



CITY OF LIGHTS

AS URBAN DEVELOPMENTS INCREASE, TOWN PLANNERS AND LIGHTING DESIGNERS HAVE A LOT TO CONSIDER WHEN IT COMES TO ILLUMINATING OUR CITIES.

We don't need to tell you how important lighting is, but when we look at the bigger picture – how lighting impacts the way people enjoy and use the urban areas in their communities – lighting really does matter.

And it's going to become increasingly important when constructing our cities of the future. While 50 per cent of the world's population currently lives in urban areas, by 2050 it's forecast that number will have risen to almost 75 per cent.

According to Damian Dawson, Director at Planning Chambers, a specialist town planning consultancy, the planning system needs to strike the right balance if it's to effectively create the best possible outdoor environments. "The assessment of planning applications against the relevant requirements of the Planning and Design Code seeks a balance between a sufficient level of lighting to provide adequate wayfinding and safety, while also ensuring that it does not become a nuisance or hazard for others," he says.

This includes using illumination to

provide people with a clear view of their surroundings and the path ahead, while also creating an atmosphere of comfort and reassurance.

Whether you're a shift worker making the trek home on public transport or you're heading downtown to an event, this combination encourages the community to access and enjoy the city at night.

Of course, consideration also needs to be given to suitable lighting levels, and these differ for various amenities and infrastructure, depending on both their usage and the crime rates in a given area.

BEWARE OVER-LIGHTING

Particular thought must also be given to over-lighting and avoiding visual disturbances like light glare, which can be disabling or

uncomfortable for pedestrians and drivers, especially for those who are sensitive to light.

External lighting, like you'd find in car parks or sporting courts, security lighting and lights used for digital advertising, is all carefully planned to avoid light spill, which can be annoying, uncomfortable, and distracting. It can also hinder visibility and contribute to light pollution.

"Through the assessment

process, consideration is given to the positioning and design of outdoor lighting to ensure it does not cause unreasonable light spill impact," says Damian.

"Naturally, we must also consider whether our external lighting plan would be hazardous to motorists and cyclists, or to the operation of airports and airfields." Striking this balance can be difficult because lighting is also key to expanding the usability of a city.

Over time, as urban centres have grown and expanded, they've given rise to 24-hour cities with 24/7 economies.

Today, our cities are alive with after-dark events, cultural activities, and night-time wandering, all taking place under a web of streetlights and other illuminators which work together to make the city visible, useable and safer at night.

"Feature lighting around entrances into commercial and residential buildings continues to be used as a point of difference or distinction for a development as well as a method of identification," says Damian.

"Lighting within landscaped areas and public space is also increasing, with lighting used to highlight key plantings or sculptural elements as well as provide directional lighting throughout a space."

As our cities grow, evolve and develop, there's going to be an increasing expectation from the community as to what good lighting looks like – providing an opportunity for contractors who know their stuff to really shine. ■

MAKING CITIES SAFER – WITH LIGHTING!

The connection between lighting and the perception of safety is well known – outdoor illumination provides us with a sense of security, allowing us to use public spaces and amenities at night.

But according to a study undertaken by Plan International, the Monash University XYX Lab and ARUP, which collected data on how women felt in public spaces, brighter lights do not automatically mean we feel safer.

Analysing over 80 unsafe 'hotspots' in Melbourne, the study found that women reported feeling unsafe in very bright or overlit areas, perhaps because they knew there would be a sharp drop in the lighting outside the brightly lit area.

When we experience a quick change in lighting levels, it takes time for our eyes to adjust to the change, and it's this momentary blindness that made the women in the study feel more vulnerable.

This finding challenges the established practice of lighting urban spaces using high category P

lights, which are assumed to reduce crime and increase the feeling of safety.

The analysis also found that the women felt safer when there was consistent layered lighting, which involves using multiple lighting types to create a balanced and well-lit environment. This kind of lighting reduces the negative effects of glare and counters the quick drop from extreme brightness to lower levels of light.

Another insight from the research was that women felt safer in warmer lights than they did in cooler lighting conditions – again debunking the popular practice of using cooler-coloured LED lights, such as the 4000K 'cool white' used for urban lighting in Australia.

This kind of research is valuable because it highlights misconceptions that go unchallenged, and suggests possible alternative solutions to enhancing safety with lighting.

One of the emerging technologies in street lighting is intelligent lighting, which



enables local councils to remotely control streetlights and add sensors and video to fixed LED lights to keep their cities and citizens safe.

Some applications of smart street lighting to improve safety include pairing with motion detection sensors, providing alerts when concerns arise, and using video technology to capture a real-time view of a situation.

In a notoriously unsafe park area in Tennessee in the States, a case study was undertaken where intelligent lighting was remotely controlled to brighten, dim or flash. When the lights flashed, the gathering of gangs

in the park quickly dispersed. Over time, with this smart lighting initiative, the park was reclaimed from criminal activity.

Besides helping fight crime and making public areas safer, smart lighting comes with the additional potential to improve safety in urban areas by broadcasting evacuations and warnings, monitoring traffic, and for use in combination with other emerging technologies like gunshot detection.

While smart street lighting is being widely adopted around the world, less than 5% of Australia's streetlights are currently smart-controlled.



LED UPGRADE UPSETS THE LOCALS IN LONDON

Replacing city lights with modern counterparts doesn't come without risk, however. And you can understand why. Recently, some gas streetlights in Westminster, London, were at the centre of controversy after the local council began replacing the ornate lanterns with modern reproductions featuring LEDs.

Two hundred and seventy five lamps were due to be replaced as part of a £3m project, but once work got underway the locals kicked up a fuss. 'Cultural vandalism' was shouted by a group of conservationists, including actor Simon Callow, of Four Weddings and a Funeral fame. So beware – you never know who you might upset!



READ MORE ONLINE!

Interested to learn how lighting is helping cities become more sustainable? Scan this QR code to read all about it on our brand new Gemcell website, which is full of content for electrical contractors!

