



Campaign for Dark Skies

Light pollution – a new threshold

Bob Mizon & Graham Bryant

Since 1989, the BAA's Campaign for Dark Skies (CfDS) has been working with central and local government, industry, lighting professionals and all those who make, choose and install exterior lighting, promoting 'star-quality' lights that protect the celestial and terrestrial environments through careful control of the brightness and direction of emissions.

The *Lighting Journal*, produced monthly by the UK Institution of Lighting Professionals (ILP), is the well-respected and widely read voice of the British lighting industry. Its pages echo the opinions and publicise the latest products of the many companies who light our streets, car parks, sports venues and other public spaces. The *Lighting Journal* tracks the trends and heralds future developments in the lighting that is so much a part of the modern nightscape. A meta-

morphosis has gradually occurred in its pages in recent years. Up to and including the 1990s, many of the products illustrated allowed light sideways and upwards, with little apparent desire to optimise energy use, and no thought for limitation of the emissions to where they might be needed. Now, it is difficult to find any such products in those pages; advertisements and features now show road lights that are full-cut-off, illuminating only below and minimising spill. Articles appear about the negative impacts of wasted light (on human health and wildlife, for example). Light pollution of the night sky is constantly mentioned.

Has this sea-change in the thinking of the lighting industry had anything to do with the activities of campaigners such as the CfDS and the CPRE (Campaign to Protect Rural England)?

In the 1980s, when astronomers and environmentalists began expressing their fears about the loss of the night sky to wasted light, the term 'light pollution' was unknown to the general population. Nowadays, nearly everybody will have come across this phrase: astronomers and non-astronomers know it, and realise that there is a 'dark side' to artificial lighting. It occurs as a separate entry in dictionaries, and has been the subject of countless newspaper and magazine articles, films and television programmes. For example, in 2010, BBC Television's *Inside Out* took on the subject of light

Below: 'Getting Light Right', a 3-page folded leaflet produced by DEFRA, CPRE, the ILP and CfDS, designed to be distributed in packaging with all retail so-called 'security' lights.

Getting Light Right



Simple tips to get your floodlight working best for you and the environment

Be considerate of others

- Choose the correct bulb for the task: 300-500W is far too bright for a small area; it wastes energy and can dazzle possible witnesses.
- 150W is often more appropriate, and uses less energy – saving you money.
- Don't leave yourself open to complaints by allowing your light to shine through others' windows and onto their property.
- If you are found to be causing a statutory artificial light nuisance you may be served a notice by your local authority that requires you to minimise or stop the nuisance. Failure to abide by such a notice can result in a fine.



Don't leave yourself open to complaints by failing to site your light carefully.

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This leaflet was created jointly with Campaign to Protect Rural England (CPRE), Campaign for Dark Skies (CfDS) and the Institution of Lighting Professionals (ILP).

CPRE

Campaign to Protect Rural England (CPRE) campaigns for a beautiful and living countryside. They work to protect, promote and enhance our towns and countryside to make them better places to live, work and enjoy, and to ensure the countryside is protected for now and future generations. Phone: 020 7981 2800; Email: info@cpre.org.uk; Web www.cpre.org.uk

CfDS

Campaign for Dark Skies (CfDS) aims to preserve and restore the beauty of the night sky by campaigning against excessive, inefficient and irresponsible lighting that shines where it is not wanted nor needed. Web: <http://www.britastro.org/dark-skies/>

Institution of Lighting Professionals

The Institution of Lighting Professionals (ILP) is the UK and Ireland's largest and most influential professional lighting association, dedicated solely to excellence in lighting. Phone: 01788 576492; Email: info@theilp.org.uk; Web www.theilp.org.uk

Local authorities are the main enforcers of light nuisance legislation and are therefore the best point of contact for light-related queries. For more information, please contact your local authority.



pollution, visiting several British towns at dead of night with CfDS dark-sky campaigners to film and comment on cathedrals floodlit when there was nobody about to see them, and wonder at the sight of garishly lightwashed public buildings, brightly lit but empty car parks, and light halos over distant towns.

Wasted light has been the subject of parliamentary debates, Select Committee hearings and government and Royal Commission reports. Campaigners have been at the forefront of this change in attitudes, and the industry itself acknowledged as long ago as 2001, at a seminar on Lighting and the Environment in London, that the CfDS was 'probably the biggest factor in lighting change in the last decade [1990s]'. Also in 2001, Edward Camplin, not an astronomer but a professional lighting consultant, commenting on the need to avoid intrusive light in the countryside, wrote: 'The movement started internationally by astronomers to regain and retain dark skies has become a serious factor in the planning of lighting'.

The CfDS and other organisations have made light pollution a talking point, not just among astronomers, but in the media, in legislative assemblies, among lighting professionals, and in legal chambers. Primary-school children and experienced politicians know the meaning of the term. Organisations as varied as countryside preservation campaigns, wildlife groups, ornithologists and guideline bodies at the forefront of the lighting and engineering professions are playing an active role in spreading the word that quality lighting is desirable and achievable. The media are treating the subject ever more seriously.

In what ways have dark-skies campaigners been successful in changing exterior lighting practice, with consequent benefits to the night sky, and to landscapes and victims of intrusive light?

In the years since its establishment, the Campaign for Dark Skies, through its committee and local officers throughout the UK, has:

- Raised awareness of the issue of the deleterious effects of poor lighting, which wastes energy and money. Many local authorities now use CfDS' wording in their lighting leaflets

and local plans, and seek CfDS' advice on lighting problems. CfDS speakers have visited many council chambers, and national government also counts the Campaign among its advisers and consultants.

For example, lively discussions are proceeding at present with DEFRA on the subject of 'taming' bright exterior domestic lighting through better information to suppliers and installers, for whom a joint DEFRA/CPRE/CfDS/ILP information leaflet has been produced (see previous page). The section on intrusive lighting as a statutory nuisance in the Clean Neighbourhoods and Environment Act 2005 owes much to consultation with CfDS, and the evidence CfDS gave to the Select Committee on light pollution in 2003 was instrumental in passing this legislation.

- Promoted awareness of the science underlying the light pollution debate and offered solutions, setting up a national structure of local officers to spread its message and inform as many people and agencies as possible that the problem exists, is worth solving and can indeed be reversed.
- Worked with the lighting industry to promote good practice and the production of lamp designs that do not pollute with wasted and misdirected light. The industry has responded, and more and more flat-glass, well directed lights are being seen on the UK's roads. The Institution of Lighting Professionals now promotes and sells the publication *Towards Understanding Skyglow*, a technical guide to light pollution issues written by CfDS committee member Dr Christopher Baddiley, an expert in optical design. The Highways Agency has also responded well and will not now fit lamps that shine above the horizontal.
- Worked with the CPRE, Buglife and many other environmental protection organisations to raise awareness of the issues.

- Been instrumental in influencing planning case law and in securing the arrival on the statute books of the Clean Neighbourhoods Act 2005 section 102, which makes intrusive light deleterious to health and well-being a criminal offence. Skybeams are also now subject to regulation and licensing, thanks largely to the work of CfDS committee member Martin Morgan-Taylor.

- Helped to draw attention to the impact of wasted light upon the night-time environment, on wildlife and indeed on human health, as increasing evidence emerges that we tamper with our ancient day-night cycle at our peril.



Lighting consultant Nigel Pollard receives the 2012 CfDS Award of Appreciation from Bob Mizon. Nigel has freely given his time and good advice to the Campaign. (Photo: Mike Tabb)



Still work to be done: a golf driving range near Stonehenge World Heritage Site. (Photo: CfDS)

- Promoted the darkness of the night sky as a positive feature, and actively supported the establishment of dark-sky preserves such as Galloway Forest Park, the island of Sark, Exmoor and the Brecon Beacons National Park, to name but a few.
- Through meetings, national and international conferences and seminars, consolidated links with like-minded organisations throughout the world, all working to promote the turning of the tide of light pollution. As a result of their efforts, lights are being changed to new designs conforming to standards, guidelines and laws that have been laid down in many countries worldwide.

From its inception, the CfDS has worked with manufacturers and policy-makers and not against them, taking the view that making friends and not creating adversaries is the only way forward in finding solutions. This positive stance has gained the respect of both lighting professionals and administrators, and they admire the approach that the CfDS has always adopted: an approach that teaches that the path towards environmentally friendly lighting design should be one of evolution. Some early campaigners who simply wanted to switch off all exterior lights or recommended actions that amounted to criminal damage were not recognised as supporters!

The CfDS' publications include its newsletter, leaflets, lighting handbooks, books such as Bob Mizon's *Light Pollution: Responses and Remedies*, websites, articles and scientific papers. These are widely quoted in magazines, journals and on other websites. So the CfDS can be seen as a 'lightning rod' for lighting issues – people come to it for help, assistance and to further the debate, and the press and concerned councils and organisations value its comments, interviews and information supplied.

All this progress means that we have reached a new threshold in countering light pollution. So many people now know and care, so many media outlets report upon it, so many lighting professionals are 'on board': in the coming years, as energy prices continue to bite and environmental concerns permeate the thinking of legislators, we should see a return to sane lighting practices that offer a well-lit night-time scene while preserving our ancient view of the stars above. We should all be working towards that simple goal.

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www.dark-skies.org