

Streetlamp LED Project, October 22

Background

Freshford Parish Council pays for the maintenance and electricity of 38 street lights in the village. All of the lights are currently on half night and pre-dawn cycle. This is a residential dimming regime which means lights are on:

- 100% between dusk and 22.00,
- 50% between 22:00 and 23.00,
- 10% between 23:00 and 06:00,
- 50% between 06:00 and 07:00,
- 100% between 07:00 and DAWN.

Note that lights are only on if it is dark.

We also have a number of lights in the village which are the responsibility of BANES and CURO, that is those on the pathway from Galleries towards the school, and those on the pathway from the war memorial past the Glebe.

Eight of the parish owned lights have been upgraded to LEDs and the rationale is to save energy and energy costs by replacing the remaining lights to LEDs and/or switching off some of the lights. The five LED lights owned by BANES on the footpath by the Galleries are 28W and 2700 Kelvins (the colour of the light). 2700 Kelvin LEDs are acceptable in AONB and Conservation areas. I propose that the same Kelvin value is used throughout the village.

Note that LED lights require less maintenance than non-LED lights, usually every 6 years.

Options and Quotes

I have requested quotes for the following 3 options to 5 companies:

1. change 30 non LED lights to LEDs. There are also 3 of the lamps that need refurbishing.
2. change some of our lights to LEDs and switch off the rest. There is a cost involved in switching off the lights, the cost depends on the number being switched off. We would need to consult the villagers about this.
3. Switch off all the lights. There is a cost involved in switching off the lights. We would need to consult the villagers about this.

I also asked the companies if the project could be spread over 3 financial years to spread the cost to the parish but some have replied that this would not be viable due the current volatility in cost of materials and labour.

If, as in options 1 & 2, the street lights are kept, then I feel most villagers would want to keep the attractive teardrop lanterns. Although LED lights have less light spillage than the sodium lamps, we may want to consider shielding some of the lights that are near buildings whilst the work is being done. We are awaiting some examples of shielding of this type of lantern from BANES Street Lighting department. They have also suggested that single light source LED lights are best for heritage lamps.

I am still investigating the option of solar powered lights. From what I have been told so far, they need a clear view of the sun so some of our lights would not be appropriate due to foliage and buildings. Each light would have 3 main components, a solar panel, a battery and a control panel, each with a different life span. This is a lot of resource use and embodied energy. BANES have fitted some but had a problem with battery storage and the light was not on when it should be and they

had some complaints about this. These lights have since been replaced with mains connected street lights.

Another option is to have lights that come on when pedestrians come within range, i.e. motion sensors. I have discussed motion sensors with one street lighting company. Currently our lights are unmetered, the amount of electricity that they will use in a year is estimated from the wattage and the lighting cycle that they are on. Motion sensor lights need to be individually metered as there is no way of estimating how much electricity they would use. In addition such a system requires different specification lanterns. If we wish to explore this option then they would need to undertake a survey and produce a design for the metered supply. This will attract survey and design costs payable in advance. I am finding out how much this would cost if we wish to proceed with this option.

Richard Tibbles