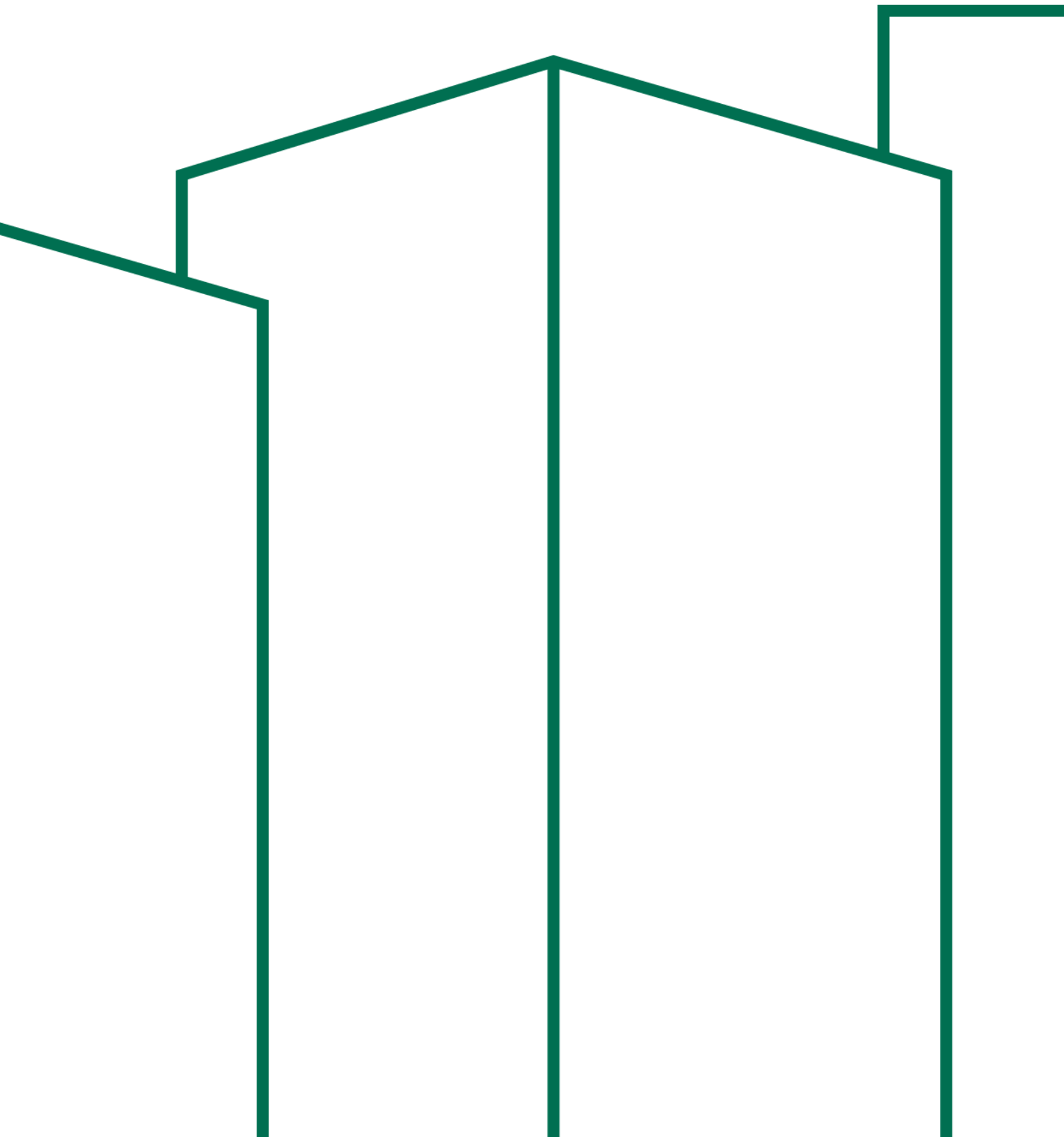


**PLANNING STATEMENT**

Globe Lawn Tennis Club  
190A Haverstock Hill  
London  
NW3 2AL



## **1.0 INTRODUCTION**

- 1.1 This Planning Statement has been prepared to accompany a planning application that has been submitted to Camden Council on behalf of Globe Lawn Tennis Club. The application seeks consent for the installation of a new floodlighting system to Courts 2 and 6, comprising of 16 no. 5.8 metre columns and 16 no. luminaires to be attached to the 16 no. new columns at Globe Lawn Tennis Club, 160A Haverstock Hill.

### **The Application Site**

- 1.2 Globe Lawn Tennis Club is a long-established club, located within the built-up area of Belsize Park. The club is surrounded by residential properties in Aspern Grove to the north, and the rear gardens of properties in Downside Crescent to the south and east and properties fronting onto Haverstock Hill to the west. Belsize Park Underground Station is also situated to the west of the site.
- 1.3 Globe Lawn Tennis Club is accessed by a private drive from Haverstock Hill. There are 6 no. tennis courts at the club. In the southwest corner of the site is a pavilion immediately alongside Court 2. The pavilion provides a range of facilities to support the operations of the club. Immediately behind the pavilion sits a car parking area which provides off street parking for members of the club.
- 1.4 Along the southern boundary of the site are the rear gardens to properties in Downside Crescent significant amounts of mature vegetation separate the development site from the adjacent properties. The eastern boundary of the site to the properties in Lawn Road is defined, by mature and dense

vegetation. The northern boundary of the site is also bound by residential properties, but again is separated from the development site by mature and dense vegetation located along Aspern Grove.

- 1.5 The western boundary of the site is defined by a row of mixed-use properties along Haverstock Hill. The properties are a mix of commercial and residential units. These units are separated from the tennis courts themselves by the existing car park.

### **Planning History**

- 1.6 The following applications relate to the development site:
- 2016/7020/T – Within Grounds: 4 x sycamore – crown reduction in height by 3m, reduce all lateral branches by 2.5m, remove ivy from central trees to ground level, remove epicormic and basal growth (Approved)
  - PE9701006/ – Extension to the northern side of existing club house to provide an office, games room and common room (Approved)
  - PE9701006R1 – Extension to north side of existing as new entrance hall. Extension to east side of existing as multipurpose hall on ground floor and common room at first floor (Withdrawn)
  - TC9806847 – Reduction works to two sycamores, a group of plums, one mountain ash and one cherry (Approved)

- PE9701006 – Extension to north side of existing as new entrance hall. Extension to east side of existing as multipurpose hall on ground floor and common room at first floor (Withdrawn)
- 9501066 – Variation of condition 2 on decision ref. 8905291 (Approved)
- 9192292 – Works to large Lombardy poplar (Approved)
- F8/7/B/25558 – The continued use for light industrial purposes and the retention of the single storey replacement building (Temporary Approval)
- F8/7/B/16681 – The continued use for light industrial purposes and the erection of a single storey replacement building – Temporary Approval)
- F8/7/B/11422 – The continued use for a further limited period of No.190A Haverstock Hill, NW3 for storage and light industrial purposes (Refused)

### **The Application Proposals**

- 1.7 Planning permission is sought for the installation of a floodlight system to Courts 2 and 6 comprising of 16 no. 5.8 metre columns with 16 no. luminaires. For Courts 2 and 6, it is proposed to erect 3 no. lighting columns along the western and eastern sides of the court attached to which will be a single luminaire.
- 1.8 As with the current floodlighting on Courts 1, 3, 4 and 5 the applicants will accept a condition upon any planning permission that may be granted that

limits the use of the floodlights to hours associated with application ref.9501066.

- 1.9 It is proposed that the floodlight columns will be painted green (RAL No. 6005 – green).

## **2.0 PLANNING POLICY**

2.1 The Development Plan includes the Camden Local Plan. The Local Plan was adopted in 2017. The following policies are considered relevant to the determination of this application:

- Policy C1: Health and Wellbeing
- Policy C2: Community Facilities
- Policy C3: Cultural and Leisure Facilities
- Policy A1: Managing the Impact of Development
- Policy A2: Open Space
- Policy E1: Economic Development
- Policy D1: Design
- Policy D2: Heritage

### **National Planning Policy Framework 2021**

2.2 The National Planning Policy Framework (the Framework) establishes (paragraphs 92 and 93) that to provide the social, recreation and cultural facilities and services that communities need, planning policies and decisions should ensure that established facilities are able to develop and modernise and are retained for the benefit of the community.

2.3 Paragraph 98 outlines the importance of a network of high-quality open spaces and providing opportunities for sport and physical recreation as well as the important role that this plays in healthy lifestyles and the well-being of communities.

- 2.4 At paragraph 185, the Framework seeks to ensure that new development is appropriate for its location taking into account the likely effects of pollution on health, living conditions and natural environment and in so doing they should 'limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation'.

### **Sport England**

- 2.5 Sport England provides advice on planning for sport. Its aims and objectives are set out in a series of Guidance Notes published in July 2014. Sport England has a stated aim of ensuring positive planning for sport and enabling the right facilities to be provided in the right place. To achieve this objective, Sport England seeks to protect sports facilities from losses as a result of redevelopment, to enhance existing facilities through improving their quality, accessibility and management and to provide new facilities that are fit for purpose to meet demands for participation now and in the future. Sport England seek to promote better quality, access and management of existing facilities, in order to maintain and provide greater opportunity for participation and to ensure that the facilities are sustainable. In this context Sport England seeks to promote the installation of sport lighting to help maximise facility use and its sustainability, whilst protecting residential amenity.

### **3.0 MATERIAL PLANNING CONSIDERATIONS**

3.1 Having regard to the proposed development, it is considered that the following material considerations are relevant to the application:

1. Residential amenity, with particular regard to light pollution.
2. Character and appearance of the surrounding area.

#### **Material Consideration 1: Residential Amenity**

3.2 The principle of floodlighting at Globe Lawn Tennis Club has been established through the grant of floodlights on Courts 1, 3, 4 and 5 which have been operational for a number of years.

3.3 This application seeks consent for the installation of a floodlighting system on Courts 2 and 6, the courts that lie immediately to the south and east of Courts 1, 3, 4 and 5 all of which benefit from existing floodlights. Globe Lawn Tennis Club is a well-established sports facility within the built-up area of Belsize Park. The club supports a wide range of coaching and competition programmes to encourage participation in tennis and sport generally. The provision of floodlighting on Courts 1, 3, 4 and 5 has improved the use of an existing open space and sporting facility. The provision of floodlighting on Courts 2 and 6 will further improve access to, and enjoyment of, an existing sporting facility and will increase recreational opportunities in the local area.

3.4 Light pollution considerations require applicants to take into account the Environmental Zone where a development is being proposed and the corresponding lighting thresholds that are informed by the Guidance Notes for



the reduction of light pollution prepared by the Institution of Lighting Engineers, a copy of which is provided as Appendix 2.

- 3.5 It is evident that Globe Lawn Tennis Club is located within Environmental Zone 4 (urban) where the maximum acceptable value of spillage onto windows of any adjoining property should not exceed 25 lux.
- 3.6 The submitted lighting scheme has been subject to an assessment undertaken by Luminance Pro-Lighting Systems that is contained within their technical report that is submitted as an application document. The assessment undertaken by Luminance Pro-Lighting Systems follows the advice contained in the Guidance Notes prepared by the Institute of Lighting Professionals for the reduction of obtrusive light (see Appendix 2). The analysis undertaken by Luminance Pro-Lighting Systems demonstrates that the proposed floodlighting scheme will only result in limited spillage of light outside of the application site.
- 3.7 Application drawing 5924/01 indicates the relationship between the proposed luminance and lighting columns and the surrounding properties. Superimposed on this plan is the 5 lux contour taken from the analysis provided by Luminance Pro-Lighting Systems. It is evident from application drawing 5924/01 that there is a substantial degree of separation between Courts 2 and 6 to the nearest residential properties. Drawing 5924/01 illustrates that the 5 lux contour is largely contained within the boundary of Globe Lawn Tennis Club. It will be noted that the 5 lux contour does not come within close proximity to any of the surrounding residential properties along Downside Crescent or Aspern Grove.

- 3.8 The proposed floodlighting system has been designed specifically for the lighting of tennis courts. The luminaires incorporate the use of side deflectors to reduce the potential for glare. The luminaires have horizontally mounted lights with a high position of the bulbs within the luminaires and sharp reflective cut offs; this ensures that the lighting is directed downwards and minimises glare to the neighbours. It is submitted that although the light would be visible from some of neighbouring properties, it would not result in a significant amount of glare or be close enough to adjacent houses to cause significant harm to their living conditions. Existing vegetation around the perimeter of the tennis club further assists in reducing the impact of the floodlighting.
- 3.9 When considering the impact of the floodlights on the living conditions of the neighbouring properties, Appeal decision ref. APP/B1550/A/09/2112656 (Appendix 1) made clear that the Inspector concluded (paragraph 7):

**“Residents of houses surrounding the site would be aware of the floodlighting and the generally lighter character of the space at the rear of the dwellings. However, I consider that any intrusive effects of the lighting scheme would be limited. Residents are no doubt already familiar with the effects of evening activity of the club, albeit less so in the winter months, and the planning condition preventing use of the floodlights beyond 21.30 hours would ensure that for a substantial period of the evening the area would remain dark and the courts unused. When balanced against the sport and community benefits arising from the**

**development, I do not consider that harm to the living conditions of these residence would be unduly great.”**

- 3.10 It is proposed that the floodlights will not be used beyond 21.30 hours as with the existing floodlights on Courts 1, 3, 4 and 5. In the context of the conclusions reached by the Inspector of Appeal APP/B1550/A/09/2112656 and having regard to the lighting assessment prepared by Luminance Pro-Lighting Systems, it is submitted that the proposed floodlighting system for Courts 2 and 6 would not result in any adverse impact of the living conditions of neighbouring properties.
- 3.11 As a consequence of the hours of operation proposed, the floodlights would only be used during the hours of darkness. Their use will be limited by weather conditions and demand. The floodlights are only likely to be used when most people will be inside their dwellings with windows shut and curtains drawn.
- 3.12 When balanced against the sport and community benefits arising from the development, any harm to the living conditions of surrounding residents would not be significant. It is submitted that the harm, if any, of the proposed floodlighting upon the living conditions of nearby residents or properties has to be weighed against the positive benefits to be gained from installing floodlights on Courts 2 and 6. The introduction of floodlighting on Courts 2 and 6 would enhance the ability of the club to develop its membership and encourage juniors to participate the sport. The provision of floodlighting would ensure that the best use is made of an existing sporting facility in order to maintain and provide greater opportunities for healthy recreation and leisure activities in line with objectives of sustainable living.

### Noise

3.13 A tennis court can, at any one time, be used by a maximum of four people assuming that a doubles match is played. At Globe Lawn Tennis Club there are 6 no. tennis courts. Consequently, during daylight hours, there could be a maximum of 24 persons playing on 6 no. courts. In summer months, playing can take place on the courts until 22:00 hours on any night without the need for floodlights.

3.14 The inspector of appeal ref. APP/B1550/A/09/2112656 gave consideration to the issue of noise. In his report the inspector concluded (paragraph 9):

**“The floodlights will enable Courts 3 and 4 to be used all the year including at times when all five courts are already used during the summer period when the lengthier daylight hours permit. Tennis is not normally regarded as a noisy activity but that it is not to say that some noise, for example of voices or that emanating from the striking of tennis balls, may be heard from outside the courts and in the rear gardens of nearby houses..... The use of a limited number of courts during winter evenings will not result in sounds that are not already familiar to residents. Given the less intensive use of the courts during winter and evenings and the fact that most residents are likely to be indoors at this time I am satisfied that, with appropriate conditions, the use of the courts themselves would not cause any significant harm to the living conditions of neighbouring residents due to noise and disturbance.”**

3.15 In light of the conclusions reached by the Inspector in a situation consistent with the application proposal, it is respectfully submitted that the use of two additional floodlit courts would not cause any significant harm to the living conditions of neighbouring residents due to noise and disturbance.

**Material Consideration 2: Character and Appearance of the Area**

3.16 It is submitted that the proposed development would have no noticeable effect upon the character and appearance of the area when viewed from the public realm. The proposed floodlighting columns would not form a prominent or obtrusive feature in the street scene. There is no reason to suppose that the proposed floodlights would have any marked effect upon the character and appearance of the area. It is therefore submitted that the proposed floodlights would not adversely affect the character and appearance of the area.

3.17 The lighting columns are slender structures. It is proposed that the lighting columns will be coloured dark green (RAL No. 6005).

3.18 The proposed lighting columns will be some 5.8 metres tall; they are consistent with lighting columns that exist on site. The courts are located some 20 metres west of properties in Downside Crescent. When viewed from the surrounding properties, the lighting columns will be viewed in the context of the existing lighting columns on Courts 1, 3, 4 and 5 and against the backdrop provided by the existing vegetation in the surrounding area. The columns when painted dark green combined with the dark background and the distance between the columns and the surrounding dwellings will be sufficient to ensure that the columns will not have an unacceptable effect upon outlook from surrounding residential properties.

3.19 Relevant to the consideration of the impact of the columns upon the character and appearance of the area are the Inspector's conclusions on this matter in Appeal APP/B1550/A/09/2112656. The Inspector concluded (paragraph 8):

**"The proposed floodlighting columns would be slender and relatively slim structures enclosed within the mesh fencing that surrounds the courts. I am satisfied that these features together with the backdrop of high vegetation which screens views from dwellings in Elizabeth Avenue and the separation distance will ensure that the columns will not have an unacceptable impact on the outlook from residential properties".**

#### **Other Matters: The Planning Balance**

3.20 As is evident from Sport England's Planning for Sport suite of planning guidance, floodlighting helps to ensure that the best use is made of existing facilities in order to maintain and provide greater opportunities for participation in sport. The provision of floodlighting also ensures that existing sporting facilities are sustainable. The provision of additional floodlighting at Globe Lawn Tennis Club on Courts 2 and 6 will therefore not appear out of context in these circumstances.

3.21 The proposed floodlighting of Courts 2 and 6 would facilitate further extended play at Globe Lawn Tennis Club, particularly during winter months. It will particularly enable greater court time for junior members. Overall, the floodlighting will be the kind of improvement to an existing sporting facility that national and development plan policies seek to encourage.

- 3.22 There are positive benefits to the residents of the surrounding area, as a whole, from installing floodlights on Courts 2 and 6. This is in terms of increased opportunities for healthier recreation and leisure activities and in terms of achieving the objective of sustainable living. The substantial benefits need to be weighed against harm, if any, of the proposed floodlighting scheme upon the living conditions of a limited number of nearby dwellings.
- 3.23 Further to the previous point, the site is designated as Open Space as per the adopted Policies map (designation 185). As such there is significant policy support to increase access to and to protect the viability and vitality of existing recreational sporting activities within designated Open Space provision via local and national policy as well as Sport England.

### **Conclusions**

- 3.24 The proposed floodlighting of Courts 2 and 6 would offer benefits to the community in that it would facilitate greater participation in tennis and in particular coaching of juniors for the whole year. The development would thus allow for more efficient use of an existing sporting facility. This in turn will provide increased opportunity for healthy recreation and leisure activities in line with Development Plan initiatives for sustainable living.
- 3.25 It is submitted that, subject to the use of appropriate conditions, the proposal would not cause any significant harm to the living conditions of neighbouring residents due to light spillage.
- 3.26 The design of the proposed floodlights has been produced with the objective of minimising the impact upon residential amenity. The living conditions of the

neighbouring properties can be safeguarded through the use of conditions controlling the use of the floodlights.

3.27 The proposal is consistent with the policies contained in the Camden Local Plan 2017 in terms of safeguarding the living conditions of neighbouring properties and in terms of maximising the use of existing sports facilities.

3.28 In the light of the above circumstances, planning permission should be granted.

ADB/JAG/5924

28 October 2022



#### **4.0 APPENDICES**

- Appendix 1 : Appeal Decision APP/B1550/A/09/2112656 Rayleigh  
Lawn Tennis Club, Watchfield Lane, Rayleigh, Essex SS6  
7SG dated 3 March 2010
- Appendix 2 : Institute of Lighting Professional Guidance Notes for the  
Reduction of Intrusive Light: 2011

ADB/JAG/5924

28 October 2022

**Appeal Decision APP/B1550/A/09/2112656 Rayleigh Lawn  
Tennis Club, Watchfield Lane, Rayleigh, Essex SS6 7SG dated 3  
March 2010**

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# Appeal Decision

Site visit made on 16 February 2010

**by Philip J A Crookes BSc (Hons) DipTP  
MRTPI**

**an Inspector appointed by the Secretary of State  
for Communities and Local Government**

The Planning Inspectorate  
4/11 Eagle Wing  
Temple Quay House  
2 The Square  
Temple Quay  
Bristol BS1 6PN

☎ 0117 372 6372  
email: [enquiries@pins.gsi.gov.uk](mailto:enquiries@pins.gsi.gov.uk)

**Decision date:  
3 March 2010**

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## **Appeal Ref: APP/B1550/A/09/2112656**

### **Rayleigh Lawn Tennis Club, Watchfield Lane, Rayleigh, Essex SS6 7SG**

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a refusal to grant planning permission.
  - The appeal is made by Mr W Todman (Rayleigh Lawn Tennis Club) against the decision of Rochford District Council.
  - The application Ref 09/00227/FUL, dated 28 April 2009, was refused by notice dated 7 July 2009.
  - The development proposed is installation of floodlighting system to courts 3 & 4 comprising 9 no. 6.7metre columns with 12 no. luminaries.
- 

## **Decision**

1. I allow the appeal, and grant planning permission for installation of floodlighting system to courts 3 & 4 comprising 9 no. 6.7metre columns with 12 no. luminaries at Rayleigh Lawn Tennis Club, Watchfield Lane, Rayleigh, Essex SS6 7SG in accordance with the terms of the application, Ref 09/00227/FUL, dated 28 April 2009, and the plans submitted with it, subject to the following conditions:
  - i) The development hereby permitted shall begin not later than three years from the date of this decision.
  - ii) The floodlighting to be erected at the site shall be in accordance with the details submitted with this application and no other floodlighting shall be used unless previously submitted to and approved in writing by the local planning authority.
  - iii) The lights hereby permitted shall be switched off daily between the hours of 21.30 and 08.00 the following morning.
  - iv) Prior to the commencement of development hereby approved details of the floodlight columns shall be submitted to and approved in writing by the local planning authority. The details as approved shall be implemented at the site and be retained as such thereafter.

## **Main issue**

2. The main issue is the effect of the proposal on the living conditions of occupiers of adjoining residential properties with particular regard to the effects on outlook due to the level of illumination proposed, the lighting structures, and noise and disturbance.
-

## Reasons

3. The proposed floodlighting would facilitate extended play at the club, particularly during the winter months. It would particularly enable greater court time for junior members. Overall, the floodlighting would be the kind of improvement to an existing sporting facility national and development plan policies seek to encourage. This objective is reflected in the responses from Sport England and the representations from many existing club members. However, the benefits in these terms must be weighed against the effects on the amenities of local residents and this in my view can only be understood in the context of the particular characteristics of the site and surrounding area.
4. The floodlights would be positioned around two of the club's five tennis courts and thus exclude illumination of other more peripheral courts that are closer to residential properties. The appellant has sought to minimise the spill of light beyond the courts by proposing that the floodlights are horizontally mounted with reflectors to ensure that there is a sharp cut off of light beyond the two courts and positioned at the lowest practical height of 6.7metres.
5. I note that the appellant consider that the locality should be regarded as a medium brightness area falling into Category E3 in the *Institution of Lighting Engineers: Guidance Notes for the Reduction of Obtrusive Light*. However the tennis club is enclosed on all 4 sides by housing and private rear gardens, and thus shielded from street lighting in surrounding roads. In my opinion it is a low light area defined as category E2 – relatively dark urban locations, in the guidance.
6. In this context the floodlit courts would appear as a bright area and, to that extent, longer distance views from adjacent houses will change when the lighting system is deployed. The key issue however is whether this change would cause unacceptable harm to residents' amenity. With regard to light pollution, the appellant has provided details of the proposed lighting design in a technical report prepared by Luminance Pro Lighting Systems Ltd. The report includes a graphical table and an Iso Contour plan showing the calculated light overspill. Even when categorising the locality as E2 in the above guidance notes, these demonstrate that there would be only a very limited overspill of light into the adjacent gardens.
7. Residents of houses surrounding the site would be aware of the floodlighting and the generally lighter character of the space to the rear of their dwellings. However, I consider that any intrusive effects of the lighting scheme would be limited. Residents are no doubt already familiar with the effects of evening activity at the club, albeit less so in the winter months, and a planning condition preventing use of the floodlights beyond 21.30 hours would ensure that for a substantial period of the evening the area would remain dark and the courts unused. When balanced against the sport and community benefits arising from the development I do not consider that harm to the living conditions of these residents would be unduly great.
8. The proposed floodlighting columns would be slender and relatively low structures enclosed within the mesh fencing that surrounds the courts. I am satisfied that these features together with the backdrop of high vegetation which screens views from dwellings in Elizabeth Avenue and the separation

distance would ensure that the columns would not have an unacceptable impact on the outlook from residential properties.

9. The floodlights would enable courts 3 and 4 to be used all the year including at times when all five courts are already used during the summer period when the lengthier daylight hours permit. Tennis is not normally regarded as a noisy activity but that is not to say that some noise, for example of voices or that emanating from the striking of tennis balls, may be heard from outside the courts and in the rear gardens of nearby houses. In this context I am not aware of any complaints from residents concerning disturbance caused by the present use of the courts during the evening. The use of a limited number of courts during winter evenings would not result in sounds that are not already familiar to residents. Given the less intensive use of the courts during winter evenings and the fact that most residents are likely to be indoors at this time I am satisfied that, with appropriate conditions, the use of the courts themselves would not cause any significant harm to the living conditions of neighbouring residents due to noise and disturbance.
10. The club pavilion has a bar and recreational facilities that will already attract members to attend on any evening both during the summer and winter months. Consequently there are already likely to be a significant number of comings and going to the club, many involving the use of its car park, throughout the year. Any additional comings and goings of vehicles associated with the additional use two courts that the floodlighting scheme would facilitate would be limited. Overall, I consider it likely therefore that noise and disturbance generally is likely to be less during period when the floodlights are deployed than during the summer months when all five courts are available for use.
11. I accept that vehicles would have their headlights on when using the car park. Nevertheless, given the limited volume of traffic associated with the additional use of two of the courts on winter evening, the effects on adjacent residential occupiers would be limited. In this I have taken into account that the rear boundaries of the bungalows in Humber Close have solid fencing that would act as an effective screen. I also note that the highway authority considers that any road safety and traffic generation implications arising from the proposal would be de-minimis which is a clear indication that a substantial increase in the use of the access and car park is not considered likely.
12. I have been referred to appeal decision Ref, T/APP/B1550/A/96/270146/P7 in 1996 relating to a proposal to install eighteen 6 metre high lighting columns to provide floodlighting to three courts at the tennis club. I acknowledge that the appeal was dismissed. However, I have little information concerning the extent and nature of the evidence, including technical evidence relating to the lighting scheme that was put to that Inspector. Nevertheless what is clear is that the previous scheme involved twice the number of lighting columns and more luminaries. It was also assessed against the policy provisions of a Local Plan that has now been replaced. I am satisfied that there are significant differences between the current and previous appeal proposals which, subject to conditions being imposed, are sufficient to overcome the concerns of the previous Inspector.

13. In terms of conditions, I have come to my conclusion on the basis of the details, including technical specifications submitted. A condition is necessary to ensure that the scheme which is implemented conforms to those details. For the reasons indicated earlier a condition is necessary in the interests of residential amenity to restrict the operation of the floodlights to the particular hours proposed. I shall also impose the suggested condition in respect of details of the floodlighting columns to be submitted and approved.

### **Conclusions**

14. I have taken into account all the other matters raised in the written representations, including the objections raised by local residents and the previous appeal decision in 1996. I consider that considerations have changed materially since that time sufficient for a different decision to be made in respect of the specific nature of the proposals before me. Overall, I conclude that the installation of the proposed floodlights would not be unduly harmful to the living conditions of the occupiers of nearby residential properties. The development would therefore comply with the provisions of Policies LT21 and LT22 of the Rochford District Replacement Local Plan. On this basis I shall allow the appeal.

*Philip Crookes*

INSPECTOR

**Institute Of Lighting Professional Guidance Notes For  
The Reduction Of Intrusive Light: 2011**

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# GUIDANCE NOTES FOR THE REDUCTION OF OBTRUSIVE LIGHT

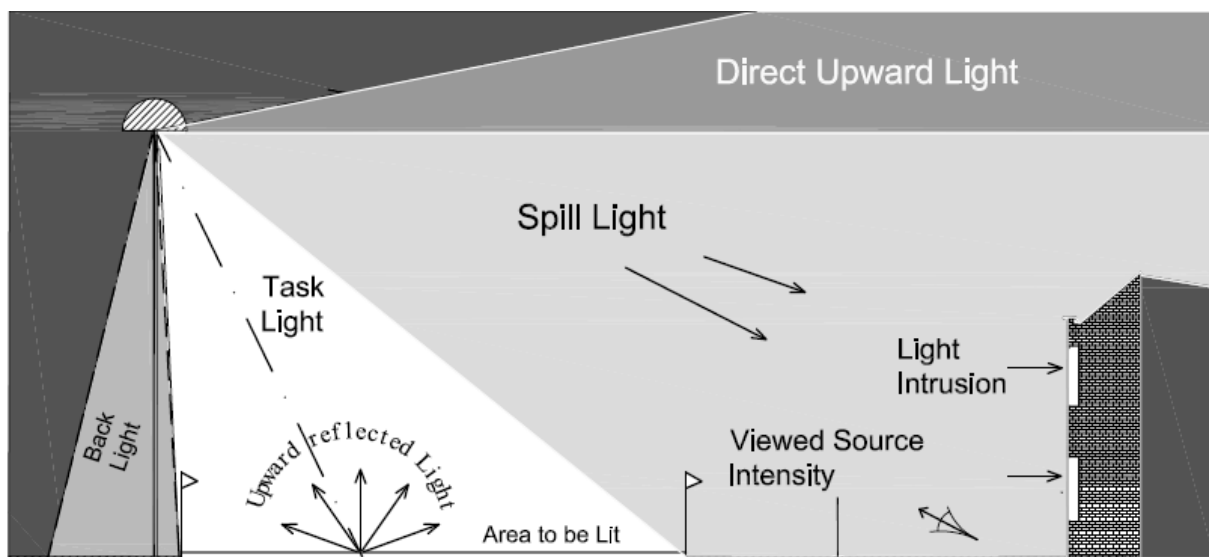
**“Think before you light - The right amount of light, where wanted, when wanted.”**

Man's invention of artificial light has done much to safeguard and enhance our night-time environment but, if not properly controlled, **obtrusive light** (sometimes referred to as light pollution) can present serious physiological and ecological problems.

**Obtrusive Light**, whether it keeps you awake through a bedroom window or impedes your view of the night sky, is a form of pollution, which may also be a nuisance in law and which can be substantially reduced without detriment to the lighting task.

**Sky glow**, the brightening of the night sky, **Glare** the uncomfortable brightness of a light source when viewed against a darker background, and **Light Intrusion (“Trespass”)**, the spilling of light beyond the boundary of the property or area being lit, are all forms of obtrusive light which may cause nuisance to others and waste money and energy. Think before you light. Is it necessary? What effect will it have on others? Will it cause a nuisance? How can you minimise the problem?

**Figure 1 – Types of obtrusive light**



Do not "over" light. This is a major cause of obtrusive light and is a waste of energy. There are published standards for most lighting tasks, adherence to which will help minimise upward reflected light. Organisations from which full details of these standards can be obtained are given on the last page of this leaflet.



Dim or switch off lights when the task is finished. Generally a lower level of lighting will suffice to enhance the night time scene than that required for safety and security.

## **“Good Design equals Good Lighting”**

Any lighting scheme will consist of three basic elements: a light source, a luminaire and a method of installation.

### **Light sources (Lamps)**

Remember that the light source output in LUMENS is not the same as the wattage and that it is the former that is important in combating the problems of obtrusive light.

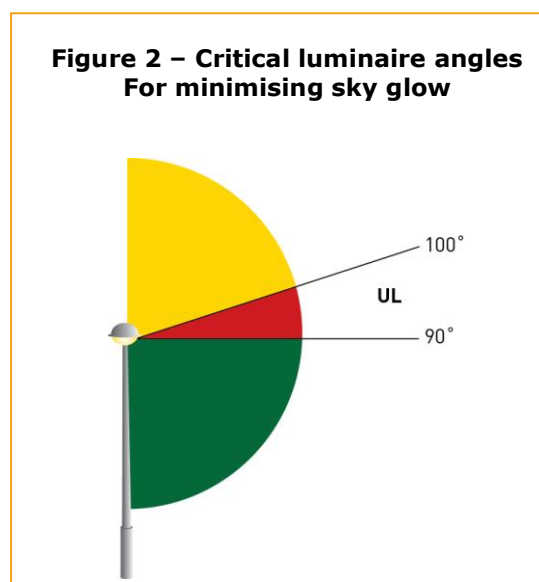
Most nighttime visual tasks are only dependant on light radiated within the visual spectrum. It is therefore NOT necessary for light sources to emit either ultra-violet or infra-red radiation unless specifically designed to do so. It is also understood that light from the shorter wavelengths of the spectrum has important effects on both flora and fauna that should be considered.

Research indicates that light from the blue end of the spectrum has important non-visual effects on the health of the human body, in particular in our sleep/wake patterns. It is therefore important to appreciate that while in obtrusive light terms the use of blue light should be minimised, there are many night-time tasks such as driving and sports where to be fully awake is an important aid to safety.

### **Luminaires**

Care should always be taken when selecting luminaires to ensure that appropriate products are chosen and that their location will reduce spill light and glare to a minimum.

Use specifically designed lighting equipment that minimises the upward spread of light near to and above the horizontal. The most sensitive/critical zones for minimising sky glow are those between 90° and 100° as shown in Figure 2 and referred to as the lower, upward light output zone (UL).



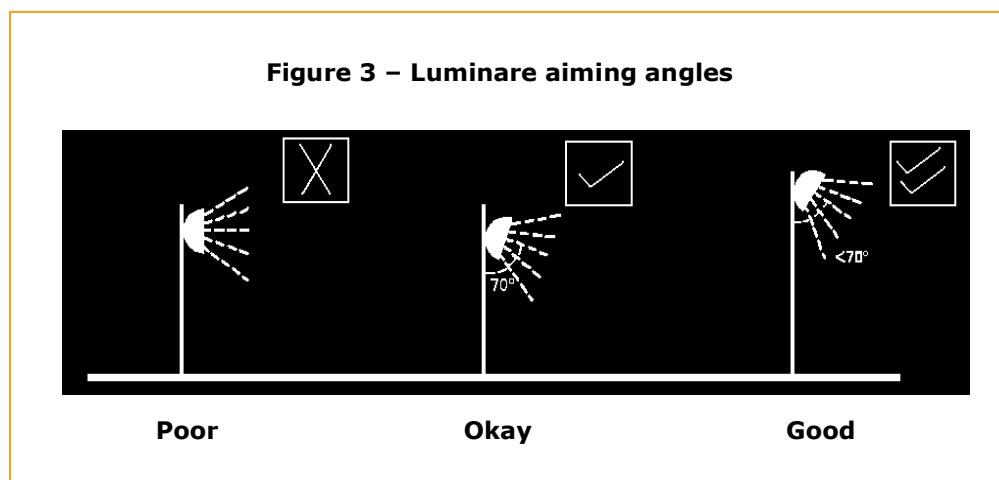
For most sports and area lighting installations the use of luminaires with double-asymmetric beams designed so that the front glazing is kept at or near parallel to the surface being lit should, if correctly aimed, ensures minimum obtrusive light.

Appendices 1 and 2 to these notes gives more details of how to choose and if necessary modify luminaires.

## **Installation**

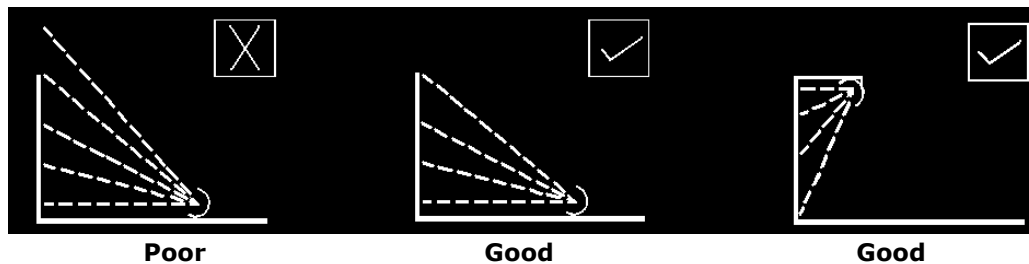
In most cases it will be beneficial to use as high a mounting height as possible, giving due regard to the daytime appearance of the installation. The requirements to control glare for the safety of road users are given in Table 3.

Keep glare to a minimum by ensuring that the main beam angle of all lights directed towards any potential observer is not more than  $70^\circ$ . Higher mounting heights allow lower main beam angles, which can assist in reducing glare. In areas with low ambient lighting levels, glare can be very obtrusive and extra care should be taken when positioning and aiming lighting equipment. With regard to domestic security lighting the ILP produces an information leaflet GN02:2009 that is freely available from its website.



When lighting vertical structures such as advertising signs, direct light downwards wherever possible. If there is no alternative to up-lighting, as with much decorative lighting of buildings, then the use of shields, baffles and louvres will help reduce spill light around and over the structure to a minimum.

For road and amenity lighting installations, (see also design standards listed on Page 5) light near to and above the horizontal should normally be minimised to reduce glare and sky glow (Note ULR's in Table 2). In rural areas the use of full horizontal cut off luminaires installed at  $0^\circ$  uplift will, in addition to reducing sky glow, also help to minimise visual intrusion within the open landscape. However in some urban locations, luminaires fitted with a more decorative bowl and good optical control of light should be acceptable and may be more appropriate.

**Figure 4 – Façade Illumination**

Since 2006 “Artificial Light” has been added to the list of possible Statutory Nuisances in England, Wales and Scotland. The monitoring of such nuisances will be the responsibility of Environmental Health Officers (EHOs) for which separate guidance is being produced.

With regard to the planning aspect, many Local Planning Authorities (LPAs) have already produced, or are producing, policies that within the planning system will become part of their local development framework. For new developments there is an opportunity for LPAs to impose planning conditions related to external lighting, including curfew hours.

The Scottish Executive has published a design methodology document (March 2007) entitled [“Controlling Light Pollution and Reducing Energy Consumption”](#) to further assist in mitigating obtrusive light elements at the design stage.

## ENVIRONMENTAL ZONES

It is recommended that Local Planning Authorities specify the following environmental zones for exterior lighting control within their Development Plans.

**Table 1 – Environmental Zones**

Zone	Surrounding	Lighting Environment	Examples
E0	Protected	Dark	UNESCO Starlight Reserves, IDA Dark Sky Parks
E1	Natural	Intrinsically dark	National Parks, Areas of Outstanding Natural Beauty etc
E2	Rural	Low district brightness	Village or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Small town centres or suburban locations
E4	Urban	High district brightness	Town/city centres with high levels of night-time activity

Where an area to be lit lies on the boundary of two zones the obtrusive light limitation values used should be those applicable to the most rigorous zone.

NB: Zone E0 must always be surrounded by an E1 Zone.

## DESIGN GUIDANCE

The following limitations may be supplemented or replaced by a LPA's own planning guidance for exterior lighting installations. As lighting design is not as simple as it may seem, you are advised to consult and/or work with a professional lighting designer before installing any exterior lighting.

**Table 2 – Obtrusive Light Limitations for Exterior Lighting Installations – General Observers**

Environment al Zone	Sky Glow ULR [Max %] <sup>(1)</sup>	Light Intrusion (into Windows) $E_v$ [lux] <sup>(2)</sup>		Luminaire Intensity $I$ [candelas] <sup>(3)</sup>		Building Luminance Pre-curfew <sup>(4)</sup>
		Pre- curfew	Post- curfew	Pre- curfew	Post- curfew	Average, $L$ [cd/m <sup>2</sup> ]
E0	0	0	0	0	0	0
E1	0	2	0 ( 1*)	2,500	0	0
E2	2.5	5	1	7,500	500	5
E3	5.0	10	2	10,000	1,000	10
E4	15	25	5	25,000	2,500	25

**ULR** = **Upward Light Ratio of the Installation** is the maximum permitted percentage of luminaire flux that goes directly into the sky.

**$E_v$**  = **Vertical Illuminance in Lux** - measured flat on the glazing at the centre of the window.

**$I$**  = **Light Intensity in Candelas (cd)**

**$L$**  = **Luminance in Candelas per Square Metre (cd/m<sup>2</sup>)**

**Curfew** = **the time after which stricter requirements (for the control of obtrusive light) will apply**; often a condition of use of lighting applied by the local planning authority. If not otherwise stated - 23.00hrs is suggested.

**\*** = **Permitted only from** Public road lighting installations

**(1) Upward Light Ratio** – Some lighting schemes will require the deliberate and careful use of upward light, e.g. ground recessed luminaires, ground mounted floodlights, festive lighting, to which these limits cannot apply. However, care should always be taken to minimise any upward waste light by the proper application of suitably directional luminaires and light controlling attachments.

- (2) Light Intrusion (into Windows)** – These values are suggested maxima and need to take account of existing light intrusion at the point of measurement. In the case of road lighting on public highways where building facades are adjacent to the lit highway, these levels may not be obtainable. In such cases where a specific complaint has been received, the Highway Authority should endeavour to reduce the light intrusion into the window down to the post curfew value by fitting a shield, replacing the luminaire, or by varying the lighting level.
- (3) Luminaire Intensity** – This applies to each luminaire in the potentially obtrusive direction, outside of the area being lit. The figures given are for general guidance only and for some sports lighting applications with limited mounting heights, may be difficult to achieve.
- (4) Building Luminance** – This should be limited to avoid over lighting, and related to the general district brightness. In this reference building luminance is applicable to buildings directly illuminated as a night-time feature as against the illumination of a building caused by spill light from adjacent luminaires or luminaires fixed to the building but used to light an adjacent area.

<b>Table 3 – Obtrusive Light Limitations for Exterior Lighting Installations – Road Users</b>		
<b>Road Classification <sup>(1)</sup></b>	<b>Threshold Increment (TI)</b>	<b>Veiling Luminance (Lv)</b>
No road lighting	15% based on adaptation luminance of 0.1cd/m <sup>2</sup>	0.04
ME6/ ME5	15% based on adaptation luminance of 1cd/m <sup>2</sup>	0.25
ME4/ ME3	15% based on adaptation luminance of 2cd/m	0.40
ME2 / ME1	15% based on adaptation luminance of 5cd/m <sup>2</sup>	0.84

**TI = Threshold Increment** is a measure of the loss of visibility caused by the disability glare from the obtrusive light installation

**Lv = Veiling Luminance** is a measure of the adaptation luminance caused by the disability glare from the obtrusive light installation

**(1) = Road Classifications** as given in BS EN 13201 - 2: 2003 Road lighting Performance requirements. Limits apply where users of transport systems are subject to a reduction in the ability to see essential information. Values given are for relevant positions and for viewing directions in path of travel. For a more detailed description and methods for determining, calculating and measuring the above parameters see CIE Publication 150:2003.


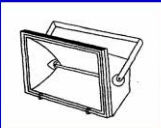
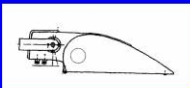
## RELEVANT PUBLICATIONS AND STANDARDS:

British Standards: www.bsi.org.uk	BS 5489-1: 2003	Code of practice for the design of road lighting – Part 1: Lighting of roads and public amenity areas
	BS EN 13201-2:2003	Road lighting – Part 2: Performance requirements
	BS EN 13201-3:2003	Road lighting – Part 3: Calculation of performance
	BS EN 13201-4:2003	Road lighting – Part 4: Methods of measuring lighting performance.
	BS EN 12193: 1999	Light and lighting – Sports lighting
	BS EN 12464-2: 2007	Lighting of work places – Outdoor work places
Countryside Commission/ DOE	Lighting in the Countryside: Towards good practice (1997) ( <i>Out of Print but available on <a href="http://www.communities.gov.uk/index.asp?id=1144823">www.communities.gov.uk/index.asp?id=1144823</a></i> )	
UK Government / Defra www.defra.gov.uk	Statutory Nuisance from Insects and Artificial Light – Guidance on Sections 101 to 103 of the Clean Neighbourhoods and Environment Act 2005	
	Road Lighting and the Environment (1993) (Out of Print)	
CIBSE/SLL Publications: www.cibse.org	CoL	Code for Lighting (2002)
	LG1	The Industrial Environment (1989)
	LG4	Sports (1990+Addendum 2000)
	LG6	The Exterior Environment (1992)
	FF7	Environmental Considerations for Exterior Lighting (2003)
CIE Publications: www.cie.co.at	01	Guidelines for minimizing Urban Sky Glow near Astronomical Observatories (1980)
	83	Guide for the lighting of sports events for colour television and film systems (1989)
	92	Guide for floodlighting (1992)
	115	Recommendations for the lighting of roads for motor and pedestrian traffic – Second Edition (2010)
	126	Guidelines for minimizing Sky glow (1997)
	129	Guide for lighting exterior work areas (1998)
	136	Guide to the lighting of urban areas (2000)
	150	Guide on the limitations of the effect of obtrusive light from outdoor lighting installations (2003)
	154	The Maintenance of outdoor lighting systems (2003)
ILP Publications: www.theilp.org.uk	TR 5	Brightness of Illuminated Advertisements (2001)
	TR24	A Practical Guide to the Development of a Public Lighting Policy for Local Authorities (1999)
	GN02	Domestic Security Lighting, Friend or Foe
ILP/CIBSE Joint Publications	Lighting the Environment - A guide to good urban lighting (1995)	
ILP/CSS Publications	Joint Code of Practice for the installation, maintenance and removal of seasonal decorations. (2005)	
ILP/CfDS Joint Publication www.dark-skies.org	Towards Understanding Sky glow. 2007	
IESNA www.iesna.org	TM-15-07 (R) Luminaire Classification System for Outdoor luminaires	

**NB:** These notes are intended as guidance only and the application of the values given in Tables 2 & 3 should be given due consideration along with all other factors in the lighting design. Lighting is a complex subject with both objective and subjective criteria to be considered. The notes are therefore no substitute for professionally assessed and designed lighting, where the various and maybe conflicting visual requirements need to be balanced.

## APPENDIX 1 - PROPOSED OUTDOOR LUMINAIRE CLASSIFICATION SYSTEM

Variable Aim Luminaires – General Classifications:

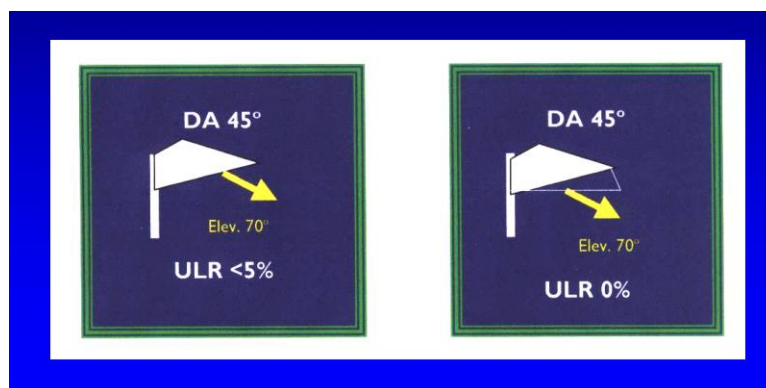
➤ Type A	Symmetrical	
➤ Type B	Asymmetrical	
➤ Type C	Double-Asymmetrical	

### Proposed labelling System:

Fixed Position luminaires



Variable Aim Luminaires  
(Shown here for a 45° Double-Asymmetric luminaire aimed at 70° – with and without a cowl).



**PLANNING STATEMENT**

Globe Lawn Tennis Club  
190A Haverstock Hill,  
London,  
NW3 2AL

**Our Reference:** ADB/JAG/5924

**Date:** 28 October 2022

**CT Planning Limited**

Three Spires House Station Road  
Lichfield Staffordshire WS13 6HX  
Tel: 01543 418779  
Email: [apps@ctplanning.co.uk](mailto:apps@ctplanning.co.uk)

