

DSSR | CONSULTING ENGINEERS



PROJECT |

**WEST CUMBERLAND HOSPITAL
PHASE 2**

EXTERNAL LIGHTING DESIGN STATEMENT

WCHPH2-DSSR-99-XX-RP-E-60001

1. EXTERNAL LIGHTING DESIGN STATEMENT

The external lighting design will ensure that it is concentrated in the appropriate areas and that upward lighting is minimised, reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties.

The exterior lighting will be designed in compliance with:

- BSEN12464-2:2014 Light and Lighting Part 2 : Outdoor Work Places
- BS5489-1:2013 Lighting of Roads and Public Amenity Areas
- Institution of Lighting Professionals guidance note1 for the reduction of obtrusive light (ILE GN01)
- International Commission on Illumination (CIE)150:2003
- Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations.

The Environmental Zone for ILE GN01:2011 has been assessed as E3 for limitation guidance on obtrusive light for – Sky Glow, Light Trespass, Source Intensity & Building Luminance.

The external lighting will be designed in compliance with table 1 & 2 of the ILE Guidance notes for reduction of obtrusive light (ILE GNO1:2011).

BREEAM POL 04 Reduction of night time light pollution

The design will limit the following

- Average upward light ratio of the luminaires, to restrict sky glow
- Illuminance at nearby properties for which light trespass might be an issue
- Intensity of each light source in potentially obtrusive directions beyond the site boundaries

The building will have wall mounted LED luminaires to the perimeter and exit doors.

The car park / roadway / footpaths will be a mixture of LED lamp posts (with forward throw distribution, asymmetrical) and low level bollards (shielded light source, symmetrical).

All lighting equipment will be controlled by photocell and /Time Clock controls to prevent operation during daylight hours, and enable reduced levels of lighting in low traffic areas during hours of darkness.

Luminaire Selection

Luminaire efficiencies for the current stage external lighting design are as follows:

Luminaire Ref	Height	Average Initial Luminous Efficacy	Luminaire Lumens / Circuit Watt
69W LED LIGHTING COLUMN	6M	5725lm	83
42W LED LIGHTING COLUMN	6M	4669lm	111
4.2W WALL MOUNTED LUMINAIRE	2M	1119lm	124
4.2W LED LIGHTING BOLLARD	1M	410lm	96

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E manchester@dssr.co.uk T 0161 872 4811 F 0161 872 7325
Trafford House Chester Road Manchester M32 0RS

Glasgow | Harrogate | Manchester