

The Society of Light and Lighting

Presidential Address 2010

'Lighting is (still) exciting

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Past Presidents, Members, Ladies and Gentlemen

Welcome to the start of the Society's next hundred years.

The very first benefit of becoming president-elect is that you can choose the venue for your inauguration. My immediate thought was that we should signal our next 100 years in a building younger than the incoming President. Unless the members of the Royal College of Physicians discover something really special, I am unlikely to be here for the next Centenary event.

When I was first asked if I was interested in becoming president, my first reaction was of being honoured and then, "But why me?" To which the answer was that each president brings their own particular experience, personality and skills to the job. Those of you on the Society's Executive and Council will know me well enough, but the other 2000 members will only know my views and interests from reading past editorials of the Society Newsletter and the occasional letter in the lighting press. At the end of my address, I will tell you a little bit more about me. However, I would like to start by discussing what we have achieved so far and then what I believe to be the challenges for the future and how to tackle them.

The Centenary Year

Firstly, I would like to thank Stephen Lisk for all his hard work in the past year. His efforts mean that the Society has formalised its funding within CIBSE. This was essential work and invisible to the general membership but it means that we have greater financial autonomy and a clear view of what we can do in future.

Secondly, I would like to pay tribute to the work of our Secretary Liz Peck, in what has been a tremendously hectic and exciting twelve months.

I think that we would all agree that the Centenary year has been a great success in raising the profile of the Society. All the major lighting journals have reported on the events and I would just like to run quickly through some of my personal highlights.

The LR&T event organised in conjunction with the National Physical Laboratory on HMS Belfast, “Good lighting with less energy” was packed full of interesting trends and new ideas for research. I recommend you all to read the full papers in LR&T. Don’t forget that a benefit of SLL membership is that you can read LR&T free online.

When I was ten, I went to a Royal Institution Christmas lecture on the topic of what the lecturer called “mohlee cules”. Many decades later, it was good to be entertained yet again in the same historic building when the Society hosted the CIBSE Annual Lecture for the first time. In October, we had a much discussed and controversial talk by Kit Cuttle about the 3rd stage of lighting design. My personal view is that the topic raised will run and run. The 2009 events culminated in November with the dinner at the Criterion where the IES first began.

I would also like to thank Helen Loomes and her Committee together with the CIBSE staff who did a really great job in organising the Centenary events.

2010 so far

So where are we at the start of our next hundred years?

Young Lighter of the Year

Yet again, Young Lighter of the Year had more entries than ever before, $\frac{3}{4}$ of whom were from overseas. Perhaps with a nod to our Centenary president! The winning entry described how the meaning of light in religious buildings has changed over the millennia. This was quite a contrast with another excellent finalist who described the lighting of cycle and pedestrian routes (known as Redways) in Milton Keynes.

Lighting Design Awards

At the Lighting Design Awards, several of the short listed entries were by SLL members. The winner of the Workplace Lighting category being Addleshaw Goddard designed by Chapman Bathurst; clearly demonstrating that corporate offices benefit from creative engineering as much any other category.

Ready Steady Light

Personally, this is one of the annual events I most look forward to because of the buzz. The fixed deadline and limited choice of equipment means people have to work together, design and install a project in a very short period of time. The enthusiasm shown by the young participants is the envy of other engineering disciplines.

Lighting Liaison Group

Apart from bi-partite co-operation between individual bodies, there have been many more meetings of the now extended Lighting Liaison Group. After a slow start, the LLG is building momentum and having an organisation that speaks for all parties interested in lighting gives us a stronger voice in dealing with government.

The LLG has recently published the document "Guidelines for Specification of LED lighting products" which is supported by all the LLG members. More publications are sure to follow.

The future

Something we often forget is that lighting & heating are some of humanity's basic needs, immediately after food and shelter. A fire, by its nature, gives both heat and light. There are indications that some kind of artificial light was produced 70,000 years ago. However, dedicated oil lamps certainly existed over 15,000 years. That's three times as long ago as Stonehenge or the Pyramids were built. The lamps were made of clay because metal was yet to be discovered. So we are talking about a period long before the Bronze Age. Some of these lamps are highly crafted and were used to illuminate cave paintings.

This brings me to a more serious point which is that when darkness falls, you need to expend fuel to produce light. When you are cold, you can wear more clothing. Similarly, when it is too hot or stuffy, one can open a window or create a draught. But when it's dark, you have no choice. Darkness is the same for all human beings wherever they are. The science behind illuminating engineering crosses all cultural, linguistic, religious and geographic boundaries. No matter where you are in the world, it gets dark. And when it does, you need to consume energy in order to see.

Of course, daylight is our most sustainable source of light. Throughout history, architects and builders across the world have designed their buildings in order to control the daylight and concomitant heat or cold. We are all aware of the use of brise-soleil and shaded courtyards in the Mediterranean & Africa where humanity first began. Nowadays, the walls are not simply

there to enclose the space but can be fully engineered facades which have intelligent control over the heating, lighting and ventilation entering the interior. The Society of Facade Engineers and the Daylight Group are, of course, two of the professional groups within CIBSE.

However, when night falls, we need artificial light and this uses energy. Exacerbating our requirement for artificial light is our 21st century 24/7 global economy and its subsequent impact on lifestyle.

Whether or not one believes that mankind causes global warming, there is no disputing that there is only one earth and hence, an ever dwindling amount of carbon based fuel. It is our duty, therefore, to minimise the environmental and energy impact of lighting.

The annual Lighting Design Awards have a Low Carbon category and the Society is producing a Factfile on the topic. In future, I would hope these are unnecessary because all new lighting will be low carbon and sustainable. In response to this, the SLL Energy Panel has been reconstituted to review ways of minimising the energy consumption of lighting in the built environment. The intention of the panel is to give guidance & demonstrate best practice. Furthermore, the knowledge from the panel will be fed in to the relevant guides such as CIBSE Guide F, the Energy Services & Technology Association (ESTA), SLL Code for Lighting etc. The challenge for SLL members and all lighting designers is to produce good lighting for minimal energy use. As President, one of my key messages is that good design and efficient energy use are not mutually exclusive concepts.

The revised Part L comes in to force this October. I doubt there are any lighting professionals who think that system efficiency measured as delivered lumens/watt is a good measure of lighting quality. Neither is a power density target an effective way of controlling energy use because it is based on the total installed lighting load rather than the actual energy consumed. In my view, a much better metric is that of total energy consumption per annum such as LENI which is based on EN15193. This standard is now being adopted by some EU states. My opinion is that this is something that we in the UK should also adopt. I raised the idea of a joint position on this at a recent LLG meeting and there was a positive response from the other bodies represented.

Another route to reducing energy demand in offices is to reduce illuminance levels. There is now a groundswell of authoritative opinion saying that the recommended illuminance levels should be reduced. This is not a random change of heart by the experts but quite simply recognition that

most visual tasks nowadays are much less demanding than when the standards were first written. Laser printed documents and high contrast VDTs are easier on the eye than 3rd sheet carbon copies or 4H pencil lines on tracing paper.

Continued research in vision, ways of working, colour and new light source technology all lead to reductions in energy consumption. It is important to emphasise that reducing energy use does not have to mean compromising the standard of lighting – we just have to work smarter by using all the available knowledge and technology we have. This is where the Society with its wealth of expertise can truly make its mark in the future of lighting.

I should mention that CIBSE now recognises the trend towards low energy and sustainability and its 2010 – 2015 vision will include in its professional remit other disciplines such as building physics, construction, local power generation and water management.

A little about me

Finally, I have spoken a lot about the science and engineering of lighting, but the aspect that brings me on to the stage in front of you is, for me, the most important. Quite simply, lighting is still exciting.

I came to lighting later than most people, having previously worked in advertising copywriting and the infant turned monster of computing. I realised that both admen and IT had a great future; it's just that I didn't want to do either as a career.

Quite by chance, I passed a college in Tottenham advertising vacancies for their courses in illuminating engineering. I read the syllabus, thought it sounded interesting and signed up. I was a freelance computer operator at the time, so I asked one of the lecturers the names of employers who would send their employees on a course like this. Two of them offered me a job and I took the one at Osram GEC in Wembley because I hadn't heard of Concord Lighting. Interestingly, CFLs had just been introduced and I remember the lecturer telling the young students that it would be a long while before the GLS lamp disappeared from view. I bet he never thought laws would have to be passed to withdraw them!

Soon after joining Osram I visited a couple of sites which confirmed the variety and interest that has sustained my career. One was the Committee Rooms in the House of Commons where we were asked to develop a new luminaire. In fact, it was a simple, cylindrical bronze-painted pendant with a 150w GLS lamp in it. Not having Acad or Photoshop in those days, our

presentation to the customer included a water colour painting of the pendant in situ. Later the very same week, I visited a warehouse to design security lighting for pallets of condoms. More properly, lighting of the loading bays of the London Rubber Industries warehouse on the North Circular Rd. In those days, a pallet was worth over £1000 – which was a lot of money 30 yrs ago.

Having decided on my career, I thought I should join a professional body. At that time, it was the Illuminating Engineering Society. I didn't care what its name was; I simply wanted to meet like-minded people. This, to me, is one of the main strengths of the Society of Light and Lighting. The only membership criterion is being interested in lighting.

In conclusion, where do I think the Society will be in one hundred years? I'm certain that lighting will have become a professionally recognised discipline. I also think that there will always be a need for an organisation that is devoted to people who are interested in lighting, pure and simple. Lastly, people across the world will continue to need artificial light. I am optimistic that lighting professionals will meet the challenge of producing attractive lighting with minimal environmental impact.

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