Part L: the key changes for lighting

Masterclass programme 2010-11
Editorial

The issue of the affect on – and possible disservice to – lighting design that energy legislation might have was raised in the last issue (see responses below). In this issue Richard Forster scrutinises the new Part L for the bits that will affect lighting (p6&7).

However you cut it, energy is now the driving force in lighting our buildings, streets and cities. The one thing we can hope for is that legislation will be informed and based on the whole picture rather than pecking away at bits and pieces.

Manufacturers still insist on slapping a marketing tag on their products declaring that they are ‘Part L compliant’. In some ways you can’t blame them for pandering to the box tickers, but of course a compliant scheme is the sum of its parts and no element can be taken in isolation as Part L increasingly acknowledges.

It is also one of the keys to retaining the quality of lighting schemes. For years lighting designers have been cannily trading off one part of a scheme with another to meet the energy quota which is a perfectly sensible and pragmatic approach. Once again, the cover project exemplifies that in the hands of skilful lighting professionals, quality lighting and energy saving go hand in hand.

Jill Entwistle
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LETTERS... LETTERS... LETTERS... LETTERS... LETTERS... LETTERS...

I enjoyed reading Mr Tulla’s and Mr Hoggett’s comments [July/August NL: Presidential address, p6, and Acts of folly? p10]. A little note from the past to boost their arguments is a paper I published in LD+A which was simultaneously published in Sight Saving Review in January 1975 entitled A Little Light on Sight. I called for ‘rational lighting level specifications’. It was quite controversial at the time and seems to be catching on now, some 35 years later.

Howard Brandston

The lighting industry is looking forward to the implementation of the new Part L: Building Regulations with all of the enthusiasm of a trip to the dentist. Part L is being tightened up – quite rightly – but the design community is still finding plenty to argue about. For example, a recent article by my good friend Nick Hoggett [see above] condemns the use of prescriptive criteria based on installed lighting load, arguing correctly that good lighting design can deliver even better energy savings than those required by Part L. But, Nick – there’s a problem with your argument, and it’s in that bit about ‘good lighting design’.

I’m reminded of Simeon Stylites. You remember Simeon – he was the guy who escaped the troubles of the world by living his life on the top of a column in the foothills of a mountain. It’s certainly one way to do it – the problem is, you only have to look over the edge of your little platform to see the rest of the world running around and getting it just as wrong as they ever did.

No: if this is a time for zealotry, then we have to welcome all the prescriptive limitations of Part L / BREEAM / CoSH / LEED and the rest, and then show that good lighting design can still function. Now that’s a neat trick.

From John Bullock’s blog
www.jb-ld.co.uk

Front cover: German power giant EnBW’s HQ in Stuttgart with lighting by Licht Kunst Licht. Winner of this year’s GE Edison Award (see p11). Photography: Lukas Roth
First, I would like to pay tribute to two members of the society’s executive, Cliff Shoebridge and Steve Langford, who have recently stood down from their posts. Cliff Shoebridge has been treasurer of the society for some seven years during which time there have been many changes at CIBSE, bringing with them many challenges. His contribution to the society during this time cannot be overestimated and I would like to thank him most sincerely.

Steve Langford has stepped down as chairman of the technical and publications committee. As he is based in Sheffield, the time commitment has proved too much. However, I am pleased that he continues to play an active part on the society’s executive as vice president. During his time as chair of T&P, he oversaw the publication of LG2, the SLL Lighting Handbook and the 2009 Code for Lighting. Peter Boyce and Mike Jankowski will now take on this role and I look forward to working with them both as we continue to be the industry leader in publications and guidance.

The Masterclasses, entitled The Low Carbon Challenge, kick off in Birmingham and Leeds in October (see p8) and I would encourage you all to get one in your diary. In addition to Philips, Holophane and Thorn, both Ercol and Tridonic have joined as sponsors this year so this series of Masterclasses promises to be the best yet. There is an even larger array of key lighting players as keynote speakers, plus guest speakers from the field of independent lighting design through the IALD. With low carbon buildings firmly on everyone’s agenda, these are not-to-be-missed events for anyone involved in lighting.

Professional recognition has never been more important than in today’s tough economic climate and in addition to keeping up with your CPD – like going to Masterclasses – being a member of the society is hugely beneficial. Many of you would be able to upgrade your SLL membership to achieve greater professional recognition, be that from associate to associate member or to full member. Details of the requirements for each grade are on the website, along with an easy-to-follow flowchart. There is only a small increase in annual membership fee so I would encourage all associates and associate members to investigate this.

This month we are also launching a special offer to our members with an SLL publications package. This comprises a bundle of all our publications for just £180. As this includes the 2009 Code for Lighting CD and the new SLL Lighting Handbook, as well as LG2 (Hospitals and Healthcare, 2008), LG4 (Sports, 2006), LG6 (Outdoor Environment, 1992), LG7 (Offices, 2005), LG10 (Daylight and Window Design, 1999), LG11 (Surface Reflectance and Colour, 2001) and LG12 (Emergency Lighting, 2004), this is a quite unbelievable offer. If you haven’t already secured your copies of the Code CD and Handbook, now’s your chance to grab a bargain. The offer is solely for SLL members and is only available until the end of October.

Finally, I was very saddened to hear of the death of John Holmes at the magnificent age of 101 (see p10). I met him last year shortly after his 100th birthday and he was most inspiring. The society is going to assist his family with the organisation of a memorial service so for those of you who knew or worked with him and wish to be kept informed about this, please contact my colleague Julie Kane by email at sl@cibse.org.

Liz Peck
lpeck@cibse.org
Visionary initiative launched

With the launch of its Light for Sight Framework, the Thomas Pocklington Trust, together with 11 professional bodies that include the SLL, have called for lighting to be acknowledged as a vital aid for sight and to be a routine consideration in health and social care and housing. ‘We call on everyone who can influence lighting in the home to think about people’s sight when they plan their lighting,’ said the trust’s chief executive Ron Bramley.

The Light for Sight Framework sets out eight key goals:

- All new houses to be designed and built with light for sight in mind.
- Sight loss issues to be addressed more explicitly in health and social care assessments.
- Lighting information to be widely available to social care and housing professionals.
- Lighting information to be routinely provided to older people, those with sight loss and their families.
- Skilled advisors to be available to assess lighting needs and to identify solutions.
- Electricians to be able to provide appropriate lighting for people with sight loss.
- Lighting training to be given to health and social care professionals so that they can assess people’s needs and advise on solutions.
- Policy makers to be urged to add Light for Sight to policies on health, social care and housing.

The trust, a UK charity which provides housing, care and support services for people with sight loss, estimates that around two million people in the UK have sight loss that affects their everyday life and, as sight loss is frequently age-related, this figure is set to rise as the population ages. In addition, there are around 13 million people in the UK aged over 60 who might benefit from better lighting at home, says the trust, given that an average 60-year-old needs three times as much light as a 20-year-old to carry out basic tasks.

Dramatic win

Norwegian lighting graduate Lora Kaleva was this year’s winner of the Electrical Safety Council/Lightmongers Award for the best exterior lighting design project by a student on the MSc Light and Lighting course at the Bartlett.

This year’s task was to illuminate the facade of the historic Wilton’s Music Hall in London’s East End. Kaleva’s theatrically inspired composition (pictured) included metal halide floodlighting with gobo shadow effects and backlit shadow figures in the windows suggesting actors and audience. Runner-up was Hilary Denby-Jones who trained as an architect.

The awards presentation was made at Wilton’s theatre which featured the winning scheme for the evening. The award is given annually and sponsored by the ESC, an independent charity committed to reducing injuries and deaths caused by electrical accidents.

On the lighter side...

- A bottle that uses ultraviolet light to sterilise drinking water has won the UK leg of the James Dyson Award. The Pure bottle was invented by Timothy Whitehead, a design and technology graduate from Loughborough University. The bottle contains two chambers. Dirty water is put in an outer chamber and the inner chamber is plunged through it, filtering water particles as small as four microns. Once filtered, the water is sterilised by a wind-up ultraviolet lamp. It takes 90 seconds and a prototype killed 99.9 per cent of bacteria and viruses.

- Supermarket lighting helps keep spinach fresh and producing new vitamins, according to a report in the Journal of Agricultural and Food Chemistry. Even when picked, leafy greens continue to photosynthesise, said Gene Lester of the US Department of Agriculture’s Agricultural Research Service. ‘As long as there is moisture in the leaves and there is gas exchange and light, it is good to go whether they are picked or not.’

ILE changes name

In a move planned for more than two years, the ILE will change its name at its annual conference in September to the Institution of Lighting Professionals (ILP). The aim is to broaden the base of the membership beyond the traditional sector of street lighting. ‘The name change is a secondary issue – the real purpose is the longer term future of the profession,’ said chief executive Richard Frost.

Architectural lighting specialists, urban lighting designers and interior lighting designers are among the groups the ILP is setting its sights on in what is viewed as a long-term strategy. ‘This isn’t an instant fix,’ said incoming ILP president Alistair Scott in a recent interview. ‘This is a five-year vision. The primary objective is to better serve the existing members but alongside that we also want to expand the membership.’
Laying down the law

The ILE* and PLDA’s Zero to Hero seminar outlined eight things a lighting professional should know about current and new legislation. Burying your head in the sand is no longer an option, concluded Alan Tulla.

How knowledgeable and confident do you feel on the following topics: the CRC Energy Efficiency Scheme, EuP/ErP, CO2 footprint software, Green Procurement, energy labelling of lamps and UEL? Speaking personally, it is a long time since I felt so ignorant, and that sentiment applied to many in the audience.

Mike Simpson of Philips Lighting began the session by discussing the predicted energy gap and the need to start reducing energy now. He forecast that by 2030 all CFLs and HID lamps will have disappeared for reasons of efficacy. The only sources left, he said, will be linear fluorescent and LEDs. Lower recommended task illuminances and the luminance method of road lighting were also predicted to go.

The second talk, by Katrina Hazell of Balfour Beatty, concerned the Carbon Reduction Commitment or CRC scheme. Although we are all aware that it applies to users of >6000Mwhr/pa, you still need to document your electrical use when it exceeds half this value. The first stage of the CRC is already in force and organisations need to register their interest. There are big penalties for those who don’t.

The EuP has morphed into the ErP (Energy-related Products) and is an EU Directive aimed at improving the energy performance of lamps and ballasts. Allan Howard of WSP showed multiple tables with the efficacies and time scales to be achieved. There are also minimum standards on life and lumen depreciation – this may mean the death of conventional metal halide lamps. Interestingly, LEDs are not currently listed. The reason is that the Directive is based on unit quantity sales (>200,000) in each market segment and LEDs have not yet breached this threshold. However, Howard emphasised that the Directive changes on an almost weekly basis.

Related to this, did you know that lighting design may soon fall under EU legislation? EU lighting manufacturers’ federation Celma estimates that properly designed systems can triple the benefit of ErP. Martin Lupton of Light Collective (above right) described moves afoot within the EU to tackle the complete lighting installation rather than just the product.

Embodied energy is only a small part of the total energy used by lamps and luminaires. Most comes from their use, hence the move to system efficiency.

We are all familiar with the A-G energy-labelling scheme on white goods. As part of its work, Defra tests products on the market to verify that the energy label shows the correct value. The audience was stunned to learn that last year 30 per cent of CFLs were labelled showing a higher efficacy than Defra measured. Kevan Shaw raised the question of what action Defra was taking, to which the response was none, since it only had a limited budget. (I’ve subsequently discovered that both the LIF and LA responded to the Defra findings, their contention being that Defra did not do a proper market survey and did not get representative samples).

Due to the increasing efficiencies of products, Defra will be introducing three additional classifications. Rather than simply changing the A-G system, we will soon also have values A+, A++ and A+++.

Gareth Jones, CTO of Enlis and consultant on Ultra Efficient Lighting (UEL) for the Photonics and Plastics Electronics KTN, spoke on the definition of UEL. A form of words had been agreed by all interested parties including the SLL, the ILE*, and PLDA. The important aspect of UEL is that it refers to a lighting system. There is no such thing as a UEL product. He also raised the controversial issue of whether we need high CRI sources for all tasks. In other words, energy saving could be achieved by using low CRI lamps where colour discrimination is not critical.

Kevan Shaw, always a worthwhile speaker, discussed Green Procurement and what suppliers, such as consultants and luminaire manufacturers, can do to demonstrate their ‘green’ credentials. One of the big issues for local authorities is how to incorporate whole-life costing into budgets which change annually. Shaw made reference to BS8555 ‘Environmental management systems’ for SMEs and the PLDA’s ‘Towards sustainable practice’ document on its Greenpages site.

The last talk of the day by Alistair Scott of Designs for Lighting (above left) and Mark Ridler of BDP Lighting was about how to demonstrate professional competence, so at least we left knowing what to do next. Lighting professionals are generally from an engineering or a design background. It is arguably easier to define engineering (objective) competence than design/artistic (subjective) competence. It is essential that legislation does not drive out creativity through the lack of a suitable tick-box. The presentation discussed work in progress, based on the Highways Agency GD-02 competency scheme, which is examining how both disciplines can be incorporated.

From Zero to Hero was organised jointly by the ILE* (now the Institute of Lighting Professionals) and the PLDA, and held in July at the Coin Street Neighbourhood Centre on London’s South Bank.
L is let loose

With the latest version of Part L coming into force this October, Richard Forster looks at the key changes which will affect lighting variations due to weather patterns or business fluctuations.

ADs are not intended to be prescriptive and all carry a note that there may be other ways of achieving compliance with the requirements. There is no obligation to adopt any particular solution in the AD if some other way is preferred and can be shown to be equally effective.

Because the aim is to assess overall energy consumption of a building, it is possible for an individual product to be compliant in one building, but not in another. Therefore compliance only relates to individual buildings and not products. However, ‘each building service should be at least as efficient as the worst acceptable value for a particular type of appliance as set out in the Compliance Guide’.

Section 6 of AD L2B for existing non-dwellings includes the requirement for consequential improvement. Among the practical and economical measures suggested (Table 6 p24) is ‘upgrading general lighting systems with an average lamp efficacy of less than 40 lamp lumens per circuit-watt... by new luminaires or improved controls’. Section 6 para 11(c) has a supplementary requirement when the installed capacity per unit area of a cooling system is increased: ‘any general lighting system within the same area with an average lamp efficacy of less than 45 lamp lumens per circuit-watt should be upgraded with new luminaires and/or controls...’. This reduces lighting load and hence the space cooling demand.

Most useful are Sections 12 of both Compliance Guides which cover detail lighting requirements, although odd references to lighting remain in the ADs. For domestic dwellings changes largely relate to withdrawal of tungsten filament lamps.

Low energy lamps must have an efficacy of not less than 45 lamp lumens per circuit-watt (previously 40). Fittings must also have a total of more than 400 lamp lumens and those that are of less than 5 circuit-watts are excluded from the total number of luminaires. These last two requirements are 2010 additions, although products of less than 5W and an

Building for the future: due for completion in 2011, the City of London’s tallest building, the 46-storey Heron Tower, already has a BREEAM Excellent rating and has been awarded green building status
output exceeding 400 lumens seem likely in the near future. The previous exclusion of compact lamps with bayonet or Edison screw caps has been withdrawn as there is now less risk of subsequent substitution by GLS tungsten lamps.

For non-domestic buildings, some key terms are defined in the Compliance Guide but for display, emergency and special process lighting it is necessary to refer to Section 3 in the AD. As before, recommended minimum lighting efficiencies for new and existing buildings are defined by type and situation.

For general lighting in office, industrial and storage areas average initial efficacy has to be not less than 55 luminaire lumens per circuit-watt (from 45). For existing buildings this can be modified by a lighting control factor in Table 45 where automatic lighting controls are used. No correction should be applied in new buildings as it is incorporated in the calculation method. For general lighting of other areas the average initial efficacy must be not less than 55 lamp lumens per circuit-watt (previously 50).

Average initial efficacy for display lighting is no less than 22 lamp lumens per circuit-watt (from 15). Often overlooked is that it is the average luminous efficacy, and so will vary for each building according to the combination of products used.

Places of worship are excluded, but not ancillary areas such as offices, kitchens and meeting halls. There is special consideration for listed/historic buildings, largely as before, and English Heritage guidance should be taken into account.

The area that is subject to the largest change is display lighting with average lamp lumens per circuit watt increased by nearly 50 per cent. Replacements for reflector tungsten filament lamps in this sector are overdue so compliance should not prove difficult.

Finally, it is worth stressing that compliance with Part L does not indicate good lighting practice or suitability for purpose. It only examines whether building energy performance, including permanent lighting, is equal or better than the worst acceptable efficacy given in the Compliance Guides.

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**Regulations**

Energy in Lighting, a major London event organised by the SLL, will focus on the new Part L regulations. It will take place at the RSA on 19 October from 6pm-8pm (5.30pm registration), followed by a reception from 8pm-9pm. Registration is required for this event: sl@ciabse.org or online at www.sll.org.uk

### Building Regulations 2010 (28)

<table>
<thead>
<tr>
<th>Approved Document L1A New dwelling (29)</th>
<th>Approved Document L1B Existing dwelling (29)</th>
<th>Approved Document L2A New building other than dwelling (34)</th>
<th>Approved Document L2B Existing building other than dwelling (32)</th>
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<tr>
<td>Domestic Building Services Compliance Guide (129)</td>
<td>Non-Domestic Building Services Compliance Guide (92)</td>
<td>Dwelling Emission Rate (DER) SAP2009</td>
<td>Building Emission Rate (BER) SBEM</td>
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**Reference documents – standards, guides and legislation**

**Building Energy Certificate (produced not later than five days after the work has been completed)**

**Documentation format**

### Domestic dwellings

<table>
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<th>2010</th>
<th>2006</th>
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<tr>
<td><strong>Internal lighting</strong></td>
<td>3 out of 4 to be low energy fittings</td>
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<tr>
<td><strong>Internal lighting</strong></td>
<td>Fittings must have luminous efficacy greater than 45 lamp lumens/circuit watt and total output greater than 400 lumens</td>
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<tr>
<td><strong>Internal lighting</strong></td>
<td>Fittings of less than 5 circuit watts excluded</td>
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<tr>
<td><strong>External lighting</strong></td>
<td>Not greater than 100 lamp watts per fitting and automatically controlled when daylight sufficient and location unoccupied</td>
</tr>
<tr>
<td><strong>External lighting</strong></td>
<td>OR lamp efficacy greater than 45 lumens/circuit watt and automatically controlled when daylight sufficient and controllable manually by occupants</td>
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### Non-domestic buildings

| **General lighting for office, industrial and storage areas** | Average efficacy must be not less than 55 luminaire lumens/circuit watt Control factor only applied for existing buildings | Average efficacy not less than 45 luminaire lumens/circuit watt |
| **General lighting for other interior areas** | Average efficacy must be not less than 55 lamp lumens/circuit watt | Average efficacy not less than 50 lamp lumens/circuit watt |
| **Display lighting** | Average efficacy must be not less than 22 lamp lumens/circuit watt | Average efficacy not less than 15 lamp lumens/circuit watt |

**Key lighting changes in Part L 2010**
The low carbon challenge

The new Masterclass programme focuses on energy usage in lighting

**LEDs – the big picture**
Brian Charman, Philips Lighting

The speed of innovation is increasing with the switch to LEDs. Keeping pace with this are rapidly developing standards and guides to help designers change their mindset and get to grips with the new technology. How will this affect you?

**Energy saving by design**
Tad Trylski, Erco

- Light and architecture: how light interprets space
- Vertical illumination: human perception
- Simplified understanding of lighting design
- Efficient visual comfort: light not luminaires
- Energy saving, by design

**The speakers**

**Stewart Langdown MSLL**
Stewart Langdown heads up technical and marketing for leading component and LED manufacturer Tridonic UK. He is chair of the LIF Controls group and a member of the LIF Technical Board. He was on the steering group for CIBSE Commissioning Code L. He is also a guest lecturer on the Bartlett MSc for Lighting.

**Iain Macrae MSLL**
Iain Macrae graduated in mechanical engineering and started with Thorn more than 22 years ago. He is now its head of Global Lighting Applications Management, working with an international team on strategy, lighting standards, and new product development and marketing. He is current vice president of the SLL.

**Brian Charman MSLL**
Brian Charman has spent more than 20 years in the lighting industry, specialising in the component side of the business for 10 years. Recently this has encompassed LEDs and their associated technology. He now draws on his experience to manage the Philips Lighting Academy.

**Tad Trylski BEng MSc MSLL**
Lighting designer Tad Trylski’s background includes theatre lighting and product development with DHA. He graduated from the Bartlett in 1999. His lighting work has spanned the Clifton Suspension Bridge and the Pyramids of Giza. He is now responsible for training at Erco, coordinating an international network of trainers.

**Christopher Wilkes MSLL**
A physics graduate, Christopher Wilkes has specialised in lighting with Holophane for more than seven years. An optical designer by trade, he runs the company’s photometric testing lab, and its relatively rare multicell Gonio-Photometer. He has designed optics, both reflective and refractive, for many different applications.

**Energy saving or bust!**
Christopher Wilkes, Holophane

EMC testing is now more stringent, with new challenges for both control gear and luminaire manufacturers. Reduced lighting levels using white light? The benefits, the considerations and the pitfalls.

- EMC: What is it? How is it tested?
- Energy savings and EMC?
- Light production and our vision
- Optimising vision to save energy
- Measurement of light

**Lighting performance and the future**
Iain Macrae, Thorn Lighting

- Ultra Efficient Lighting?
- Will LEDs save the World?
- Part L – some problems to solve
- A taste of the future

**Lighting controls**
Stewart Langdown, Tridonic

- Analogue, Digital Broadcast (DSI) and Dali: how and when they should be used
- Field bus technologies (Echelon, KNX, TCP-IP), convergence and using the internet/intranet.
- Control of lighting as a sub-system of building control and how Lighting System Legislation (LSL) will impact on lighting design.
- Future trends: wireless and powerline control, DMX.
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- Opinion: Lighting’s parallel universes. W Julian
- Editorial: Demonstrating diversity. PR Boyce
- Using satellite-based methods to predict daylight illuminance for subtropical Hong Kong. JZ He and E Ng
- Overcast sky luminance is dependent on the physical state of the atmosphere below cloud level. M Kočifaj
- Optimisation and design of ducted daylight systems. AP Robertson, RC Hedges and NM Rideout
- A comparison of simultaneous and sequential brightness judgements. SA Fotios and C Cheal
- Mesopic spectral sensitivity curves by a colour-matching method. G Polymerooulos and FV Topalis
- A method for assessing the visibility benefits of roadway lighting. MS Ree, JD Bullough and Y Zhou
- Comparison of conventional and accelerated lifetime testing of fluorescent lamps. PG Rosillo, N Martin and MA Egido
- Book review: Light Perspectives – between Culture and Technology. D Loe
A guiding light

Arthur Tarrant pays tribute to the life and work of former SLL president John Holmes who died recently at the age of 101

The work of John Holmes touches all of us. Whenever you make a journey, whether by road, rail, sea or air, your safety is more assured through the use of coloured light signals. The fact that they are standardised, and therefore instantly recognisable the world over, is in large part due to his work. Today we take night flying for granted. But it was Holmes who devised the first flush runway lights that made the night landing of commercial aircraft possible. He was, in fact, a passenger on the first experimental night-landing flight to make use of them in 1939.

The son of a Methodist minister, John Guyscliffe Holmes was born in Bradford in 1909. He graduated at the age of 20 from the Royal College of Science (now part of Imperial College) London with a BSc in physics and a diploma in optics. His first job was with Chance Brothers in Birmingham, maker of optical and coloured glasses.

His mentor at the RCS, Dr David Wright, was at the time particularly concerned with the research that led to the system of colour measurement now used worldwide. Holmes applied that to coloured glasses and was soon in demand for the purposes of international standardisation. He carried out research on those areas of the colour gamut that could safely be used for signal purposes, and his findings, which appeared in 1941, still stand in use today. They were submitted for a PhD, but were rejected in an extraordinary decision by one examiner ‘because it was not physics’. But those findings established his reputation as an international expert.

His work at Chance Brothers also involved him in the design of lighthouse lanterns – which led to his long association with Trinity House – and brought him into contact with lighting in general. He moved to lighting manufacturer Holophane in 1946, where he rose to become its technical director. Here his knowledge and skills were applied to lighting design and lighting equipment of all kinds – he designed the light fittings that were used in Westminster Abbey for the 1953 coronation.

A great innovator, in 1967 Holmes initiated research on flashing light signals at Imperial College which culminated

‘A strictly rigorous scientist, he was eloquent and elegant. He was a master of the mot juste and had the perfect touch of humour’

in an international symposium in 1970. That led to their adoption by British and many other national railways. He supposedly retired in 1970, but in fact continued with much committee, writing and consulting work.

During his career, he was in great demand for international standardisation work, and played a prominent part in the work of the CIE (including contributing to the formulation of the International Lighting Vocabulary that we use today). He also made great contributions to the Society of Light and Lighting, then the Illuminating Engineering Society, twice serving as its president. His communication skills, together with his tact and diplomacy in international technical discussions, were always greatly valued.

On a personal level, John Holmes was a devoted Methodist and contributed a great deal to the work of the YMCA – he lived in one of its hostels as a student – serving as a member of its national committee. Like the Colour Group – of which he was the last surviving co-founder – and the IES, the YMCA awarded him its highest honours, and he also received the Queen’s Silver Jubilee Medal in 1977.

He was always willing to give his help, whether it was with short courses or scientific meetings. His assistance was sought with the preparation of a lighting guide for communal residential buildings when he was 85. He had no hesitation in agreeing – and he brought experience, a sound measure of common sense and a sense of humour to that work.

Holmes was perhaps at his best when he spoke in the discussions at scientific meetings. A strictly rigorous scientist, he was eloquent and elegant. He always had the right words for the occasion – he was a master of the mot juste – and had the perfect touch of humour. He has received many tributes, but perhaps the best came from another great colour scientist: ‘He was a most gracious man.’

IES presidents’ dinner, 1970. Seated, from left to right, are: Harry Carpenter, Jack Harris, Harry Hewitt (in office), Jack Waldram and John Holmes
A war ds: pro ject pro file

Powerful statement

The latest winner of the GE Edison Award, EnBW City combines cutting-edge building services with multifaceted lighting

EnBW’s business is producing and selling energy so its new Stuttgart HQ had to be a model of efficiency and cutting-edge building services. A key aim of the lighting system was to reduce primary energy consumption by 54 per cent compared with reference office buildings, largely achieved through a predominance of metal halide and fluorescent lamps and a daylight-linked control system.

However, the lighting concept by Licht Kunst Licht was multifaceted: in some cases discreetly articulating the architecture, in others creating eye-catching elements or aiding orientation. All aspects are exemplified by the treatment of the foyer. Cylindrical surface-mounted downlights (70W 3000K CMH) are an integral part of the architecture. Located at the intersections of the roof trusses, they visually recede in the space, allowing for an almost unobstructed view through the glass roof on to the facade of the high-rise building.

The reception desk has been designed as a focal point. A luminous corona from fluorescent at its base gives it an impression of weightlessness, underlined by a luminous cloud that appears to be floating above the desk. Comprising layers of polished aluminium wire mesh, it has 400 open-distribution xenon light sources located within the structure.

Another lighting focal point, the sculptural staircase, is to the left of the desk. The central wall, to which the flights of stairs are attached, is clad in overlapping glass panels over which water flows. Between the panes are lighting profiles with narrow-beam LEDs aimed downwards, which suffuse the water with light. On the underside of the stairs a slender luminous strip (3500K T5 lamps) traces the outline of the staircase and circumscibes the central water wall in a zigzag.

The water flows into a large, shallow basin, which marks the boundary between the public part of the entrance hall and the internal part – a contemporary moat. The waiting zone is within the water basin, like an island, an impression emphasised by the LED illumination of the pool’s edge.

All the individual buildings are linked at first-floor level by a connecting corridor – the ‘netwalk’ – which extends across the entire length of the complex. To give this a sense of rhythm, two distinct light moods were developed. In the transition area to the office blocks pairs of CMH downlights emphasise the floor. In the remaining areas, recessed linear fluorescent luminaires fill the space with a direct diffuse light and illuminate the side areas. Viewed from the end of the netwalk, a sequence of brighter and darker zones emerges.
2010

6-7 October
M&E: The Building Services Event
Venue: Olympia
London W14
www.buildingservicesevent.com

7 October
Lighting Masterclass:
The Low Carbon Challenge
Speakers: Brian Charman,
Chris Wilkes, Iain Macrae,
Stewart Langdown, Tad Trylski
Plus IALD guest speakers
Location: Birmingham
Time: 10am-4.30pm
www.sil.org.uk

7 October
LoveLight
Venue: Village Underground
London EC2
www.we-love-light.com

19 October
Energy in Lighting
Venue: Royal Society of Arts
John Adam Street, London WC2
Time: 6pm-8pm; reception 8pm-9pm
Registration required
www.sil.org.uk

21 October
Joined Up Lighting
Sports lighting and television
Venue: BDP, London EC1
Time: 2.30pm

28 October
Lighting Masterclass (see 7 October)
Location: Leeds
www.sil.org.uk

23 November
Lighting Masterclass (see 7 October)
Location: Liverpool
www.sil.org.uk

14 December
Future Trends in Street Lighting
Venue: Transport Museum,
London WC2
Time: 6pm-8pm
www.sil.org.uk

2011

12 January
Young Lighter of the Year final
Venue: The Arc Show, Business
Design Centre, London N1
Time: 4.30pm-6.30pm
www.sil.org.uk

12-13 January
The Arc Show and IALD
Enlighten Europe Conference
Venue: Business Design Centre
Islington, London N1
www.thearcshow.com

27 January
Lighting Masterclass (see 7 October)
Location: Cardiff
www.sil.org.uk

24 February
Lighting Masterclass (see 7 October)
Location: Norwich
www.sil.org.uk

15 March
Is Light a Hazard?
Venue: London (tbc)
Time: 6pm-8pm
www.sil.org.uk

16 March
Ready Steady Light
Location: Rose Bruford College
www.sil.org.uk

24 March
Lighting Masterclass (see 7 October)
Location: Edinburgh
www.sil.org.uk

12-17 April
Eurolute
Venue: Fiera Milano Nuovo
Polo, Milan, Italy
www.cosmit.it

28 April
Lighting Masterclass (see 7 October)
Location: Dublin
www.sil.org.uk

17-19 May
Lightfair International
Daylighting Institute (15-16 May)
Venue: Pennsylvania Convention
Center, Pennsylvania
www.lightfair.com

19 May
Lighting Masterclass
(see 7 October)
Location: London
www.sil.org.uk

24 May
AGM, presidential address
and awards reception
Venue: tbc
www.sil.org.uk

Lighting Masterclasses:
Masterclasses are kindly sponsored by Erco, Holophane,
Philips, Thorn and Tridonic. For venues and booking details, see
www.sil.org.uk

Mid Career College: the college runs various courses across
the whole spectrum of lighting and at sites across the UK. Full details at:
www.cibsetraining.co.uk/mcc

LIF courses: details from John Hugill, 0208 529 6909, or email
training@lif.co.uk