

1.0 INTRODUCTION

This report has been prepared on behalf of HSBC Bank Pension Trust (UK) Ltd. to provide details of the proposed external lighting strategy for the proposed redevelopment of 25 Bakers Road, Uxbridge to provide a nine storey hotel, with ground floor retail unit, basement car parking and associated works.

2.0 PROPOSAL

2.1 Design Consideration

The project is located within a busy urban area with nearby residential housing surrounding the rear of the site. The external lighting strategy will be designed to provide safe access to and around the site and to deter theft and vandalism, whilst taking the local residential housing in to account.

The scheme will be designed in accordance with the following principles:

- Sky Glow – To allow reduced upward light by utilising luminaires with low upward wasted light ratio.
- Glare – To allow minimum glare by utilising low glare luminaires in suitable positions and mounting heights.
- Light Trespass – To allow minimum light trespass to adjacent properties by utilising directional luminaires in suitable positions and mounting heights.

This documents relates purely to the pedestrian and roadway lighting to the side and the rear of the site from Cock's Yard. Any building feature lighting or signage is not covered part this report and will be detailed via a separate application.

2.2 Standards and Illumination Levels

As per table 1, the environmental zone is E4.

The external lighting design will be provided in accordance with the following guidelines and documentations:

- CIBSE Lighting Guide 6 – The Outdoor Environment (1992)
- Secure by Design Guidance
- Table 2 (and its accompanying notes) of the ILP Guidance notes for the reduction of obtrusive light, 2011
- BS 5489-1:2013 Lighting of roads and public amenity areas
- BS EN 12464-2:2014 Light and lighting - Lighting of work places - Part 2: Outdoor work places

The target illuminance levels for the various are will be designed to achieve the following:

- Car parking 10lux @ 0.25 Uniformity.
- Roadway with pedestrian path 20lux @ 0.4 Uniformity.
- Loading bay, turning area 50lux @ 0.4 Uniformity.

For all areas a glare rating limit of 50 will be maintained.

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

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

Environmental Zone	Sky Glow ULR [Max %]	Light Intrusion (into Windows) Ev [Lux]		Luminaire Intensity I [candelas]		Building Lumiance Pre-Curfew
		Pre-Curfew	Post-Curfew	Pre-Curfew	Post-Curfew	Average, L[cd/m ²]
E0	0	0	0	0	0	0
E1	0	2	0	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	15
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ULR = Upward Light Ratio of the Installation is the maximum permitted percentage of luminaire flux that goes directly into the sky.

Ev= 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/m²)

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.

2.3 Luminaire Types

It is proposed that the following luminaire types will be utilised:

- Access pathways – Wall mounted downlights
- Perimeter lighting – Wall mounted downlights
- Basement Car park lighting –Surface mounted baton luminaire



2.4 Lighting Controls

External lighting shall be provided with the following controls:

- Time switch control – All luminaires
- Photocell control – Single photocell via contactor for all building mounted luminaires
- PIR control for specific pedestrian path luminaires
- Manual over-ride control at reception for all external luminaires