

The Society of Light and Lighting Presidential Address 2013

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I would like to thank SLL for the great privilege and honour of becoming its President for 2013/14. Particularly as I follow a long list of distinguished Presidents who have contributed hugely to lighting. I would particularly like to thank past presidents Iain Macrae, Peter Raynham, Alan Tulla and Stephen Lisk for their encouragement to become involved at executive level in SLL. I am not being falsely modest to say that I feel very humble in being elected as President. I am not a dedicated Lighter. My career has been as an Electrical Services Engineer with a degree in Building Services Engineering and who served an electrical apprenticeship. My experience has been in the broader building/electrical services sector but lighting has always been a main feature and an area of particular interest for me.



May I take this opportunity to congratulate Brendan Keely on his appointment as Secretary. He is an excellent candidate who we must all now support. As you know we have been without a Secretary for a period of time but now we have the right person for the job. In the interim we have been supported by a top class full time co-ordinator in Julie Kane, who has done a superb job. Julie will remain in place to continue her good work and will work closely with Brendan and me going forward. This now leaves SLL administratively in a very strong position to not only consolidate our position but to now address the challenges ahead to market ourselves better, grow membership further and manage ourselves better with reasonable budgetary control. The CIBSE Knowledge Portal offers huge member benefits and is the start of a change that will ultimately lead to much more electronic publication, to a wider and more international audience. Membership income grows at the expense of publication income but we will continue to monitor this and manage the society well in a time of great transition for the industry and for the Society.

The challenges ahead to reduce greenhouse gases and develop renewable resources are now embedded in our industry. CIBSE focuses on developing low energy buildings and this can only be achieved through holistic design. The development of building information modelling (BIM) facilitates this holistic approach and is a new way of working together. For example the design of daylighting impinges upon the thermal aspects of a building significantly, so a cross disciplinary collaboration at building design stage is critical to achieving low energy performance overall. BIM facilitates this approach. The levels of daylight impact upon the lighting control strategy and interior lighting needs to be considered in a different way and at an earlier stage of the process. Savings in light energy also reduce cooling load so holistic design also means that other members of the design team need to know more about lighting; and by the way, that it is not just about LEDs. Iain Macrae presented a paper at the recent lighting conference where he offered 15 ways to reduce lighting energy and only one was LED. How many of these other 14 methods do our Architectural, Building Services and indeed some of our Electrical Services colleagues know about reducing light energy? So low energy design has to be a truly collaborative process where we all learn from one another and of course the solution must be based on the strength of evidence rather than the strength of a person's position in the design team – which I know has sometimes been the case historically. To gather evidence effectively means we need to do more research and research is not necessarily about people in white coats in a laboratory.

In recent years my interest has focused on applied research in lighting. This is not done in a laboratory, although we do have a modest lighting laboratory in the Dublin Institute of Technology. We had a young

undergraduate student a few years ago who investigated photosynthesis and was a finalist in the Young Lighter, having won the Irish Young Lighter. He went on to win a scholarship and spent a semester in the space programme in America. I presently supervise a research student who is investigating Kit Cuttle's theory of Exitance and he hopes to develop a new way of designing interior lighting as he completes his PhD. Peter Boyce challenges us to *Lift the Spirit* with lighting. The way to do this is by experimenting, collecting data and analysing it rigorously. This applied research must be undertaken by lighting designers in the field, not by people like me in universities.

Evaluating what we do is not easy, particularly if we are embedded in only quantitative research traditions. If we develop new designs and new ways of doing things some aspects can be evaluated quantitatively but for others we need to know what people think. How do we know what they think without asking them? And not just in questionnaires that respondents answer within terms of reference set by the researcher. Sometimes we have to explore outside of the quantitative methods into *the more difficult to do Qualitative Paradigm*. I spoke with an American engineer a few years ago at the American Society of Engineering Educators conference in Austin, Texas about Qualitative Research. I am not exaggerating to say that he became apoplectic in being dismissive of this important method of collecting data. He felt it could never be rigorous. But if we want to know what someone thinks then we have to ask them and allow them go outside parameters that we might set. Two years later I presented a paper at the ASEE conference on Qualitative research and outlined where I had used it. I am relieved to say there was a more open mind about it from the audience that time around.

A few years ago I was supervising a mature student who wished to investigate the effectiveness of lighting controls. He had designed the lighting controls in a building, installed various meters to measure energy and did the same in an older but otherwise almost identical building with no controls. He then spent a semester with us undertaking various modules and preparing for his dissertation. He went away at Christmas to reappear in January almost in tears, the lighting controls had been disconnected and he had no data. I then said to him that he now had a more interesting question to investigate. Why were the controls disconnected? To answer that question he had to interview people and get to the heart of the problem, which he did. He also had to do this in a rigorous way which he drew from the rigour of the Qualitative Research paradigm from our colleagues in the social sciences who have been doing this type of research for many years. Bernard Doyle's paper was published in the SDAR journal in 2011 and carries insightful findings about how to get lighting controls wrong and things to avoid.

So one of my aims in my Presidential year is to focus on research in lighting, applied research in its very broadest sense, and to try and get across to our members that they need to be part of an applied research community in adapting applied research and evaluation in their everyday practice. This adds value to what they do and value to the client. Disseminating interesting findings based on rigorous collection and analysis of evidence is key to developing our profession. The Republic of Ireland branch of CIBSE/SLL publish the SDAR* Journal. This contains real world findings about innovative practice in the building services and lighting. The **lighting** papers are by far the most downloaded papers in the SDAR journal. The recent Lighting Conference papers are also available from the same site – all free. Why not consider contributing a paper to the SDAR journal? The papers are different than LR&T but of good quality and evidence based and might inspire you to contribute as they are mainly papers by working engineers for dissemination about real world projects

In respect of research, let me emphasise the good work of LR&T and SLL in this regard. Members of SLL have access to the results of lighting research, through *Lighting Research and Technology*, a truly world class research journal. Given their vast experience, it is the members of the SLL who will know how best to employ the ideas from such research in real lighting projects. Once these ideas are tried and tested they can be adopted into standards, guides and codes; quite often the innovative ideas put forward in research need evaluation on the ground. Post occupancy evaluation is a way of doing this and is applied research. It is this second stage of evaluation on the ground that the SDAR journal mainly focuses on, evaluation of the application.

Like everybody else I have watched and enjoyed the benefits of the revolution in the electronics industry in recent decades, as smart solutions have evolved to meet so many of our needs as individuals and professionals. But lighting is now going through a revolution. After many decades using incandescent and discharge lamp technologies, the Electronics revolution has almost accidentally produced the Light Emitting Diode. According to the McKinsey & Company analysis of the global lighting market: *Lighting the Way*, the LED market will be a £55billion industry by 2020 (60% + of the industry). Luxlive last year provided visual evidence of the ever more imaginative LED offerings available. But yet I sometimes hear lighting designers question the claims and reliability of these lamps, not to mention the cost. Healthy scepticism is required of us as lighting professionals and we can only answer these valid questions by properly evaluating what we do. We need to evaluate the application of LED technology rigorously as we adopt its more widespread use.

SLL is a facilitator to better lighting by disseminating research findings and best practice not only within the core lighting profession but also to electrical services engineers, building services engineers, architects, contractors, public bodies and all others involved in the building and lighting industries. To do this SLL needs to reach out domestically and internationally. Not enough people know about SLL or the great work that goes on. I believe we can grow our membership, stimulate interest in lighting in the wider profession and inspire younger people in particular to join our ranks. Lifelong learning is now a major factor in society. Our publications have great potential for use by universities and learners worldwide. Let us introduce ourselves to more of those communities of learners through our publications and LR&T.

CIBSE/SLL membership to full time students is now free and my own department in DIT provided 50 new student members this year. But retaining them must follow this investment as there is fierce competition from other professional organisations. We must meet this competition by emphasising our strengths, whilst addressing our weaknesses, taking advantage of opportunities whilst protecting our position against threats. Executive is presently addressing the outcome of a SWOT analysis and with the appointment of the new Secretary we have the resources to help us address this.

CPD is an important activity and we will support that at all times throughout the regions. The Masterclass series goes from strength to strength and we continue to get more of the audience to become members whilst accepting that non members are also an important part of this audience. We have excellent London events. Events such as Young Lighter of the Year also continue to grow in standing. This year the final will once again be at Lux Live, following its great success there last year. The Young Lighter is a great opportunity to engage with young people in the industry and the importance of this cannot be overstated. Ready Steady Light last year completed its first decade and is an event that highlights the importance of creativity, design and teamwork.

Our young members and potential members need professional recognition. Let us assist in this by facilitating members with the education, experience and skills requirements that they need. Let us encourage more universities to accredit their courses and programmes with the Society whilst ensuring such programmes are rigorous and meet the required standard.

So to sum up, this year as president I will focus on:

- Reaching out to other disciplines within CIBSE and outside, and internationally in order to improve collaboration,
- To support applied research and the dissemination of findings from that to help inform the whole community.
- Beginning working with the new secretary and the administrative team to move SLL forward on an agreed strategy, providing support to all our volunteer committees and addressing the issues raised in the recent SWOT Analysis;

Finally, may I once again thank you for the honour of being your President.

Profile: Dr Kevin Kelly is a senior academic in the Dublin Institute of Technology (DIT), the largest HEI in Ireland, with over 20,000 students. He is Head of Electrical Services Engineering in DIT which has 30 academic staff. Last year 200 students graduated in Electrical Services Engineering and Energy Management. Kevin was instrumental in establishing Electrical Services Engineering as a discipline in DIT over a decade ago when the industry was crying out for electrical services graduates. He is a former chairman of CIBSE Ireland and Editor of the *Sustainable Engineering Design* journal which publishes applied research in sustainable design of the built environment <http://arrow.dit.ie/sdar/>. He instigated the Sustainable Design and Applied Research Awards on behalf of CIBSE Ireland and the Irish Lighter and Irish Young Lighter Awards which have been operating in DIT for 10 years. He recently co-ordinated the International Lighting Conference which took place in Croke Park, Dublin. Kevin lives in Dublin with his wife Louise and has three adult children.