

## **FACT SHEET**

### **Supplementary information on the regulation of outdoor lighting in selected places**

#### **1. Background**

1.1 Following the publication of the information note entitled "Light pollution and the regulation of outdoor lighting in selected places" (IN08/08-09) in March 2009, this fact sheet provides the Panel on Environmental Affairs with updated information on the regulation of outdoor lighting in Japan, the United Kingdom ("the UK") and the State of California ("California") of the United States ("the US") in relation to the control of light pollution.

#### **2. Japan**

2.1 In Japan, there are voluntary guidelines published by the Ministry of the Environment to help local authorities formulate light pollution control measures. The Light Pollution Control Guidelines 2006, the Manual for Local Planning of Lighting Environment 2000, and the Guidebook on Light Pollution Preventive Measures 2001, as covered in the aforementioned information note, remain the latest versions.

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### 3. The United Kingdom

3.1 In the UK, under the "plan-led" system<sup>1</sup>, the government has issued several Planning Policy Statements ("PPS") to explain statutory provisions relating to planning policies, which on some occasions cover the control of light pollution. In particular, PPS23 "Planning and Pollution Control" recommends that local planning authorities should take account of the issues of lighting in preparing local plans. As stated on PPS 23, a Third Annex would be prepared for public consultation in due course. Nevertheless, this Third Annex has not been published.<sup>2</sup> In December 2010, the Minister of State for Decentralisation announced an end to the centralist approach to planning. Meanwhile, the existing policy statements and guidance documents will be consolidated into a single national planning policy framework. Instead of devising the Third Annex to PPS23, the Department for Communities and Local Government will study the policy on light pollution as part of the work on the national planning policy framework.<sup>3</sup>

3.2 Meanwhile, the *Clean Neighbourhoods and Environment Act 2005* extends the nuisance provisions of the *Environmental Protection Act 1990* to cover artificial light emitted from premises, including domestic and commercial security lights, some healthy living and sports facilities and domestic decorative lighting. Under the *Act*, local authorities have a duty to take reasonable steps where practicable to investigate any complaints of artificial light nuisance.

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<sup>1</sup> In England and Wales, the plan-led system involves preparing plans that set out what can be built and where. The Department for Communities and Local Government sets out the overarching national planning policy, while the local planning authorities decide on individual development applications.

<sup>2</sup> Reply from the Department for Communities and Local Government, 3 March 2011.

<sup>3</sup> Ibid.

3.3 The Royal Commission on Environmental Pollution ("RCEP")<sup>4</sup>, an independent standing body to advise the Queen, the government, the Parliament and the public on environmental issues, published a short report on "Artificial Light in the Environment" on 27 November 2009. This report addresses two issues: the possibility of nuisance being caused by badly designed or inappropriate lighting, and the possible effects of artificial light on nature and ecosystems. The report makes a number of recommendations to address these issues through future policy development, research and practical initiatives.

3.4 The UK government's response to the RCEP report was published on 18 March 2010. It provides point-to-point responses to the recommendations made by RCEP. In relation to the control of light pollution, the government supports the recommendation to carry out replacement programmes for road lighting in a way that explicitly minimises the negative impacts of stray light, as well as the recommendation that local authorities and others responsible for the provision of road lighting should examine the impact of reducing or turning off lighting in quieter areas. As regards the recommendation that lighting standards should require the provision of light at an intensity no greater than the minimum necessary to deliver the intended benefits and that the light should be directed at only those areas which are intended to be illuminated, the government welcomes the recommendation, but it believes that instead of relying on broad standards, it is better for local highway authorities to consider what level a street lighting scheme is intended to achieve and to determine the most suitable solution. The government will also continue to work with the lighting industry to encourage improvements in the design of lamps and luminaires used in external lighting in order to minimise wasted light.

3.5 The Department for Environment, Food and Rural Affairs ("DEFRA") is responsible for the statutory nuisance provisions of the *Clean Neighbourhoods and Environment Act 2005*. In 2009, the government commissioned a review of the artificial light nuisance provisions with respect to the most common sources of light nuisance complaints, enforcement by the local authorities, and the availability and use of current guidance. The findings of the review were published in November 2010.

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<sup>4</sup> Despite being funded by the Department for Environment, Food and Rural Affairs, the Royal Commission on Environmental Pollution ("RCEP") is independent of the government. RCEP delivers its advice in the form of reports, which are submitted to the Queen and the Parliament. Since its inception in 1970, RCEP has published over 30 reports.

3.6 According to the DEFRA study, there was an average of around 12 light nuisance complaints per authority per year. The ratio of complaints categorised as arising from domestic light sources to non-domestic light sources was found to be approximately 2:1. Domestic complaints were predominantly concerned with security lighting, while on the non-domestic complaints, commercial (shop and office security and shop advertising lights) and industrial (factory/warehouse security) lighting were the most frequent sources of complaints. Floodlighting of football and hockey pitches and tennis courts accounted for more than half of sports lighting complaints. Complaints were mostly on alleged sleeplessness or sleep deprivation in connection with artificial light sources, illumination (e.g. enabling books to be read with no room lights on), detrimental effects on normal living activities (e.g. unable to use a bedroom) or preventing enjoyment of property (e.g. unable to use gardens).

3.7 The DEFRA study found that 32 abatement notices had been served (less than 1% of complaints) amongst those local authorities responding to the study. Such a low rate might be due to the fact that informal resolution would be sought wherever possible rather than immediate service of an abatement notice. Despite there being no numerical standards for light nuisance, nearly half of the respondents indicated that they had at some time used a lux meter to measure the amount of light affecting the complainant. Most local authorities routinely adopted the standard nuisance investigation procedures which relied on professional judgements by environmental health officers against objective and non-quantitative standards, although the precise approach varied (e.g. the stage of the investigation at which the owner of the light source was contacted, whether diary sheets were used routinely, etc.). All of the commonly anticipated abatement techniques (e.g. re-aligning the angle of the luminary, refitting with a less powerful lamp, etc.) had been suggested by local authorities as a means of resolving complaints.

3.8 The DRFRA Guidance<sup>5</sup> has already addressed in broad terms many of the light sources that the DEFRA study found to have given rise to complaints. Nonetheless, while shop advertising lights and car-park lighting appear to be significant sources of complaints, they are not presently addressed in the DEFRA Guidance. Another notable omission from the Guidance is reference to sleep-related effects and how to assess them in the context of the light nuisance legislation. The report suggests that more prudent guidance should be provided to assist local authorities in the investigation and resolution of artificial light nuisance complaints. In particular, guidance on the scope of the exemptions from the light nuisance regime<sup>6</sup> would probably be helpful.

#### **4. The State of California of the United States**

4.1 In California of the US, the mandatory 2007 California Energy Code (California Code of Regulations, Title 24, Part 6); and 2008 Building Energy Efficiency Standards for Residential and Non-residential Buildings ("the 2008 Standards") address newly constructed buildings as well as additions and alterations to existing buildings. The 2007 California Energy Code governs the construction of buildings to ensure compliance with energy conservation standards and lighting control, and the 2008 Standards aim to achieve energy efficiency through imposing technical standards and concrete requirements for lighting control and energy consumption. Both the 2007 California Energy Code and the 2008 Standards remain in effect.

4.2 The Standards have been periodically updated, approximately on a three-year cycle, and thus the California Energy Commission is preparing to update the 2008 Standards. The new Standards are planned to go into effect in conjunction with the triennial update of the other parts of the California Building Standards Code, and be published as the 2013 California Energy Code. The updated Standards are expected to improve upon the 2008 Standards and will implement some state energy policy directives already published. The updated Standards will be adopted in 2014.

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<sup>5</sup> *Statutory Nuisance from Insects and Artificial Light: Guidance on Sections 101 to 103 of the Clean Neighbourhoods and Environment Act 2005.*

<sup>6</sup> The provisions exclude many artificial light sources, such as airports, transport depots, railway premises, and public service vehicle operating centres, on public policy grounds.

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