SEEING THE GARDEN IN A DIFFERENT LIGHT

What are the key principles of lighting a garden? **Luke Thomas**, Design Director of John Cullen Lighting, reveals some of his top tips

arden lighting should be discreet and effective and in keeping with the Responsible Outdoor Lighting at Night (ROLAN) Manifesto. This was developed by industry professionals and academics to tackle the growing issues of light pollution on our dark skies and the impact it has on the wildlife with which we share our environment.

Applying the same principles that are used to light the inside of a home makes it easier to create an extension of the living space outside. We can also combat unconsidered issues such as the expansive glazing that is a feature of modern homes, in particular. While large panes of uninterrupted glass provide an incredible inside-outside feel that works to great effect during the day, when the sun goes down and the garden is unlit, the windows become big black holes that reflect room interiors back at their owners as they sit inside them. By using sensitive lighting solutions, however, we can create a nighttime view that adds an entirely new and exciting dimension to the garden.

Say no to one light

Single-source, high-output flood lights should be avoided at all costs. They create a look that is hard and obvious, and which does nothing for the aesthetics or the functionality of the garden. Such lights are also a persistent nuisance to neighbours and local wildlife.

CLOCKWISE FROM TOP: *Buxus* balls given shapely night form by spiked Hampton floodlights; Lucca steplights set into the wall on one side create a dynamic but safe light effect for steps; Kew spotlights at the foot of each pergola post draw the viewer through a space by defining depth and creating focus. A separate pair hidden in the planting are angled to illuminate the statue.

A successful lighting layout will instead take into consideration the key features within the garden and use a carefully considered balance between light and shadow to bring them to the forefront of the user experience. Creating focal points and accents requires the use of low-glare fittings with baffles to shield the light source, combined with optic lenses to control the spread of light into concentrated beams. This makes it possible to manipulate the lighting effect so that the spill of light from each fitting falls only where it is needed – a pathway, a sculpture, a plant of interest and so on.

A colour temperature of 2,700K, or sometimes warmer, will give a soft welcoming effect that marries well with the interior lighting scheme, connecting the two spaces. Bats, and other animals that may co-habit the space, will be less significantly affected by the lighting installation if these warmer colours are applied, making it a more environmentally friendly option.

Which light, where?

The choice of light fitting will, of course, vary between application area, depending on whether it is to be installed within – and to light – hard landscaping or plant beds. Very careful consideration indeed needs to be given to lighting that is integrated within hard landscaping. Wherever possible, the lighting specification should be done at the same time as that for the hard surface.

Uplighting is a very powerful tool that can be used to add drama and accent to specific features, and floor-recessed fittings are particularly effective for illuminating a decorative plant pot, door architrave, column, or feature wall. The lights should be set very close to the vertical surface of illumination, and will







PROFESSIONAL SKILLS

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work best where there is an overhanging canopy or soffit to prevent light spill into the night sky. Optional glare cowls can be fitted to provide the most discreet effect.

Other floor-recessed light fittings can skim light out across a step or path, which is perfect for subtle way-finding. Another option is to use a flexible linear LED product that has ingress protection suitable for use outside. Linear LEDs should always be concealed from view and will need to be integrated into hard landscaping or features. Typical designs can include under-step lighting to provide a floating effect, or below a bench seat. I have also successfully applied linear LEDs to illuminate more unusual features, such as bespoke sculptures or Victorian wells.

Lighting within plant beds is generally rather more flexible. While hard, architectural elements of a property do not change, of course organic features such as plants and trees continuously evolve as they grow and as the seasons change, year after year.

In response to this cycle, spike lights are a perfect solution and we usually recommend green fittings to blend in with the foliage of the planting, or black, which is similarly discreet. Although there are battery-powered and solar options, I prefer to use cabled versions as the former (in my opinion) lack the lumen output or control options to make them a viable consideration for most installations.

When designing the lighting plan, we will generally specify the spiked lighting based on the typical plant selection provided by the landscape designer. This enables us to specify the right number of fittings and to choose those that will give an appropriate distribution of light. The final positions will be confirmed once the planting has been completed but I also like to make sure there is enough flex so the lights can be moved over time or from season to season. →



PASSIVE INFRARED SENSORS (PIRS) ARE **BEST SUITED FOR SPACES AROUND THE GARDEN** THAT ARE USED LESS OFTEN AND FOR SHORT PERIODS AT A TIME.

Lighting controls are an important aspect of the design process. I always recommend that the lights are dimmable so the owner can vary the lighting effects and see their garden in a number of different ways. The amount of light required at dusk, for instance, is completely different to what is needed in the black of night. A little lumination can go a long way and if the fitting cannot be dimmed, the effect can feel glaring and uncomfortable.

Set the scene

For larger gardens, a scene-setting system can help the owner manage the installation more easily, and help them make the best use of their outdoor space. Scenes can be pre-programmed and recalled at the touch of a button, and there are systems that will activate scenes automatically in response to astronomical events, such as sunset.

To limit unnecessary light pollution, I will encourage owners to understand that lighting all areas of the garden all of the time is not necessary. To help them, I would give the owner a programme that allows them to switch from a general evening-to-evening setting, where only the most-often used areas are lit, to a party setting that illuminates wider areas and with safety in mind, walkways in particular.



Passive infrared sensors (PIRs) can provide some basic functionality but are best suited for spaces around the garden that are used less often and for short periods at a time, such as a side access, the bin stores or log pile, for instance. I would never recommend using a PIR on the main lighting circuits – having lighting flash on and off all the time would simply annoy the garden owner, neighbours and wildlife.

Technical talk

Finally, the safety and durability of lighting systems rely on the careful and compliant installation of the technology. Any mainsconnected schemes should be installed and approved by an electrician who is a for Electrical Installation Contracting (NICEIC), the Electrical Contractors' Association (ECA), the National Association expands within the space. Setting the lights

of Professional Inspectors and Testers (NAPIT) or ELECSA. The following should also be taken into consideration:

1. To limit cable damage

Any low-voltage cabling that runs over the surface of the soil, or just below it, should be fitted into a flexible plastic conduit. Animals can chew through cables, but this will make it much harder for them to do so. It also makes it less easy for someone to put a spade through the wire.

2. Drainage

Floor-recessed lighting – be it in paving, decking, planters, or grass – must have adequate drainage. Leaving fittings to sit member of the National Inspection Council continuously in a pool of water will increase the chances of water ingress, or damage to the system as the water freezes and





CLOCKWISE FROM TOP LEFT: show off layers of planting with a layered lighting scheme; pools lit with fibre optics; for a soft glow effect that is much more congeni than bright lights shining in one's eyes, use contour LED strips inset below the cushions of built-in seating; green-coloured Kew spike lights blend discree with planting.



into a pea shingle soakaway is a typical solution, particularly for soft ground.

3. Driver locations

Because every connection within a lighting system is a potential point of failure, try to ensure as many drivers as possible are above ground. Ideally, they should be wired to an outbuilding, or routed back to the main house but if you have to bury them in the soil, they should be installed within an ingress protection (IP) enclosure filled with gel to seal against moisture.

4. Minimising scheme failure

Lights may need to be repositioned to care for the garden, but if they are not restored to their original positions, the effectiveness of the lighting scheme can be compromised. A briefing meeting with the relevant parties can help to reduce this risk. ○

The Responsible Outdoor Lighting at Night Manifesto, cibse.org/media/ okepdnf0/rolan-manifesto-whitebackground_low-res.pdf

Electrical Contractors' Association (ECA). eca.co.uk

ELECSA, niceic.com, certification body for registered electricians

John Cullen Lighting, johncullenlighting. com

NAPIT, napit.org.uk, British Governmentapproved accreditation service in the building services and fabric sectors

NICEIC, niceic.com, a voluntary register of electrical businesses

