

External security lighting

Why do I need to consider this topic?

All businesses can be affected by crime. When combined with other appropriate security measures, installing a suitable scheme of security lighting is one possible way of reducing the chances of your business becoming a victim of crime. As the majority of fires at commercial premises may now be started by children or vandals, providing good security should also help to reduce your chances of suffering a fire.

What aspects do I need to consider?

There are a number of questions you will need to ask yourself when considering a security lighting scheme. These include:-

- Are the lights (luminaries) only for deterrent purposes or will they also have to serve as general purpose lighting during working hours? If the latter, you will have to ensure that the lights will provide a suitable safe level of illumination for employees and visitors.
- If the lights are only required for "out of business hours" use, are they to be "on" all the time or controlled by movement detectors or a time clock? Although detector-operated halogen floodlights are often inexpensive to buy, they may operate much more often than their owners would like, making them expensive to run. They are often ignored and can create areas of intense darkness around them into which it is difficult to see. It is usually better to design a suitable scheme of lighting that will be on during all the hours of darkness, and covers the exterior of the building and grounds close to it, using high-efficiency low energy lamps to create an even level of light.
- Do the luminaries incorporate a light-sensitive cell that will automatically switch them on at night and off in the morning, or is a central control of this type needed?
- There is a wide range of lamps and bulbs to choose from, each with its own style of weather-resistant fittings, e.g. tungsten halogen, compact fluorescent (PL or PL-C), metal halide, high pressure mercury (HPL), high pressure sodium (SON), and low pressure sodium (SOX). Lamp life varies and can range from 1,000 hours to 24,000 hours depending upon the type. Efficiency (measured in lumens per watt) also varies from 10 Lm/W to 200 Lm/W, as does the colour of light produced, some being white, others yellow or orange.
- Does the site have a security guard and/or monitored Close Circuit Television (CCTV) system that the lighting scheme would have to suit? Some types of bulbs and lamps can affect how a CCTV system shows and records colours at night.
- Will any of the lights be located in positions which are particularly susceptible to vandalism? If so ensure that you choose a suitable fitting. The type and shape of the light fitting will also influence how effective the light is e.g. a symmetrical beam fitting will shine its light in a different pattern to an asymmetrical beam HCO (horizontal cut off) fitting (which shields against a lot of upward light spillage).
- Is the building "listed" or within a conservation area? Will any of the lights be positioned on new poles or towers, or significantly change the appearance of the building (such as might require planning permission)? If so speak to your local authority before making any purchases or placing an order. Have all necessary permissions been obtained (including from any landlord)?
- Are there neighbouring properties (particularly residential ones) for whom inappropriate or badly placed lights might cause a legal nuisance? Consider your neighbours when choosing and positioning lights.
- Has the running cost for the various types of light fittings and bulbs been calculated? Most of the major lamp and bulb manufacturers will provide technical advice on their products.

What key actions do I need to take?

- Decide if the lighting is also going to need to provide general purpose illumination for working hours, i.e. in addition to any out-of-hours security function.
- Choose light fittings and bulb types that are suitable for the intended purpose and the buildings involved. Check with the manufacturer that the luminaries proposed will provide the level of light required over the area involved.
- If you have a CCTV system, check with the installer that the bulb type is the most appropriate for any monitoring and/or recording equipment the system may have.
- Use suitable vandal-resistant fittings, particularly in positions close to public roads, footpaths or on open sites. Make sure that the light fittings are suitable for external use.
- In hazardous areas of commercial premises where flammable or explosive atmospheres may be present, ensure that a risk assessment has been completed for the Dangerous Substances & Explosive Substances Regulations (DSEAR). If the area has been "zoned" under DSEAR, ensure that the light fittings and any other associated electrical fittings are suitable for the "zone" involved and that they have been selected in accordance with the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations.
- Check, before ordering the lights, whether planning permission will be required. Obtain any other necessary consents, e.g. from a landlord etc.
- Have the work carried out by a competent electrician. Make sure that they are qualified and approved for the purpose of Building Regulations, particularly if the premises include residential areas. Bear in mind future safe access and safety needs (involving work at height) when locating the lights. Bulb-changing or other repairs should only be undertaken by a trained competent person when the electrical power has been locked off. Ensure that your health and safety risk assessments cover this and that you have a suitable safe system of work document for it. Make sure you know which bulb and lamp types are now considered as hazardous waste for registered licensed disposal purposes.
- Make sure that lights are not positioned where they will blind the view of any security guard, CCTV camera or person driving a moving vehicle, nor project light onto a neighbour's property (particularly residential ones).
- Try and avoid creating unlit areas ('pools of darkness') between powerful lights, as these very dark spots can provide secluded entry points for intruders.

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