



*Like a magician, says Ian Potter, "a lighting designer can make you 'look the other way' showing you only the interesting things, and cancelling out the rest."*

# LIGHT WORK

**F**or lighting expert Ian Potter, the famed Authors' Wing, the original building of Bangkok's Oriental Hotel, was an eye opener. Not because the lighting was so good but because, in many instances, it was downright horrible. Potter's Phuket-based company, Andaman Lighting, was called in when it was decided that the Authors' Wing needed complete renovation.

"The Authors' Wing is very special and its very heavily used. It's got a couple of ballrooms which are used for weddings and other events, the famous Authors' Lounge and so on, so we and all the other contractors had to keep the wing closed for the minimum amount of time.

"Because the building is about 130 years old, holes were cut in the ceilings to allow cameras to be inserted to photograph what was up there, so there would be no surprises that would delay the project; the original drawings didn't show all the pipes and the cables and the ventilation ducts that were up there."

It wasn't just in the ceilings that ad hoc changes and additions had been made. Potter recalls, "There was a lot of what I call 'engineering' lighting – sometime long ago there had been a party or an event of some kind and the lighting was not bright enough, so someone had screwed a floodlight to the wall, onto this beautiful stucco facade.

"They'd paid no respect to the aesthetics of this beautiful building. Credit where credit is due – the people at the party all those years ago could see the cake, or whatever it was they wanted to see, but the floodlight had not been taken down afterwards. It was still there decades later. The interior designer and I spent a lot of time taking such things out and cleaning it all up.

"But it was a bit like the chap in the dentist's chair, holding the dentist's testicles and saying, 'Now, we're not going to hurt each other, are we?' [The hotel management] were so sensitive about any changes to the inside of the building. They'd say, 'It's been like that for 30 years. Why do you have to change it?'"

Gradually, trust built up, says Potter. "In the end, we were able to do about 95 percent of what we wanted to do." He is particularly happy with the lighting for the facade facing



*At Ian Potter's own home, niches in a wall, holding Buddha images, showcase his work.*

the Chao Phraya River. "We didn't want to make the lighting obvious. We just wanted to use it to emphasise the beauty of the building.

"When you look from the river, you see these louvered shutters on the windows. We wanted to have the lights coming down on these so we explained to housekeeping that we needed the louvres set at a certain angle. So now, every night, when they come to turn down the beds, they set the louvres at the correct angle. We could do this because the staff of The Oriental are so highly professional."

That project, about 2½ years ago, has not resulted in Andaman Lighting expanding dramatically. Instead, it has allowed Potter to be more choosy about the work he does, and who he works with.

He is for example, working on the lighting for a new six-star boutique hotel in Luang Prabang, Laos. The hotel consists of a variety of different buildings that must be tied together by lighting into a coherent whole. "One door opens this way, the door next to opens that



way. Nothing's the same," Potter says, clearly relishing the challenges this poses for the design team at Andaman Lighting.

The greater freedom to pick and choose projects also means he can employ the full panoply of lighting technology to achieve effects that would not have been possible just a couple of years ago.

One recent revolution in lighting has been the advent of LED lights, which are increasingly being used to supplant conventional tungsten bulbs, fluorescent tubes and tungsten-halogen (TH) lamps. LED technology had advanced to the point where a single element running off 1.5 Watts can produce as much light as a 20W TH lamp.

The LED lamps are about 7 times more expensive, but have a lifetime about 17 times as long – considerable long-term saving. The very small amount of power they draw also means they can be powered by unconventional means.

"Imagine you want to light the trees on an island in the middle of your private lake," Potter explains. "In the past you would have had to spend a lot of money on an underwater cable to the island. But now you can use solar

power. A solar panel about two feet square, which can easily be hidden from sight, will produce 15 Watts – enough for 10 LEDs."

Link the panel to a battery which charges during the days and, with a light-sensitive switch, discharges into the bulbs after dark, and your island is lit. A similar solar-powered array can also be deployed in stairwells, for example, doubling as emergency lighting.

LEDs can also be used to create effects that were previously impossible. Potter has one client whose villa surrounds the swimming pool, which is the focus of the building. In the centre of the pool is a statue on a pedestal.

Andaman Lighting has designed a system using colour-adjustable LEDs in waterproof housings at the base of the pedestal. These consist of three LEDs in one fitting – red, green and blue, the same colours as are used to create pictures on TV or on a computer monitor.

"By varying the combinations of these colours, you can make the pool pink on a Monday, pale green on a Tuesday, and so on," he explains. "Or you can have ripples of colour or rainbow effects while people are swimming or dining by the pool."

On a more practical level, the low power demand of LEDs means that considerable savings can be made by installing smaller copper cable, and in running costs; in a home designed for natural ventilation by fans rather than air-conditioning, and where gas is used for cooking, lighting can account for as much as 40 percent of the power bill.

He emphasises, however, that to take advantage of such savings it is essential that the home owner or property developer call in the lighting designer at the early stages of design.

“Retrofitting is a lot more expensive, and it is impossible in some cases to create the required lighting effect because the structure is already complete – you’d have to tear down parts of it.”

The most enjoyable projects he has done, he says, have been those in which he was brought in early and worked with an interior designer – “two different disciplines playing off each other”, as he puts it.



A skillful lighting designer will also solve problems that no one else may even realise exist. For example, the pavilion-style villa so popular in Phuket is made up of a number of separate buildings linked together by walkways, often with steps. This design poses two lighting problems, Potter explains.

“First, buildings are often entered at multiple points – several doors or entrances into a central living space meaning you need multiway switching which can result in many confusing banks of switches.

“Second, for safety reasons, the lighting for the many walkways, steps and so on needs to be easy to turn on from many places, especially when you have visitors.”

Both of these problems, he says, can be solved using lighting control systems. For example, a light level sensor for the step and walkway lighting can be used to turn lighting on when it is dark and off again at dawn, without anyone needing to locate switches.

“The control system can include occupancy detectors for bringing on lights in certain areas. [Using modern software] we can also create various scenarios which, at the push of one button, bring on multiple lighting circuits, so a complete villa can have selected common areas lit by the simple push of a button.”

Similarly, different scenarios can be created to suit different aesthetic situations. “How often do you see a beautiful piece of art which maybe cost tens of thousands of baht, but is badly lit or simply not lit?” Potter asks. “For a small percentage of the cost of the art you could see the art, probably more beautifully, when it’s properly lit.”

To demonstrate this, in the Andaman Lighting office there is a niche holding a wooden Chinese statue. At the touch of a button, Potter can light the statue with a dramatic downlight that gives it a three-dimensional solidity that front-on lighting from outside the niche could never achieve.

Another button lights the statue at a slant from the top left corner, resulting in an eye-catching asymmetry, while a third lights it from behind, reducing it to a silhouette – appropriate, for example, when you have guests and don’t want them gawking at the statue all through dinner.

The effects that good lighting design can achieve are generally not understood, says Potter, particularly by real estate agents.

“In Asia, much of our entertaining at home is done in the evening, when it is dark. Many real estate agents miss a trick by taking clients to villas only in the daytime.

“A building that may be okay in the daytime can be enchanting at night if it has smart lighting; the proximity of other buildings, unwanted features such as structural members, power poles and transformers – these can all ‘disappear’ at night because the lighting designer lets you see only what he wants you to see.”

Like a magician, he says, “a lighting designer can make you ‘look the other way’ showing you only the interesting things, and cancelling out the rest.”

In the end, though, is there really any need for fancy lighting design? Potter explains it this way: “A simple analogy: food. You can live quite effectively on basic rice, pork and vegetables with water. Similarly, you can have one fluorescent strip light in the middle of your room. But in both cases you’d be missing out on a lot.”