
P3001502 – Hyde Road School

External Lighting – Planning Statement

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Introduction

The following document aims to provide an overview of the external lighting proposal with a particular emphasis on ensuring that light spill is effectively mitigated. The project is within early design stages and will undergo further design development however the contractor will develop the scheme in line with the proposals set within this document and in accordance with all applicable lighting standards including those described below.

The site plan below indicates the existing external area in question and shows the relationship of this area within the surrounding landscape within the proposed existing school grounds and beyond. The only light sensitive receptors in the vicinity of the proposed school are circa 35m away from the proposed new School sports facilities and outside the school grounds, these neighbouring houses have been highlighted by the green boundary line.

Existing Site

The annotated view of the existing site below identifies the existing light sensitive receptors and existing businesses adjacent to the proposed school development.



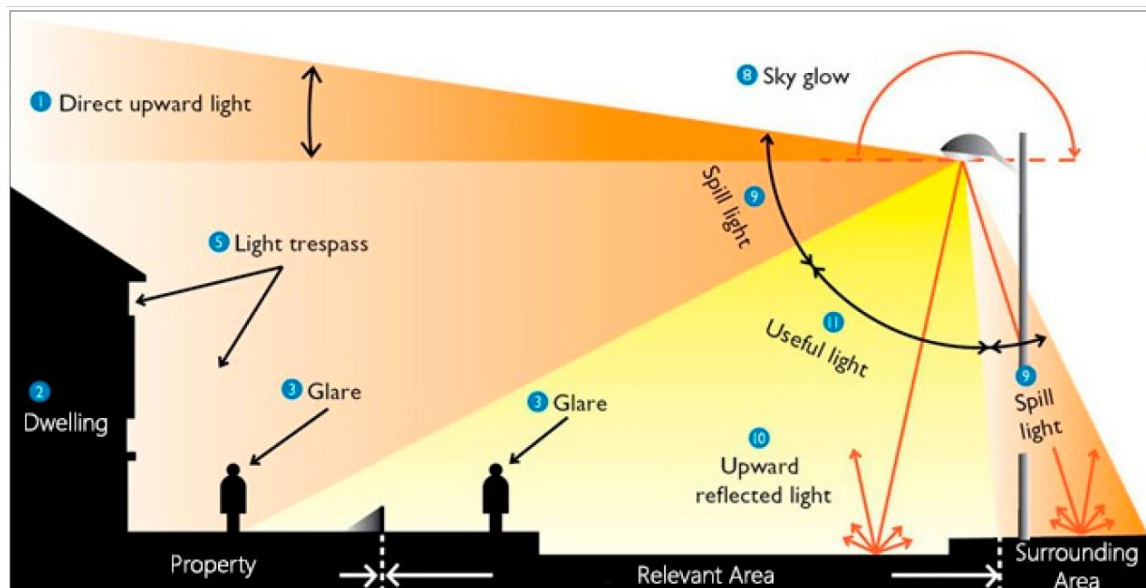
It can be seen from the site plan that there are houses and businesses within the immediate area surrounding the proposed school site that could be impacted by the external lighting proposed for the school development however, with the application of standard practice lighting design, it is not envisaged that the proposed external lighting that will illuminate the school grounds would have any impact on local residence. In particular, the following points should be noted:

- The existing gala bingo site is behind a tree line from the proposed school and it is the rear of the building that faces the school, not the buildings main frontage and entrance.
- Houses across the road from the proposed school site are some distance away and are located on the other side of the existing Hyde Road thus are not expected to be affected by the proposed external lighting that is predominantly proposed to the rear of the proposed school building. As can be seen from the Lux Level plan below, only low level and low lux level lighting is proposed at the front of the school.
- Houses adjacent to the external sports pitches are the most susceptible to light nuisance however all lighting in the locality is again at a low level and low lux level.
- The adjacent sports village is some distance away from the proposed school and the existing building faces away from the school in terms of activities carried out on site.
- The adjacent greyhound stadium is again some distance away from the school grounds but is fronted by a car park and the building itself is orientated similarly to the sports village in that the activities carried out on site are on the opposite side to the building with the building providing a boundary from the existing road and proposed school.

Proposed Site



In the development of the lighting scheme to provide for the requirements of the proposed uses above, the following light related considerations will be made to ensure the proposed lighting scheme is developed in such a way to mitigate against detrimental effects of lighting such as nuisance lighting / light trespass etc. as shown within the diagram below:



Light Pollution Explained

The lighting scheme shall be developed in such a way as to reduce upward lighting and ensure that lighting shall be focused on task areas, thus reducing light spill. Light trespass in to neighbouring dwellings shall be removed as per guidance note GN01:2020 – Reduction of Obtrusive light; from the Institute of Lighting Professionals.

The following three areas of consideration shall be incorporated:

- Optical control

Using luminaires with good optical control will be crucial in minimising the impact of artificial lighting on the surrounding ecology. Internal reflectors, collimators and louvres all help to focus light on to the intended task area. Flat glass lenses are recommended over curved or bowl lenses to avoid light spill above the horizontal. If required, back-shields can be employed as barrier to stop unwanted light spill.

- Luminaire Positioning and Aiming

Except in specific locations, where it is desired that elements of the design are uplit for aesthetic reasons, all general lighting luminaires are positioned to avoid uplighting where possible. Where practical, directional luminaires are utilised to enable the precise projection of light. Proper commissioning will ensure directional luminaires perform as intended.

- Luminaire Technology

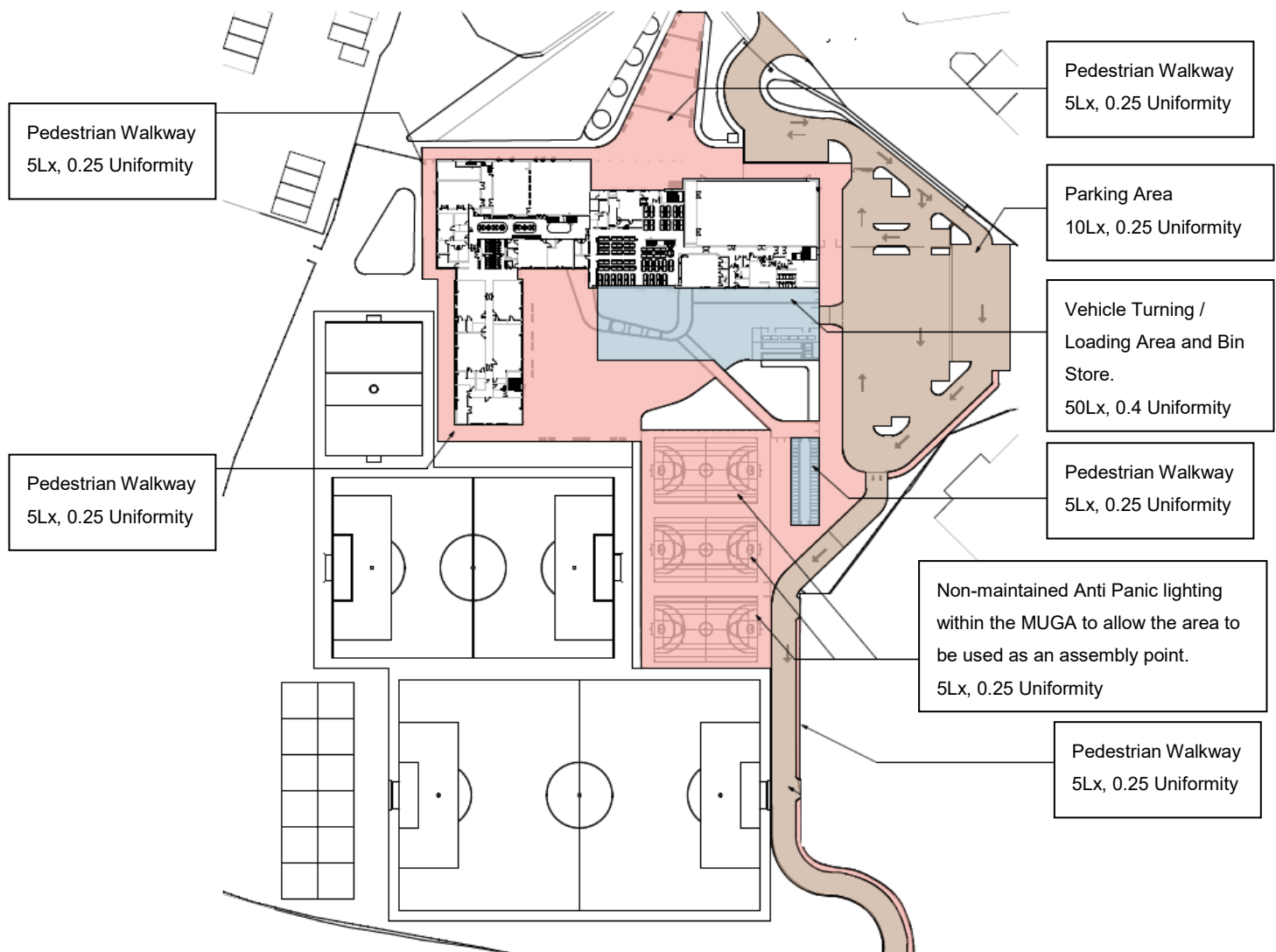
When specifying luminaires, careful consideration shall be given to minimising upward light and the use of optical units with precise light intensity distribution: thus ensuring that spill and glare are minimised. The lighting scheme is designed to have minimal impact on the surrounding environment. Lighting is only installed where a visual task requires it for safety, comfort and well-being. Light levels are kept to the minimum levels needed to meet the requirements. Luminaires with a controlled light distribution ought to be specified in order to ensure that light falls only where it is required. A combination of lighting controls and precise optics will help minimise any impact on the surrounding environment.

External Lighting Proposal

It is important to note that the external lighting design shall be developed further, however the principles below shall be adhered to:

- Walkways Exclusively for Pedestrians – 5Lx at 0.25 Uniformity
- Multi-use Sports pitches – 200Lx at 0.6 Uniformity
- Car park areas – 10Lx at 0.25 Uniformity
- Vehicle turning / loading areas – 50Lx at 0.4 Uniformity

The above criteria has been extracted and applied from BS12464-2 for light level and uniformity of light.



External lighting

External lighting shall be provided in accordance with all applicable standards including LG6 and ILP GN01. Generally external lighting will consist of;

- The building perimeter for security, pedestrian movement, bicycle racks;
- Car parking areas for parking and associated roadways, plus pedestrian footpaths;
- The service yard for vehicle turning plus loading/unloading.

Indicative luminaire selections

The exact types of luminaires to be used within the project are yet to be determined however, the luminaire selections below provide an indicative overview of the types of luminaires that are likely to be used for the different lighting requirements around the site. The quantities and positioning of all luminaires shall be determined via detailed lighting calculations in order to meet the light level and uniformity requirements from the applicable British Standard as noted previously:



360° BOLLARD LIGHT FITTING

Pedestrian areas are likely to utilise low level bollard lights to provide the minimum requirements of light and uniformity along each pedestrian route. For pedestrian routes that are directly adjacent to the building a mixed strategy may be implemented using wall mounted luminaires such as the indicative conical example.



ASYMMETRIC FLOODLIGHT

Carparks and road ways shall utilise post top mounted luminaires that may utilise various outputs and optics to achieve the required light distribution over such areas.



LED POST TOP LUMINAIRE

Floodlights may be used in order to light some of the larger open areas between the school and sports pitches as required and appropriate.



WALL MOUNTED CONICAL LUMINAIRE

Again it is important to note that the lighting design shall be developed and is subject to change, however the requirements of this report shall be adhered to along with all applicable standards in the development of the final external lighting scheme for the project. See also the BDP External lighting system strategy drawing for Lux levels and uniformity by area.

Lighting Controls

Energy saving automatic lighting control shall be implemented in accordance with the requirements of the generic design brief. Where applicable, external lighting will be equipped with photocells and time clocks to provide effective control and also reduce energy consumption.

Emergency Lighting

An emergency lighting system will be provided in accordance with all applicable standards including BS5266 and LG12. The strategy consists of emergency and escape lighting provided via maintained and non-maintained luminaires that will automatically switch to emergency power supply in the event of a mains power failure. The emergency lighting may be tested utilising manual-key operated switches for each individual lighting final sub-circuit.

Security Lighting

Lighting shall be provided to compliment any CCTV requirements, and also will meet any crime impact assessment / secure by design requirements where applicable.

Summary

It can be seen that although there are neighbouring businesses surrounding the proposed school site, it is not anticipated that any detrimental effects should be observed by those neighbours by the new proposed external school lighting scheme.

One area of concern could be the adjacent dwellings located behind the treeline to the West of the site (highlighted previously within this report) but with sufficient implementation of good practice lighting design and given the distance between the dwellings and the fact that the sports pitches are not to be artificially lit, this should not provide any ongoing concerns.

The lighting design shall be progressed / developed in accordance with the recommendations within this report and all applicable standards, some of which are highlighted within the report for consideration and adoption by the design team and contractor.