

SCARLET GETS THE GREEN LIGHTS



■ The luxury Scarlet eco-hotel employs an energy-saving lighting control system from Philips Dynalite, including a garden lighting design using less than 100 watts in total.

Lighting install specialists Lightmaster-Direct has used the Philips Dynalite system to deliver a stunning and energy efficient solution for the luxury Scarlet eco-hotel in Cornwall.

Richard Nock, Lightmaster design director, explains his company has many years of experience in the lighting of exclusive residential properties, hotels and restaurants, churches/historical buildings and prestige offices and retail outlets. The company also keeps up to date with all building and local planning regulations and has experience of working in conservation areas, on listed buildings, refurbishment and new-build projects. The company has also developed its own products and has a range of discreet garden fittings which can create stunning effects. The company is also a Philips Dynalite Dimension Dealer and Richard says: "Launched in late 2009, this initiative has already started to be beneficial by ensuring reliable technical support as well as providing marketing back-up and credibility to our clients and specifiers."

Richard explains that the original contact for the project came three years ago at The Interiors Show, NEC, Birmingham. There followed a series of meetings with both client and architect at the end of which Lightmaster was appointed as lighting designer for the project.

The design was conceived to embrace the very latest and best environmental approaches to yield a lighting scheme in harmony with the surroundings and the hotel's commitment to energy saving. The team was able to deliver a system which uses just 3.36W per square metre, but still delivers pleasing atmospheric effects in line with the hotel's luxury status.

According to the development director for the Scarlet Hotel, Simon Baldwin, the lighting system reflects the pioneering approach to environmental sustainability that is the hallmark of the hotel's design. "Lighting is very important within a hotel, and the energy used to maintain lighting is something that has been overlooked for a long time. The Scarlet has been designed to maximise the use of natural light as much as possible, and this has driven the development of the lighting system itself."

Energy-saving fluorescent and LED luminaires, along with multipurpose sensors, are integral elements of the design. Simon explains: "All the lighting is either fluorescent or LED, and the Scarlet is probably unique in this respect."



Two Philips Dynalite touch-screen control panels allow the lighting moods of the public areas to be set by the hotel staff.

The design is also challenging the expectation that hotel lights need to be on all the time, making extensive use of multi-purpose sensors to ensure lights are turned off when not required. Lightmaster-Direct has helped us achieve a lighting design that delivers both the environmental and architectural outcome we were seeking."

CREATING IN CORNWALL

Not only did Lightmaster engineer and commission the system in line with strict environmental, functional and architectural criteria, the company also custom-designed and built many of the hotel's light fittings as well.

Richard explains: "The design brief called for an integrated lighting control system to provide pre-set lighting scenes in all public areas and mood lighting to bedrooms—all controlled by a combination of wall-controls, remote

controls and motion sensors.

"A Philips Dynalite solution was the obvious choice to meet this specification. Its controllers are without question the best on the market for fluorescent and LED lighting, and the Philips Dynalite solution-set remains our preferred lighting control system to work with, due to its performance, reliability and versatility."

The Scarlet's fluorescent and LED circuits are controlled by a combination of Philips Dynalite relay and ballast controllers. Philips Dynalite universal sensors help ensure that lighting only activates when areas are occupied and when ambient light levels fall below a threshold level. The backbone to the Scarlet's lighting control system is provided by Philips Dynalite's peer-to-peer communications serial bus network, DyNet.

Two Philips Dynalite touch-screen control panels allow

the lighting moods of the public areas to be set by the hotel staff, while Revolution 2 user-interface wall panels permit local user control for some public areas and all the guest rooms. There are two engraved and backlit Revolution 2 wall panels in each guest room—one by the entrance and one by the bed—and these have been designed to be intuitive and simple to operate. Guests can match their mood from a choice of seven lighting scenes carefully created by the design team—'ambient', 'bright', 'relax', 'bath', 'night', 'balcony', and 'all off'.

Achieving a rating of just 3.36W per square metre is an impressive feat. Most Hotels use around 10W and the brief called for 8W, the energy saved means the system uses just 34% of the power needed for a conventional system. Significant energy savings were also achieved in the gardens. Using discreet 1W LED fittings and a subtle approach, garden lighting has been achieved using less than 100W in total.

Richard explains: "With the pace of development of LEDs moving so quickly, it was imperative to ensure that the absolute latest LEDs were used on the project, thereby ensuring the highest possible efficacy rates (efficacy = light output per watt of electricity used). By combining these with the general rule of 'only put light where you actually need it' we were able to ensure that no light was wasted and that the light used was as energy-efficient as possible.

"Fluorescent and compact fluorescent light sources, where used, as well as the latest high-efficiency lamps and control-gear. The Philips Dynalite control system, having been developed in the commercial market (unlike some of its competitors), was relatively straightforward to design and programme."

Richard believes the future of LEDs is now assured: "In the commercial world, low-energy light sources have been used for many years now, but the majority of these have been fluorescent light sources. What was different about this scheme was that far



Guests can match their mood from a choice of seven lighting scenes, carefully created by the design team to enhance the ambience of the guest rooms.



The lighting design in the dining room maximises the use of natural light during the day, and provides an intimate atmosphere at night



■ The Scarlet's fluorescent and LED circuits are controlled by a combination of Philips Dynalite relay and ballast controllers to provide an energy-efficient lighting design.

■ Stunning architectural and mood lighting belie the considerable energy savings realised—with an internal lighting efficacy of just 3.36 watts per square metre being achieved.

■ Philips Dynalite universal sensors ensure that lighting only activates when areas—such as the library—are occupied and when ambient light levels fall below a threshold level.

more LED fittings were used than would be expected on a project of this type at the time. Lightmaster regards this project as proof that LEDs will play a larger and larger part in the lighting of commercial buildings from now onwards."

Of course working at the cutting edge can bring its own problems, Richards says: "Because we were using leading-edge technology, the electricians needed a lot more training and assistance than would normally be the case. As they, like everyone else on site, were under significant time-pressure, this led to friction at times due to the steep learning-curve they had to climb."

CAPTAIN SCARLET

All the hard work did pay off in the end as a stunning result has been achieved and Richard explains that the client is most impressed by the overall atmosphere which has been created and the ease-of-use for both staff and guests. As for the guests, the Hotel reports that they are happy to be able to stay in such a sumptuous venue, which also delivers low environmental impact at the same

time. The guests have also commented on the ease-of-use of the system in the bedrooms, which can be over-complicated in hotels.

The hotel itself is so pleased with the system that it is considering the addition of a DLIGHT III server and MapView software from Philips Dynalite in order to measure actual power consumption and to facilitate real-time monitoring for maintenance. This will enable fine tuning of the system over time to achieve further energy savings in the future.

Last word goes to Simon Baldwin: "The goal of this project was to build a unique and opulent hotel in a beautiful location, and to achieve performance at the cutting edge of environmental sustainability. While these goals are often considered mutually exclusive, the Scarlet proves that you don't have to sacrifice luxury to achieve high levels of energy efficiency. Scarlet really is the new green."

For more information on Lightmaster Direct call +44 (0)1608 682115 or visit www.lightmaster-direct.co.uk



THE ESSENTIAL KIT

Bedrooms (37 total):

- Revolution 2 control switch DR2PE x 81
- 8 circuit relay boards DDRC810 x 33
- 12 circuit relay board DDRC1210 x 4

Each room had the following scenes:-

- Ambient ■ Bright ■ Relax
- Bath ■ Night ■ Balcony
- All Off

All Public areas of the hotel are controlled by:-

- 8 circuit relay boards DDRC810 x 20
- 12 circuit relay board DDRC1210 x 4
- 12 circuit ballast control DDBC1200 x 3
- Touch screen DTP160 x 2
- Revolution 2 control switch DR2PE x 12
- Sensor DUS804C x 43