

Light pollution

Light pollution and the **LAW**

[New rules to snuff out nuisance lighting come into force this year. **Martin Taylor** assesses their impact]

The first UK law expressly aimed at tackling the problem of light pollution will come into force early in 2006. The Clean Neighbourhoods and Environment Act 2005 makes “exterior light emitted from premises so as to be prejudicial to health or a nuisance” a criminal offence. It has the effect of inserting exterior lighting as a potential statutory nuisance into the Environmental Protection Act 1990, along with already recognised nuisances like noise and odours.

Although the statute was passed in April 2005, it has not yet come into force. Final guidelines for enforcing it are due from DEFRA – the body responsible for drafting the new law – early this year, and it is expected that the Act will be operational across the country by April.

The statute represents a milestone, and is partly a result of the Parliamentary Select Committee into Science and Technology’s *Light Pollution and Astronomy Consultation*

in 2003. This consultation was backed by the BAA’s Campaign for Dark Skies (CfDS) and the Campaign for the Protection of Rural England (CPRE).

Both these bodies define light pollution as any form of artificial light that shines outside the area it is intended to illuminate. This includes light that is directed above the horizon into the night sky, creating skyglow, or which creates a danger or nuisance by glare. Skyglow is light that catches particles in the atmosphere, creating ▶

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January 2006 BBC Sky at Night 33

Light pollution

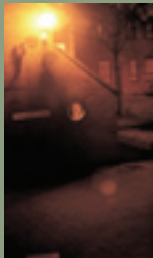
Beacons of bother

A stargazer's guide to nuisance lighting

Light pollution and nuisance can come from any type of light, but the main forms are shown below. Of the following, security lights probably cause the most light-related nuisance to astronomers.



◀ **Streetlighting**
Often used as a political tool to demonstrate that action is being taken to fight crime. This is controversial, as street lights may not perform as big a role in crime reduction as is often claimed.



◀ **Security lights**
Floodlighting is usually over-powered and, due to glare, can do more to conceal intruders. Five-hundred-watt lights are equivalent to half the luminance of the country's most powerful lighthouse.



◀ **Skybeams**
Used for advertising purposes, all of their light is intended to go up into the night sky and to be seen from a great distance. Skybeams only need planning permission if they are permanent.



◀ **Uplighters**
Usually used to illuminate historic buildings. Low-powered lights may cause minimal light pollution, but most are overpowered, and represent a considerable source of light pollution and nuisance.

NASA/JOHNSON SPACE CENTRE; PHOTOS.COM X3; TODD CARLSON X2; CORBIS; MARTIN NELSON/WGNASTRO.ORG

▶ an orange halo of light above a town or city at night, and blocking out the stars. It's been getting worse: CPRE figures for the UK show an average increase in skyglow of 24 per cent between 1993 and 2000.

Streetlighting and floodlighting are generally to blame. While it is possible to see magnitude +6 stars from dark sites, city dwellers are restricted to magnitude +3 at best. Light that has taken many millions of years to reach us from space is blocked in the last millisecond of its journey due to bad lighting. Naked-eye objects are rendered binocular objects, and the beauty of the Milky Way is no longer visible from city skies.

A night-time nuisance

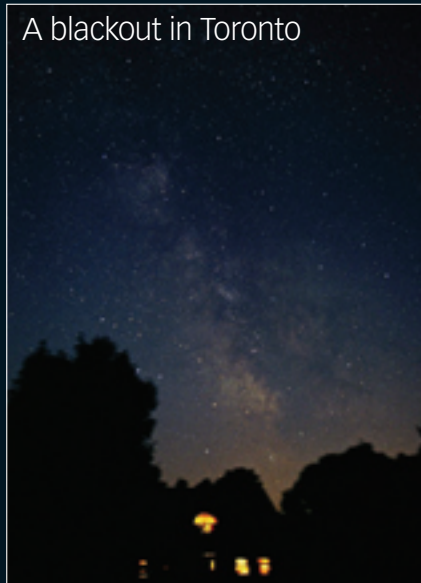
Light-related nuisance is often called light pollution when light shines into windows at night, or across an outside observer. Powerful 500 watt floodlights, often misleadingly named "security lights", are a common cause. It is more accurate to describe light pollution as "light pollution and nuisance". Light nuisance has often been called light trespass. However, trespass in UK law has a specific legal meaning, and the law relating to exterior light refers only to nuisance. The question, then, is what is a nuisance in law?



▲ London at night, as seen from the International Space Station. Central London appears bright white, while part of the M25 snakes through the southern suburbs

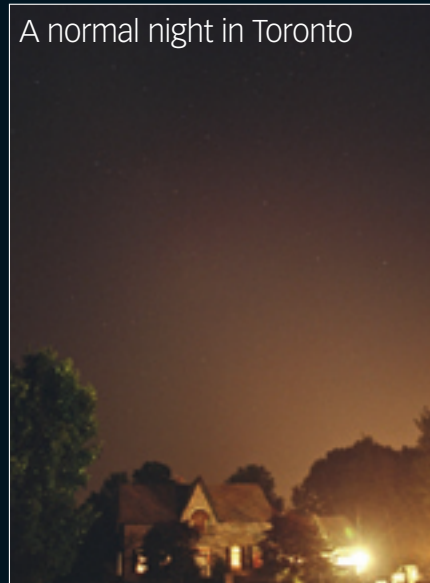
There are several answers, depending on whether you're referring to the pre-existing law or the new law. The pre-existing regulations are classed as private nuisance in common law. Common law is court-made law. The victim sues the perpetrator of the nuisance as a civil wrong in court, and personally bears the costs and burden involved in bringing the action. Until the new law, this was the only action available. However, few cases have been successfully prosecuted. In the Stonehaven case, for example, floodlights from a tennis court disturbed night-time fishing, while the Bonwick case involved floodlighting entering the complainant's windows. However, none of these concerned skyglow, the main ▶

A blackout in Toronto



On the night of 14 August 2003 the stars were visible after a massive power failure

A normal night in Toronto



After the power returned, skyglow from the nearby city obscured the stars again

What's included and excluded in the law

No type of light has been expressly excluded by the new law, but some premises have been

Included

CONSUMER LIGHTING

This will be covered, and includes a neighbour's 500 watt security light. Skybeams may also be covered, but the local authority must be convinced that your property is adversely affected.

PREMISES

The sorts of premises from which light will be covered include houses, blocks of flats, shops, supermarkets, shopping centres, office blocks, pubs and car parks (public as well as private).

SPORTS GROUNDS

Other business premises and sports grounds are included in the Act, but have the defence of "best practicable means". This means that, legally, there is no nuisance if all reasonable steps have been taken to minimise the nuisance, but the purpose of the light trumps the remaining nuisance.

The attitude of both local authorities and the courts in interpreting what may constitute a nuisance or "best practicable means" is fundamental to the success of the new law.

Excluded

STREETLIGHTING

Streetlighting is not expressly excluded, but it is unlikely to conform to the legal definition of premises, and so will probably escape liability.

Many cities are replacing their streetlights with good designs that minimise light pollution by emitting no light above the horizontal. But the new brighter lights are often on longer poles and may shine into windows, or across gardens, creating a glare nuisance. This is a gain on one hand and a loss on the other.

EXEMPTED PREMISES

There are a number of highly controversial exempted premises under section 102(4) of the Act: airports, harbours, railway or tramway premises, bus depots, public service vehicle operating centres, goods vehicle operating centres, lighthouses and prisons are all outside the legislation.

The reason given for the exemption is that these premises need lighting for operational and safety reasons. It is unclear why they should be different to any other premises.

► bane of astronomers. Under the pre-existing law, minor actions are routed to the small claims court, where the parties represent themselves to keep the claimable costs down.

The new law is statute-based, and so has the advantage that the state takes on the burden of the action and prosecutes the perpetrator. This is preferable in some ways, but statutory nuisance comes at a cost. In order to be a criminal statutory nuisance, the offence must be damaging to people's health or interfere with a person's legitimate use and enjoyment of land, and be more than just an irritant. It must also come from a legally definable "premises" in order to invoke the criminal law.

Your environmental health

If you're a victim of nuisance lighting, you'll now be able to report the matter to your local environmental health officer, part of your local council. The officer, after trying mediation, will then have to decide, based upon the new guidelines, whether the lighting could be a nuisance.

If it is, the officer will ask for the nuisance to be reduced or removed, for example by angling the offending light downwards. If the perpetrator fails to do this, the officer may take the matter to court and the perpetrator may be ordered to abate the nuisance and

[Letter of the law]

DEFRA has stated that the new law "provides a first step towards reducing light pollution, although the Act could not possibly have dealt with all sources of light pollution. The [Act] is designed primarily to give local authorities new powers to deal with anti-social behaviour that affects the local environment."

– Private correspondence from Jon Lartice, DEFRA.

possibly fined. All of this will be without financial cost to the victim.

If this does not have the satisfactory outcome, section 82 of the Environmental Protection Act 1990 provides a victim with the right to a private action in a magistrates' court if they feel their environmental health officer has failed to act. The magistrates will need all the relevant facts, including the local authority's view, and so this kind of private action is not a failsafe.

Court action should not be regarded as an initial step, however. If you are a victim, you should first try to discuss the nuisance with your neighbour. An abusive reply from them provides further evidence for use in court. If you are assigned an environmental health officer, he or she will expect you to try mediation before court action.

Although the statute is silent on streetlighting, it is not expressly exempt, but it is unlikely that the provisions will apply. Streetlighting probably cannot be classed as premises, so it may escape by implication. The new law should help, but the attitude of local environmental health officers will be critical in defining what exactly is a nuisance.

This is only the first stage, and more astronomers need to take action. In the words of Sir Patrick Moore: "Light pollution is increasing. Unless something is done, future generations may never see the stars." ☼

[Step-by-step: how to take action]

Step 1

Talk to your neighbour; many may be converted if they're invited over to observe and see first-hand the nuisance they're causing. In one case, a neighbour was found to repeatedly put their lights on to 'help' an astronomer see what he was doing! Also, consider mediation rather than court action, which could lead to a feud; see www.mediationuk.org.uk.

Step 2

Use the new law. Complain to your local authority's environmental health office. Think carefully about your complaint and give clear reasons why your health – or enjoyment of your property – is being adversely affected; for example, the light may stop you sleeping, or it may shine across your observatory.

Step 3

If your local authority will not act, you can bring a statutory nuisance case to a magistrates' court yourself under section 82 of the Environmental Protection Act 1990. The magistrates will ask why your local authority did not act, and may be swayed by this.



Step 4

If all else fails, use private nuisance in common law. You will have to prove on the balance of probabilities that the light is a nuisance. One defence is the "hypersensitive complainant", where your neighbour alleges you are being unreasonably sensitive in looking at the stars.

Step 5

Often, the solution to light nuisance is to angle the light downwards, but if all other means have failed, see www.courtservice.gov.uk for details about suing. You could even consider taking out an ASBO, as this can be granted to individuals as well as local authorities.

[FIND OUT MORE]

The Campaign for Dark Skies:
www.dark-skies.org

Clean Neighbourhoods Act 2005:
www.opsi.gov.uk/actsacts2005/20050016.htm

Parliamentary Select Committee Report:
www.publications.parliament.uk/pa/cm200203/cmselect/cmsctech/747/747.pdf

International Dark Sky Association:
<http://www.darksky.org/>

Light Pollution, Responsibilities and Remedies, B Mizon, Springer-Praxis, 2002