Lumineux
MAKING LIGHT WORK

Statement of Lighting Design

Proposed Site Development 33 Church Street Pinchbeck Spalding PE11 3UB

The aim of the external lighting is to allow both employees and the public to access the site, via foot or vehicle plus providing security to the premises. This Design only deals with the illumination to the South, West and East side of the development. The North side will be subject to a further design as part of the residential development.

The lighting will not be obtrusive or cause discomfort (Glare) to those using the site nor to neighbouring properties.

The lighting will not give rise to Sky Glow.

Emergency Lighting is provided to allow both Staff and the Public to safely exit the building in the event of an emergency or normal lighting failure.

The Lighting will be energy efficient.

All Light Fittings used on this project have an asymmetric Light Distribution Curve (LDC). This means that all the light from the fittings are both thrown forward, sideways and importantly towards the ground. This means that there is Zero skyglow.

To obtain maximum energy efficiency all fittings are LED. The fittings generally have a high lumen to watt ratio of 130 lm/W or above

The design decision with regard to obtrusive light as taken from:-

Table 3.2 CIE environmental zones (source: CIE 150 (2017) Tables 2, 5 and 7; reproduced by permission of CIE)

Table 3.3 Night-time limit values for different environmental zones (source: CIE 150 (2017) Tables 2, 5 and 7; reproduced by permission of CIE)

Suggest the area is within a Zone 3 allowing a pre-curfew of 10 lx and a post curfew of 2 lx on adjacent residential windows.

The design includes a 10m band to each side of the site to provide information on the horizontal spill.

To show compliance with the code for obtrusive light vertical planes are included on all nearby residential properties or those proposed new build.

From the report it can be seen that the spill light onto the closest residential properties is insignificant with a Max of 0.92 lx. This is well within the Pre-curfew of 10 lx and also the post-curfew of 2 lx.

The columns around the parking areas are 6m in height with a 1m outreach arm.

The Client requirement was for an illumination of 20lx measured horizontally at ground level. The design provides 26.1 lx with a uniformity of 0.6 meeting the code requirement of 0.25 uniformity.

It should be noted that the illumination on the West side is provided by two high efficient LED fittings replacing the existing non-efficient floodlights. The proposed fittings also provide emergency illumination to the entrance/exit door onto Church Street.

To provide additional information on the design the following documents are accompanying:-

Design report

Design Drawing

3D design images

Data sheets of proposed fittings.

A copy of the Obtrusive Lighting tables 3.2 and 3.3

I confirm the design meets current codes of practice.

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