

**To:** Swale Joint Transportation Board  
**By:** Behdad Haratbar – Head of Programmed Work  
**Date:** 11 March 2013  
**Subject:** A Common Sense Plan for Safe and Sensible Street Lighting  
**Classification:** For Decision

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**Summary:** This provides details of the County Council's plan for safe and sensible street lighting and requests Members' views on the proposals.

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### **Introduction**

1. There are around 120,000 street lights and 30,000 lit signs/bollards in Kent. The annual energy cost for these is around £5.8m, a cost which is expected to rise in line with the rise in fossil fuel prices.
2. There isn't a legal requirement for the County Council to provide street lighting except when linked to road safety. However it has become established practice over time and almost all street lights in Kent are continually lit during the hours of darkness. There is a fitted light sensor in each column which automatically turns the lights on at dusk and turns them off at first light.
3. The Government's Carbon Reduction Commitment requires councils to publish their greenhouse gas emissions, including CO<sub>2</sub>. To generate the energy to illuminate the street lights in Kent produces 29,000 tonnes of CO<sub>2</sub>. Although it has not been a requirement to pay for carbon credits, this is likely to change and some form of levy linked to carbon emission is likely to be introduced thus increasing the cost of energy even further.
4. The aim is to target wasted energy whilst ensuring that we maintain community and road safety. We have been working with Kent Police to make sure that these issues are considered very carefully and that vulnerable sites are excluded from the proposals.
5. The challenge of rising energy costs, carbon emissions and light pollution were among the key factors in developing a new approach. This led to the approval of the policy of reducing energy consumption.

### **What we have done so far**

6. A number of initiatives have been completed that reduced energy consumption delivering an annual saving of £130k. These are;

- Upgrades – 6,500 inefficient mercury lamps as well as 3,441 failing lamps have been replaced with energy efficient units.
- Trimming – The photocell in 13,000 lamps has been reset to reduce burning time (lights come on later at dusk and going off earlier at dawn). All new columns have these photocells as standard.
- Dimming – New lanterns have been fitted to 500 columns to dim the wattage at pre-determined times to reduce energy consumption.

### **What we plan to do**

7. It was always acknowledged that significant work would need to be done to meet the challenge of escalating cost of energy, carbon emissions and intense light pollution.
8. Further work on this front led to the identification of measures to significantly reduce energy consumption. These are proposed to be delivered in two phases; Trial Switch Off of Surplus Lights (Phase 1) and conversion of a significant number of lights to Part Night Lighting (Phase 2). These measures, when fully implemented, will reduce the annual energy bill and carbon emission significantly, by around £900,000 and 5,000 tonnes respectively.

### **Phase 1 -Trial Switch off of Surplus Lights**

9. In the past, the extent of street lighting went far beyond the required needs; around 3,100 street lights have been identified where lighting is considered not necessary. If these schemes were being designed today these lights would not be installed. These are far in excess of the normal lighting standards and have a disproportionate maintenance cost due to their locations. These are generally located on roads leading to or out of local settlements.
10. We propose to switch these lights off for a trial period of 12 months. Site specific risk assessments and a safety audit for each road has been carried out to make sure that we only switch off lights that are not needed. Crime levels and road safety will be monitored at each site throughout the trial period and lighting columns on sites being adversely affected will be switched back on. Lighting columns on unaffected sites will be reviewed at the end of the trial period to determine whether action needs to be taken. Lights within settlements will be retained.
11. Switching off these lights will save the tax payer around £150,000 and reduce our carbon emission by about 1,000 tonnes every year.
12. A list of these lights and a plan of each site within Swale Borough are shown in Appendices A and B respectively. The works will be undertaken on a District by District basis and, is due to commence in early summer 2013. The programme of switching off surplus columns will take

approximately 2 months to complete. The specific dates for the trial switch off in Swale Borough will be notified to Members nearer the time. Signs informing of the trial switch off will be erected at each site.

## **Phase 2 - Part-night lighting**

13. This proposal involves installing a light sensor in each column which has a built in timer. This means that the column would turn on automatically at dusk, turn off at 12.00 midnight, turn back on at a 05.30a.m and stay on until first light. Apart from switching off and removing the columns, this is the most effective way of saving energy, very much like a householder turning off lights at night when going to bed.
14. This would apply to two categories of roads; minor roads (which include residential, industrial estates and rural roads) and high speed roads. There are around 70,000 street lights in these roads which could be changed to part-night lighting and could result in a reduction of up to 15% in the annual energy bill, around £750,000, and reduce carbon emission by around 4,000 tonnes every year
15. Here too, community safety will be paramount, before any street lights are changed to part-night, risk assessments will be carried out to make sure that it will not have an adverse impact on the locality.
16. Some may consider that implementing part-night lighting might lead to increases in road accidents, antisocial behaviour and an increased fear of crime. The implementation of part night lighting by other Local Authorities however has shown that this is not the case as sites where streetlights have been dimmed or switched off traffic accidents and crime have not increased. This fear is based on perception rather than actual data. As with the trial switch off proposals, (Phase 1), Kent County Council's aim is to target the wasted energy whilst ensuring we maintain safety and help reduce crime.
17. The programme for conversion to part night lighting is at a much earlier stage as we need to consult with interested parties, including residents and the police, about the hours of switch off and whether any further criteria needs to be considered.

### **Exclusion Criteria**

18. The approach proposed in Kent is similar to other local authorities. Locations for this energy saving initiative will be considered suitable for inclusion unless they meet one or more of the exclusion criteria listed below
  - Main routes and locations with a significant night-time traffic record between 12.00 midnight and 05.30am.
  - Town centres.

- Areas identified by the Police as having an existing record of crime or having the potential for increased crime levels if the street lighting is changed.
- Areas with sheltered housing and other residences accommodating vulnerable people.
- Areas with operational emergency services site including hospitals and nursing homes.
- Formal pedestrian crossings, subways and enclosed footpaths and alleyways where one end links to a road that is lit all night.
- Where road safety measures are on place in the highway, such as roundabouts, central carriageways islands, chicanes, speed humps, etc.
- Roads that have local authority CCTV or Police surveillance equipment.
- Sites with existing or with potential road safety concerns.

### **Recommendations**

- I. Members are asked to consider each site selected for the trial switch off of surplus lights and suggest any local information that may help officers to determine how to proceed with each location.
- II. Members' are asked to consider the exclusion criteria used for the Part-night Lighting initiative and suggest any changes.
- III. Members views are sought on the hours of switch off for Part-night Lighting.

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# **APPENDIX A**



# **APPENDIX B**

