

## Light Design

### Which Outdoor Lights?

Do you spend as much time designing and selecting outdoor light fittings as indoor light fittings?

External lighting is an area where a little thought and hardly any effort can make a huge difference to your average moth. Moths pollinate plants and are a food source for birds, bats, lizards and other insects. Their numbers are dramatically dropping because of inappropriate external lighting. These lights, usually incandescent lamps, are fatal for the moth and other bugs and are killing them off in worrying numbers.

Artificial lighting is also a problem for many forms of wildlife, as the night sky is illuminated by street lights, internal house lights, dawn to dusk security lights, motion sensor lights, car lights and other lights. You will be adding to this with external lights, so what kind of fittings should we install and how should they be positioned?

Bug Friendly.

Yellow/Orange/Warm hue LED lights are shown by research to be most moth and bug friendly. These are even better than some light fittings advertised as serving this purpose and LED lighting consumes significantly less energy.

### Which External Light Fitting?

The ecological light fitting will not shine light where it is not needed. It will be LED to minimise attraction to bugs and moths and will have a mirror surface directing the glare downwards and not sideways or upwards. The reduced glare will increase vision of the surrounding areas and increase people's awareness of what is happening outside of the lit zone.

*Navigation* – can people access your house without outdoor lights? If they can, do you need external lighting? and if they cannot, what level of lighting will they need and where will the light points be positioned? Pathways may need to be lit up for illumination of the walkway. By having a light-coloured crushed stone rather than a black concrete or tarmac you will benefit from surface reflection, increasing visibility and reducing the number of light fittings.

Instead of lighting up above head height and inadvertently lighting the surrounding area, consider installing low-voltage bollard lighting. This will help wildlife who are in the surrounding areas. In the driveway, in a bid to reduce light fittings, fix reflective signs to objects the vehicles should avoid hitting.

*Safety* – can you or your visitors enter your home safely? This is worth considering as many believe movement detector lighting does little to address safety. After people are in for the night, can external lights be switched off comfortably? Switching off a light reduces the ecological impact of light pollution.

*Security* – if the home occupants are not there, should the lights be switched off or left on? Does night lighting reduce crime? There is little evidence to support this commonly held

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perception. Rather than improved visibility discouraging criminals and vandals, they suggest that the increased light helps this type of activity as the perpetrators have illumination to carry out their work!

*Aesthetics* – lighting up a building or elevation can look pleasing, while lighting for a feature—such as a garden water feature or inground swimming pool—can be switched on to impress.

*Entertaining* – you can plan areas to be lit so that you and your guests can enjoy a garden or patio area after sunset. This can be designed to function when needed and switched off when not.

The five main reasons for external lighting are:

- Navigation – Can people access your house?
- Safety – Will your light levels avoid accidents?
- Security – Does night time lighting reduce crime or just give criminals improved vision?
- Aesthetics – Do you wish to illuminate certain features of your home?
- Entertaining – Do you entertain in external areas after dark?

By all means have outdoor lighting for the above reasons, just design your lighting so it's bug friendly and does not pollute the heavens.

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