June 2006

Quality Design - West Berkshire
Supplementary Planning Document

Part 5
External Lighting

Local Development Framework

West Berkshire Council

PART 5

Contents

Lighting is required to ensure safety and security...

The Clean Neighbourhoods and Environment Act 2005 deals with many of the problems affecting the quality of our local environment.

Section 102 of the Act came into force on 6th April 2006 and makes light pollution a statutory nuisance.

This means that Local Authorities are able to tackle lighting issues, which had previously been impossible for them to control.

The Department for Environment Food and Rural Affairs (Defra) has produced guidance for Local Authorities and other agencies on Section 102 of the Clean Neighbourhoods and Environment Act 2005. http://www.defra.gov.uk/

1.1 Introduction

1.1.1 This Supplementary Planning Document (SPD) will support policies in the Berkshire Structure Plan 2001–2016 and West Berkshire District Local Plan 1991–2006 while complementing other existing Supplementary Planning Guidance (SPGs) and SPDs. **As such, it is a 'material consideration' in determining planning applications and if not followed, may lead to the refusal of planning permission.**

1.1.2 It has been prepared by the Council to provide guidance to those proposing external lighting schemes either as part of a development proposal or as a planning application in their own right. It is based on information provided by organisations actively engaged in lighting matters.

1.1.3 This guidance will explain the Council's intentions, identify the current planning policy context, explain the role of lighting, identify its adverse forms and effects, identify techniques to reduce those impacts and state what should be provided with applications.

1.2 Background

1.2.1 Through lighting people can enjoy public amenities, feel secure in their own homes and feel safe on transport routes. However, light pollution can have harmful effects upon all areas, particularly rural areas where artificial lighting has traditionally been limited.

1.2.2 Therefore it is necessary to try to find a balance between the need for lighting and the negative implications associated with it. Lighting in itself may not need planning permission but the Council will use planning powers where appropriate to manage the effects of lighting to achieve the objective of this part of the SPD which is to reduce excessive, intrusive and unnecessary lighting in both rural and urban areas.

1.3 Planning Policy

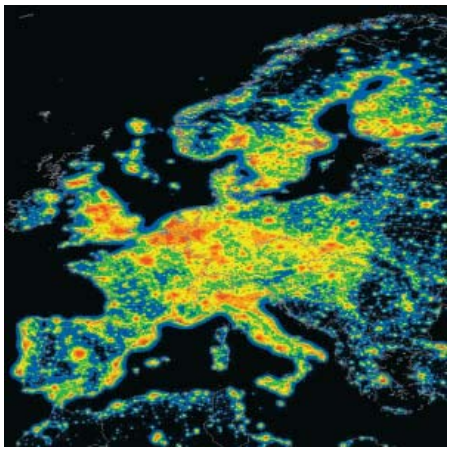
1.3.1 PPS 23 identifies lighting as both a consideration in the preparation of any development plan documents and as a material consideration in deciding if planning applications are given planning permission or not. A third Annex on 'planning and light pollution' will be produced in due course.

1.3.2 Policies within the West Berkshire District Local Plan 1991-2006 aim to minimise the harmful impacts of pollution, including the effects of light. Policy OVS.2 aims to preserve areas of character while OVS.5 aims to reduce pollution. West Berkshire SPG 03/1 'Shop fronts and Signs', states that illumination should be used sparingly and floodlighting must be very carefully considered.

1.3.3 Policy EN5 of the Berkshire Structure Plan 2001-2016 states that new developments should avoid unacceptable levels of light pollution. Policies DP3, DP4 and DP8 encourage LPAs to resist intrusive development, preserve dark night skies and retain the quality of views to and from the AONB, which could be harmed by lighting structures. The North Wessex Downs Management Plan (2004) identifies dark night skies as major attributes.

1.3.4 Extensively used guidance notes to assess the suitability of lighting proposals include the 'Reduction of Light Pollution' (ROLP - 2003) produced by the Institute of Lighting Engineers (ILE - www.ile.org.uk).

Example of light pollution



Light pollution

Night lighting

1.4 Is Lighting Necessary?

1.4.1 Lighting can enhance architectural qualities of buildings but it can also appear out of place and add to street clutter. Providing floodlighting for community facilities such as sports pitches in the evenings can allow them to be accessed by working people accordingly increasing their use.

1.4.2 Street and security lighting can also help lower the amount of road accidents and in most cases reduce fear and occurrence of crime however sometimes it can aid those committing offences. Illumination is also sometimes used for advertising. However, rural communities often prefer the absence of street lighting and other lighting forms which can be seen to be out of character with such areas.

1.5 Adverse Forms and Effects of External Lighting

1.5.1 The three main forms of light pollution are sky glow, glare and light trespass;

- **Sky glow** - is the orange light regularly visible above towns which blurs the subtle white dimness of moonlight. It is caused by illumination from low-pressure sodium (LPS) lamps being refracted by water droplets or particles. It can reduce the visibility of stars especially those just above the horizon;

- **Glare** - prevents people from observing illuminated areas and their surroundings properly. It can cause temporary blindness so it is particularly harmful to drivers moving quickly from dark to bright areas; and;

- **Light trespass** - is illumination that glows from one location into another where it is unwanted.

Lighting to enhance architectural quality

1.5.2 Ecological effects of lighting vary depending on the species involved. For instance some species of bats will feed on insects such as moths which are attracted to lights; alternatively a line of streetlights can be a barrier to other bat species. Due to excessive lighting some short–day plants might not flower while others might flower prematurely. All electrical lighting requires use of natural resources that further contribute to atmospheric pollution. Illumination proposals should therefore be designed to reduce these effects.

Lighting up signage on a building

1.6 Techniques to reduce the adverse impacts of lighting

1.6.1 The Institute of Lighting Engineers guidance note ROLP (2003) provides useful technical specifications. It also includes advice on suitable lighting levels for the following broad environmental zones:

- Intrinsically dark areas - such as rural areas including the AONB;
- Low district brightness areas - such as small villages or rural settlements;
- Medium district brightness areas - such as small town centres; and
- High district brightness areas - such as large town centres or metropolitan regions.

Street lighting

1.6.2 Applicants are advised to have regard to the type of location in designing lighting proposals and devising techniques for limiting light pollution. In intrinsically dark or low district brightness areas lighting should be omitted, or if fulfilling an essential requirement should be carefully designed and controlled to minimise its impacts.

1.6.3 Design of lighting needs careful consideration. Light should be directed downwards and at the target wherever possible. If there is no substitute to up-wards lighting, guards should be used or it must be shielded by buildings or planting. The colour, height and spacing between lighting structures should be in harmony with its setting. Furthermore by conforming to published standards it should be sufficient to illuminate the target and not over light it.

1.6.4 If the lighting proposal is for a site rather than just an object, it should ideally follow a hierarchy with minimum illumination around the perimeter. Lighting on roofs should generally be avoided. In streets of intimate scale, lighting should be fixed to new buildings but away from windows. Security lighting activated by sensors can be an effective compromise in buildings that are only partially used but it should be situated so that users of public paths and roads do not activate them.

Lighting on buildings in sensitive areas

1.6.5 An appraisal of the need for lighting must be undertaken to find out if the benefits offset the costs, if the proposal could proceed without lighting and what alternative measures might exist (such as CCTV or improved site layout). This will ensure that only lighting proposals which are necessary to the general use of developments are allowed.

CCTV

1.6.6 Different lighting types and shapes can assist in minimising pollution:

- In most cases shallow bowl luminaries that can reduce pollution by up to 20% and high pressure sodium (HPS) lighting, which have smaller luminaries will be favoured over globe and LPS lighting;
- Full cut–off lighting should be used on highways, close to light sensitive uses or in rural areas; and;
- Energy efficient lighting including solar cell storage will be encouraged.

Town centre lighting

1.6.7 Conditions may be attached to approved lighting schemes. These might include the following:

- Specify the colour and height of lighting columns/brackets – to ensure harmony with its setting;
- Limit the use of lighting schemes to identified users and specify the type of screening vegetation – to ensure minimal impact on neighbouring amenities;
- Specify the lighting position and angle of illumination – to reduce glare;
- Specify the type of lighting – to reduce sky glow and guarantee harmony with its setting;
- Limit hours of operation and lighting levels - to manage both energy consumption, light trespass and the duration of lighting impacts and associated activities;
- Review the impacts after installation – to ensure that both the human and ecological impacts are minimal;
- Review future maintenance and post-installation checks – to ensure that all lighting corresponds to the original design and approval.

Street bollard lighting

Lighting within residential areas

Public realm lighting

1.7 Details that should be provided with applications

1.7.1 Evidence that a lighting appraisal has been carried out should also be provided along with the lighting types and shapes to be used. It would also be beneficial if the Council is advised of the nature of the use of the lighting proposed. This includes the purpose and use, the likely users, the proposed frequency of use, and for new non-residential development the hours of function in both summer and winter.

1.7.2 For each light provide the upward waste light ratio and beam angle, which would normally be expected to be kept below 70 degrees. Higher than average columns will allow for lower angles. For each lighting column/bracket it would be beneficial to identify its colour and show its height.

1.7.3 The location of lighting should also be shown on a site plan as this will reveal the area to be lit relative to the surrounding area.

1.8 Technical lighting standards

1.8.1 The following bodies have published a number of guides containing standards relevant to lighting:

- The British Standards Institution (BSI) www.bsi-global.com;
- The Chartered Institution of Building Services Engineers (CIBSE) www.cibse.org;
- The International Commission on Illumination (CIE) www.cie.co.at;
- The Department for Transport (DFT) www.dft.gov.uk;
- The European Committee for Standardisation www.cenorm.be; and;
- The Institute of Lighting Engineers (ILE) www.ile.org.uk

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West Berkshire Council

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