

1 External Lighting Strategy

Introduction
 This external lighting strategy has been produced in association with the proposed development at Uppingham School Meadhurst Boarding House. The project includes the partial demolition of an existing boarding house and replacement with new purpose-built boarding facilities alongside a new arrival courtyard, landscaping and associated works.
 New external lighting is proposed to provide discrete illumination to key areas of the site for the purpose of safety and security.

Environmental Zone
 The environmental zone selected for this site has been selected as follows:

Criteria	Description
Zone	E2
Surrounding	Rural
Lighting Environment	Low District Brightness
Examples	Sparsely inhabited rural areas, village or relatively dark outer suburban locations

- The environmental zone E2, sets the requirements for the following design parameters:
- Maximum Vertical Illuminance on surrounding premises:
 - Pre-curfew – 5 Lux
 - Post-Curfew – 1 Lux
 - Maximum Value of Upward Light Ratio
 - 0.25%
 - Maximum Value of Upward Flux ratio of installation (4 or more luminaires)
 - Amenity Areas = 6%

Applicable Standards and Regulations
 The following standards and regulations have been considered in selecting the target lighting performance requirements:
 BS 5489-1:2020 Csp for the design of road lighting – Part 1 Lighting of roads and public amenity areas
 BS EN 12320:2015 Road lighting: Part 2: Performance requirements
 BS EN 12464-2:2014 Lighting of work places: Outdoor work places
 BS EN 12464-2:2014 Light and lighting: Lighting of work places: Part 2 Outdoor work places
 CIE 150:2017 Guide of the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations
 ILP Guidance Note 1: 2021 The Reduction of Obtrusive Light

Proposed Lighting Design Parameters
 The following table provides the selected target lighting level and uniformity parameters for each applicable type of external space proposed to be provided with external lighting.

Area	Maintained Lighting Level (Lux)	Uniformity (Uav)	Example Light Fitting (Subject to confirmation)
Building Entrances / Exits	20	0.25	
Footpaths	5	0.25	
Covered Cloister	10	0.25	
Accessible Drop-Off Area	10	0.25	
Delivery Area	20	0.4	
Access Road Entrance / Exit	10	0.4	
Bin Store	20	0.25	
Plant Areas	50	0.25	

Obtrusive Light Mitigation
 All light fittings will be selected and specified to eliminate upward light distribution being generated directly from the light fitting, wherever possible and as a worst case, restricted to a maximum of 2.5% upward light, in accordance with the requirements for environmental zones E2.

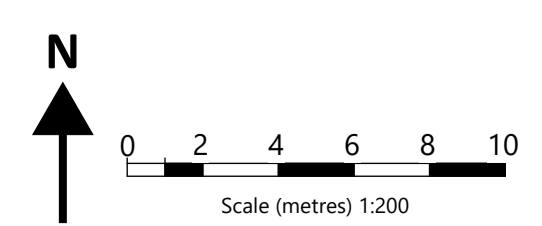
Light Sources
 All luminaires will contain LED lamps for maximum energy efficiency. All lamps will have good colour rendering of 70Ra or above to provide good rendition of colour and promote the feeling of a safe and secure environment.

Lighting Control
 External lighting will be controlled in a number of ways to suit the application and functional requirements for each separate area. Methods of control will include the following:

- Astronomical time switch with manual adjustment and override facility.
- Passive infra-red movement sensors with photocell overrides.
- Manual control switches with photocell hold-off.

Key

- Footpaths
- Covered Cloister
- Building Entrance/Exits
- Access Road Entrance/Exit
- Accessible Drop-off Area
- Bin Store
- Plant Area
- Delivery Area
- CCTV
- CCTV Zone of Cover



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