

# Thomas Cottage - Wepham

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## Lighting Assessment

The planning application includes two new sources of lighting, which are as follows:

- A. The replacement of two existing external bulkhead fittings, which are currently located over each car port vehicle entrance. The fittings are positioned such that they are partially shielded by the overhanging roof of the car port. The proposal is to replace the two fittings with a single fitting positioned over the head of the new single 'Stable' door.
- B. The installation of one or more internal light fittings, within the proposed glazed link.

Neither of the two proposed sources are located near the road access, since they are located at the back of the cottage, at the end of the driveway. Source A faces away from the garden and source B has glazing facing both ways, with its east facing elevation facing onto the garden.

The closest neighbouring property, is to the immediate west of Thomas Cottage and its boundary (along the alignment of the driveway, is within 3.5m of the new position of the external light and within 5m of the Link.

### Environmental Zone

It is assumed that Wepham, as a small village, is classified as E2, in a 'Rural' surrounding, with a 'Low District Brightness' Lighting Environment.

The ILP '*Guidance Notes for the Reduction of Obtrusive Light GN01:2011*', provides the following Design Guidance for for an Environmental Zone 'E2'.

- Sky Glow (Upward Light Ratio) 'ULR' - maximum 2.5%.
- Light Intrusion (*into windows*) 'Ev' - 5 lux Pre Curfew and 1 lux Post Curfew (*curfew time assumed to be 23.00 hours*).
- Luminaire Intensity 'I' - 7,500 candelas Pre Curfew and 500 candelas Post Curfew.

- Building Luminance (Pre Curfew) 'L' - 5 candelas/m<sup>2</sup>

### **Installation and control of the External Fitting 'A'**

The installation of the external light fitting 'A' will be at an angle to the horizontal of less than 70 degrees and will be positioned at a height above the ground of between 2.1m and 2.2m.

The ILE publication: "*Domestic Security Lighting Friend or Foe*", advises that such an external security source rarely requires more than 1000 Lumens (50watts) and if the external light is required to be operated by sensor, then it is better located separately from the lamp, giving greater freedom to its directionality. It also recommends the use of a bulkhead fitting, fitted with a low power 600-900 lumens (9/11 watt) compact fluorescent lamp, which can be left on, providing all night security if necessary. This type of light is cheaper to run and kinder to the night time environment, providing a gentle wash of light with reduced glare, especially since the fittings will be repositioned no higher than 2.2m above the external ground level. Based upon the above information,

External Fitting A, will therefore either be in the form of: a double asymmetric cowled luminaire, the hooded casing of which controls light pollution, or a bulkhead fitting, angled downwards and covered overhead by the overhanging roof eaves and gutter.

As recommended by the SDNP, the light will be turned off when not needed, or controlled by movement sensor. The rating of the fitting will be restricted to 500 Lumens.

### **Installation and control of the Internal Fittings 'B'**

The Design Statement makes reference to the fact that the link is almost fully glazed on both sides, that the internal lighting will be operated by timer switches and there will be internal blinds (horizontal slatted). The blind slats will be orientated, so as to prevent upward directional light spill, after the 23.00 hours Post Curfew time, as well as visual security to those walking through the link late at night. The timer will also limit the length of time that the internal Link lights can be left on, activated by switching at either end. The Design Statement also makes reference to the optional provision of the use of 'Smart' glass, in both sides of the Link, used similarly to limit the 'Light Spill' from within, although, this is seen as an alternative to blinds and dependent on the ability to control the level of light transmittance.

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It is assumed that high level LED or bulkhead fittings will be secured to the ceiling, on the edge of the link on one or both sides, with the lamps designed to comply also with the above Design Guidance criteria.

**Bats and the guidance of the Bat Conservation Trust (BCT)**

Neither source of lighting is considered a means of 'Celebratory Lighting' (flood lighting) of the cottage or the converted car port and so the controls, referred to above will provide a protective environment, in the event that roosting bats are attracted to the property. In this event, the lights will be switched off at bat emergence time and during peak bat activity times.

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