



Origin Design Consultancy

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Lighting Design Notes, Energy Report

Project ID – LD122510 - Desford Lane Rev 1 - Private Solar Bollard

Prepared for:

BELLWAY HOMES

Date 1st Issued:

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Prepared by:

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Lighting Design Details

Lighting level specification and design notes

Design is compliant with the following standards :	N/A
Lighting Classification used for project : (Lighting levels risk assessed in line with BS 5489-1:2020)	N/A – Solar Bollard does not meet BS standards
Design Levels	Marker lighting only
Environment classification:	E3
Road speed	20mph shared surface
Luminaire selection	Solar Bollard preferred by the developer

Luminaire specification

Private

Luminaire	NEW SOLAR BOLLARD – Type A BLUE - QTY 63
Manufacturer	DW Windsor Ligman
Product description	Prague - PRA-10062-T4-8030– 2 x 4 LED 3000K
Lamp type	4W LED SOLAR POWERED
Lumens	399
Maintenance factor	1
Control	PIR and Dimming – to be set up on site
Optic/distribution	T4 Single sided
Colour temperature	3000k
Wattage Total Circuit Watts	4W
Mounting height	1m
Electrical connections	OFF GRID



Prague Solar asymmetric T4 single sided distribution, PIR and Dimming integrated to provide reduced light in off peak hours. This will limit backlight onto adjacent vegetation. Dimming profile and set up to be selected at installation.

New Adoptable luminaire wattages

Luminaires	W		QTY		Total	
Type C OFF GRID -	4	x	63	=	252	W
Total wattage				=	252	W

Comments and Recommendations.

Name	Comment	Date

Completed by	Signature	Date
Matthew Clarke BSc of Origin Design Consultancy		24-02-26

Approved by	Signature	Date

Definitions

Luminaire	Combination of a light source, a housing, and electronics, with the purpose of providing light.
Luminance	The intensity of light in a given direction from a surface. The surface may be a light source (such as a lamp), or a reflector (such as a road surface). The unit is candelas per metre squared (cd/m^2).
Illuminance	The luminous flux density at the surface being lit. Usually measured with a light meter. The unit of measure is lux, one lumen per square metre.
S/P ratio	The scotopic/photopic (S/P) ratio is a way of adjusting for the relative strengths of these two responses within the eye and translating them to lighting. S/P is calculated using the scotopic and photopic lumens for the light source. Cooler/higher colour temperatures tend to have a higher S/P ratio compared to lower/warm sources.
Maintained illuminance	The minimum light level over an area.
Average illuminance (Avg.)	Illuminance averaged over a specified surface.
TCW	Total Circuit Wattage.
Colour temperature (K)	It is the value given to the colour of the light in degrees Kelvin, it can range from 1500K to 7000K, 1500k being warm/red to 7000K being cool/blue.
Maintenance factor.	It factor used to adjust the luminaire output to represent the reduction in light levels over time.
DNO	Distribution Network Operator.
LED	Lighting Emitting Diodes.
SON	A lamp in which sodium vapour is activated by current passing between two electrodes, producing a yellow/orange light.
Compact fluorescent (CFL PL)	Compact fluorescent lamps are tubes with a mix of phosphors excited to by voltage to produce white light with a colour rendering of Ra 60 and above and a colour temperature of 2500 – 4000k.