide a minimum standard that should be applied and gives guidance on specific hazards and points of emphasis that have to be accounted for.

The risk assessment that must be undertaken by a responsible person under the Regulatory Reform (Fire Safety) Order 2005 should identify any specific areas that must be addressed. This includes making sure that the emergency lighting system is fit for purpose and is regularly tested and maintained.

It is important to bear in mind that there is no 'one size fits all' way of assessing the risk within a building as they are all built differently and have specific uses. For instance, a hospital or home for the elderly will have different fire safety needs than an office.

You may also wish to review ICEL standards, as they have been brought into place to promote best practices in emergency lighting. The Regulatory Reform (Fire Safety) Order 2005 will also be relevant.

WHAT COUNTS AS A POINT OF EMPHASIS?

When designing an emergency lighting system covering escape routes, luminaires should be installed at points of emphasis – mandatory locations that need to highlight specific hazards, safety equipment and signs.

Points of emphasis include areas near stairs, near changes of level, at each change of direction, near fire fighting equipment and manual call points, outside and near to each final exit, first aid points, at exit doors, and near safety signs.

I'M ABOUT TO INSTALL AN EMERGENCY LIGHTING SYSTEM IN A BUILDING THAT IS USED PRIMARILY BY DISABLED PEOPLE. ARE THERE ANY PARTICULAR REQUIREMENTS?

Any non-domestic building with more than one storey should provide a means of refuge for any person who cannot easily use fire escapes, lifts and stairs. It is important to recognise that a disabled refuge should be illuminated to a higher level of illumination than normal escape routes.

Additional emergency lighting should be provided in toilet facilities and other similar areas exceeding 8m2 floor area or with no borrowed light, and all toilets for the disabled.

WHAT ARE THE MINIMUM LUX LEVELS THAT NEED TO BE ACHIEVED?

Achieving the correct Lux level is a must and BS 5266 recommends a minimum of 1Lux in escape routes and 0.5Lux in open areas at floor level. Emergency lighting should also be positioned in such a way to ensure that people are free from disability glare, which can prevent obstructions or signs from being properly seen.

There are also other areas identified in BS 5266 part 10 where higher levels of illumination are required. These include kitchens, first aid rooms, treatment rooms, plant rooms, reception areas and crash bars at exit doors.

Once again it is important to remember that these figures represent the minimum requirements, so in certain circumstances there may be a need for higher Lux levels. This is something that should also be considered during the risk assessment.

WHAT ARE THE KEY THINGS TO CONSIDER WHEN LOCATING EMERGENCY LUMINAIRES?

Not all manufacturers' products are the same. Therefore, you need to look at the spacing guide for the specific products being used and site the luminaires according to what is needed to produce the correct Lux level. This means that you may need more of one manufacturer's products than another to achieve the same result.

Also, the correct luminaire should be chosen to suit the application and minimise damage to the unit. For instance, you would need to use a different type of luminaire in a plant room than you would in an office.

SECTION 3

HOCHIKI CAN PROVIDE YOU WITH A COST EFFECTIVE SOLUTION

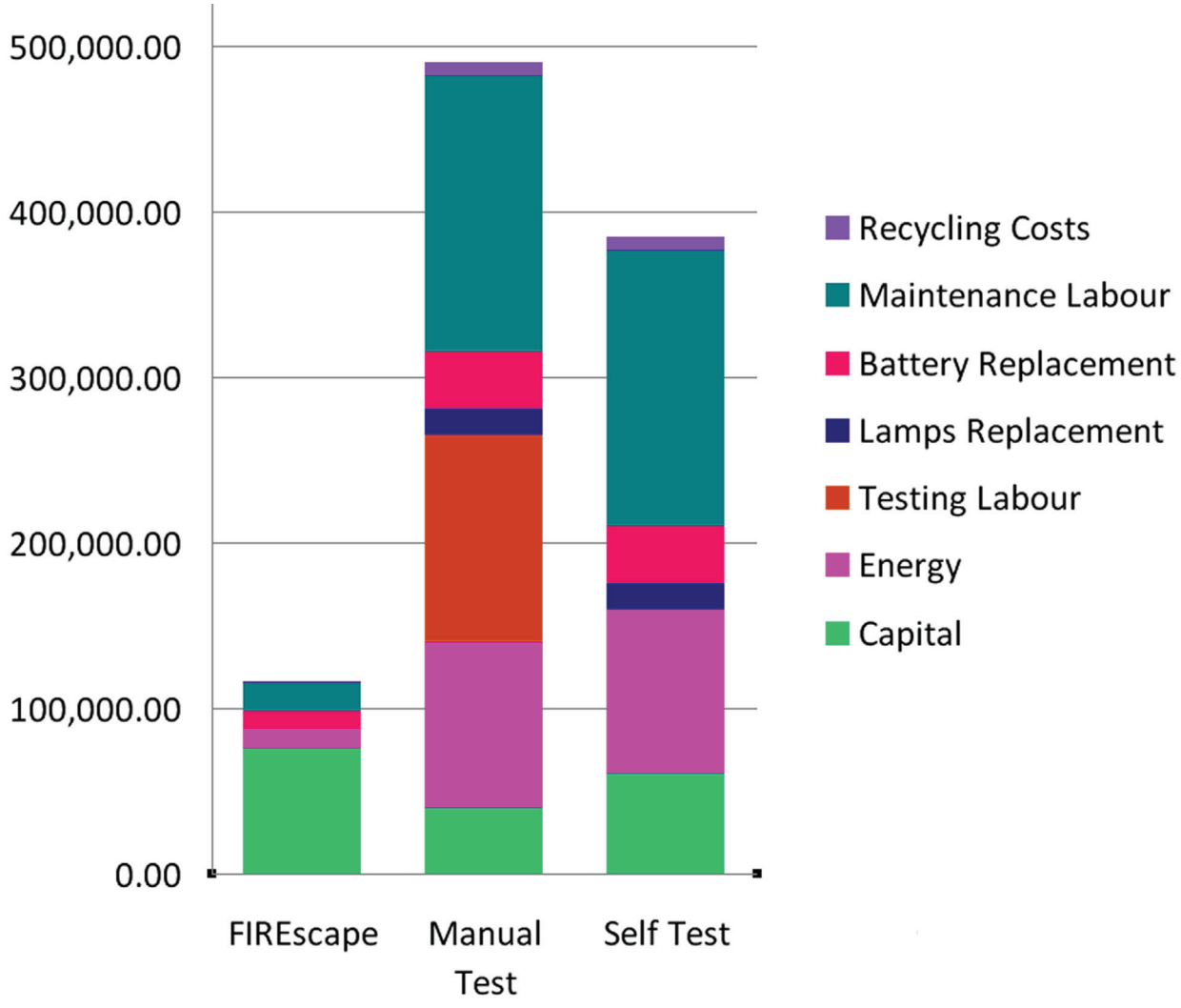
Manufactured in the UK, **FIREscape** is a highly cost effective, energy efficient emergency lighting system incorporating innovative LED and battery technologies.

Operated from an emergency lighting control panel the system is fully addressable with self-contained luminaires. The base units for the luminaires are wired in at installation, but with our leading edge technology only extra low voltage cabling is required. The luminaires themselves not only have a sleek design, but they are installed by simply twisting them into position. In case of loss of power the backup battery in each luminaire will last for three hours.

Maintenance and testing of a standard emergency lighting system can cost the end user tens of thousands of pounds across the system's life time, but **FIREscape**'s self-testing ability keeps costs to a minimum. The luminaires are fully monitored by the system, which means there is no need for individual inspection.

In addition, due to the low voltage cabling and use of LEDs the system uses less than 5% energy compared with conventional lighting, which makes **FIREscape** a much more environmentally friendly option. As an added benefit, each luminaire can be programmed to operate at any one of seven levels of light output meaning that they can be used as an energy efficient form of security or night time lighting.

- LOW COST
- HIGH QUALITY
- LOW MAINTENANCE
- ENERGY EFFICIENT
- ENVIRONMENTALLY FRIENDLY
- 10 YEAR SYSTEM LIFE EXPECTANCY
- COMPLIANT TO BRITISH & EUROPEAN STANDARDS



Total cost of ownership comparison based on a 1000 luminaires, 80% non-maintained, 20% maintained, emergency lighting system for manual-test, self-test and Hochiki's FIREscape system, over a 10 year period.

FIREscape®

Further Information

Information on Hochiki's FIREscape system can be found at:
www.hochikieurope.com/firescape

Hochiki have produced a handy A6 booklet entitled 'A Guide to BS 5266'. This is available to download from the website, you can request a hard copy here:
www.hochikieurope.com/downloads/request-literature.php

Hochiki also offer a CPD presentation called, 'Emergency Lighting Standards and Design Considerations'. You can make an enquiry by clicking on the following link:
www.hochikieurope.com/cpd

Hochiki Europe are members of the Industry Commmitte for Emergency Lighting (ICEL), you may also find useful information on their web site at:
www.icel.co.uk

The British Standards Institute offer the full revision of the emergency lighting standard, 'BS 5266: Emergency Lighting Code of Practice for the emergency escape lighting of premises' Available to buy from:
http://shop.bsigroup.com/ProductDetail/?pid=000000000030263986