

Communities Overview & Scrutiny Committee

18 September 2019

Part-Night Lighting

Recommendation(s)

1. That the Committee considers the report in response to a motion proposed by Councillors Parsons and Chattaway.

1.0 Key Issues

- 1.1 Councillor Richard Chattaway and Councillor Dave Parsons have proposed the following motion regarding the policy of part-night lighting:

“That, in line with previous commitments given by this Council, Conservative councillors and Conservative MPs regarding the roll out of LED lighting, and in view of the lack of conversion, lack of policing and increased crime during the hours of darkness, the Council agrees to the reversal of the part night street lighting policy in order to address communities’ concerns. The Council Budget set on 7 February should be amended to reflect this change with the additional cost being met from reserves”

The motion was proposed to be debated at Council in March but the Chair of Council referred it to the Communities Overview and Scrutiny Committee requiring officers time to prepare a detailed report covering both the financial and any other relevant implications of the proposal.

2.0 Options and Proposal

- 2.1 **A review of Street Lighting was presented to Communities Overview and Scrutiny Committee on the 16th January 2019. For ease of reference a summary of the pertinent points relating to this proposal follows, along with updates since the meeting.**

2.2 Financial Implications

The introduction of part-night lighting and investment in LED lanterns has delivered significant savings in terms of both electricity consumed and electricity costs. These financial savings, totalling £1.4M, have been removed from the Street Lighting budget. **A further £300K was removed from the street lighting electricity budget in 2019/20, bringing the total amount removed to £1.7M.**

- 2.3 Changing the operation of WCC's part-night street lights to all-night operation would increase the current electricity consumption by approximately 3.41M kWh per annum. In comparison, had we reached the stage where the street lighting stock is 100% LED, changing the operation of the part-night street lights to all-night operation would increase the electricity consumption by approximately 2.44M kWh per annum (There are currently 32,317 part-night street lights of which 22,055 are LED).
- 2.4 The electricity rate for 2018/19 was 14.67p per kWh. The rate for 2019/20 will not be known until October 2019 when the electricity contract is renewed by ESPO. In recent years the electricity rate has, on average, risen by 6.9% per annum, but this could be higher or lower.
- 2.5 The table below shows projections for the additional budget which would be required to move to all-night operation for the whole of 2019/20 and for a range of potential electricity rate increases.

	Zero rate increase (14.67p/kWh)	3% rate increase (15.11p/kWh)	6.9% rate increase (15.68p/kWh)	10% rate increase (16.14p/kWh)
2019/20	£500K	£515K	£535K	£550K

- 2.6 Using the average annual percentage electricity rate increase of 6.9%, and an estimation of further LED deployment until reaching 100% LED (anticipated in 2030/31), the table below illustrates how the additional budget for moving to all-night operation could potentially change over the next 12 years. This could of course be higher or lower and is for illustration purposes only.

Financial Year	Estimated additional budget required
2019/20	£535K
2020/21	£555K
2021/22	£575K
2022/23	£600K
2023/24	£620K
2024/25	£645K
2025/26	£665K
2026/27	£690K
2027/28	£710K
2028/29	£735K
2029/30	£760K
2030/31	£780K
Total for next 12 years	£7.87M

- 2.7 Based on an evidenced 6.9% electricity price increase year on year, the additional cost for moving to all-night operation is £535k per annum at 2019/20 prices/usage. Funding is not available to resource this and therefore additional funding would have to be identified.

3.0 Environmental Implications

3.1 Currently, WCC buys “Pure Green” electricity which is produced from 100% renewable sources (solar, wind, and hydro/wave) for the operation of its street lights and associated equipment. In buying Pure Green energy, WCC can report Zero emissions for this electricity consumption.

4.0 Electricity Consumption and Electricity Unit Cost

4.1 Since the last full year of all-night light operation in 2011/12 (24.9M kWh of electricity consumed), a combination of part-night lighting and LED lantern installation saw WCC’s electricity consumption reduce by approximately 12.5M kWh (units of electricity) in 2017/18 to 12.4M kWh, a 50% reduction. **Update - the electricity consumed in 2018/19 was 10.7M kWh, a 57% reduction.**

4.2 The electricity unit rate has increased from 9.22p per kWh in 2011/12 to 13.6p per kWh in 2017/18. **Update - the electricity unit rate in 2018/19 was 14.7p per kWh. This is, on average, an increase of 6.9% per annum for the electricity rate between 2011/12 and 2018/19.**

5.0 Operational and LEDs

5.1 The investment in the street lighting central management system has enabled WCC to actively manage the operation of the street lights with regard to planned operating times and also in response to events and incidents.

5.2 Approximately 73% of WCC’s street lights now have LED lanterns. The optimum level of capital investment in LED lanterns has now, for a number of reasons, been reached. The main reason is that the remaining non-LED stock is towards the lower end of the electricity consumption range which means that electricity savings through LED replacement are not as great as has been previously achieved. There are other difficulties such as the high cost of replacing heritage style lighting; the aesthetics of LED lanterns on cast iron columns; lanterns mounted on the walls of listed buildings where consent needs to be sought; lanterns mounted on pole brackets which in many cases need to be replaced completely. It is planned for the remainder of the non-LED lanterns to be replaced gradually from the street lighting maintenance budget over the next 12 years.

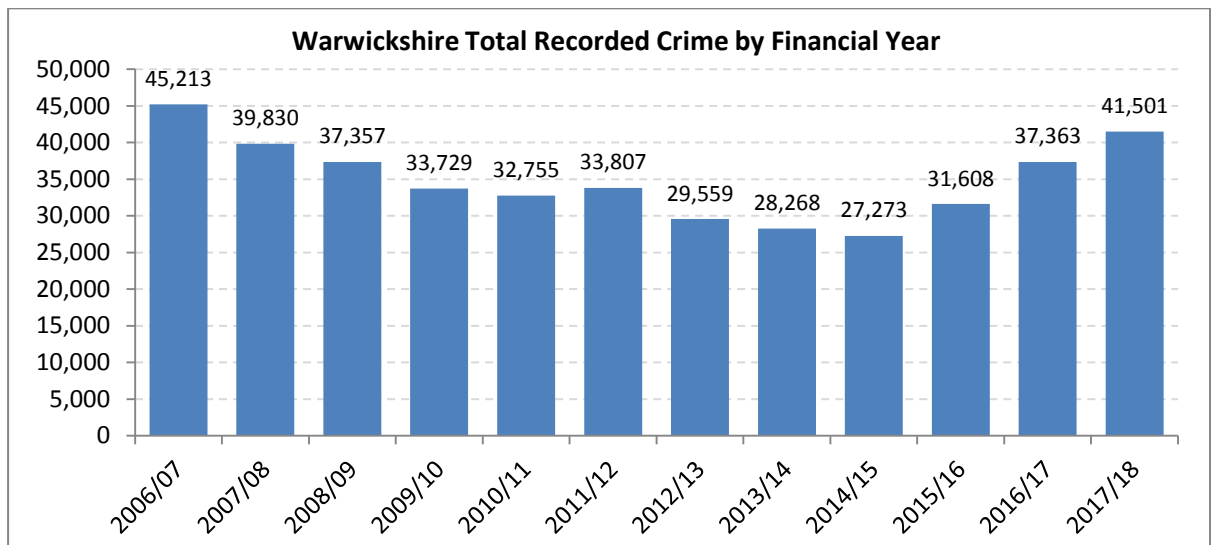
6.0 Road Safety relating to part-night lighting

6.1 Analysis has been conducted on levels of reported Road Traffic Injury Incidents around the County both immediately following the switch to part-night lighting, and after it has been operating for over five years countywide. It has been reported in earlier reviews, and continues to show, that there has not been any statistically significant change in reported Road Traffic Injury Incidents.

7.0 Crime and part-night lighting

- 7.1 During the period of time following the implementation of part-night lighting in Warwickshire there has been a national increase in total recorded crime (excluding fraud and computer misuse) for England and Wales of 34% from 2011/12 (3,903,581) to 2018/19 (5,257,081), compared to a 24.9% increase in total recorded crime experienced in Warwickshire over the same period, from 2011/12 (33,807) to 2018/19 (42,212). Warwickshire recorded crime levels remain significantly below the national average.
- 7.2 Since part-night lighting was implemented in 2012/13, WCC has undertaken a number of analytical exercises to understand whether there is an impact on crime during the hours the lighting is off. Reports were considered by Overview and Scrutiny in November 2013, July 2014 and September 2015 and there have been additional pieces of work since then looking at specific areas of the County. All of these exercises have concluded that there is no evidence to support a link between the WCC Lighting Policy and rates of crime. Similar exercises have been undertaken by other local authorities and have drawn the same conclusion. A national research project in 2015 called LANTERNS (Local Authority Collaborators National Evaluation of Reduced Night-time Streetlight) concluded that there is no evidence that reduced street lighting is associated with increases in either traffic collisions or crime.
- 7.3 **Update - Essex Police and Crime Commissioner (PCC) commissioned a report in November 2017 to understand the impact of Part Night lighting (PNL) on crime, anti-social behaviour (ASB) and the number of killed and seriously injured (KSI) road traffic collisions (RTCs) in Essex following concerns and representation to the PCC from members of the public. They found there was no evidence of a relationship between PNL and levels of crime, ASB or KSIs in areas where PNL was adopted, compared with control areas which did not have PNL.**
- 7.4 **Update - In April 2018 Lincolnshire County Council's scrutiny committee published the results of their review on the impact of the Council's Part Night Street Lighting (PNL) Policy. Key findings included**
- Overall crime was up by 4% in Lincolnshire compared to 11% nationally.
 - There was no noticeable change in the number of overnight burglary, vehicle or personal robbery offences.
 - The number of reported criminal damage offences increased, although it could not be concluded that street lighting had impacted on the levels.

7.5 Recorded crime levels in Warwickshire have increased year on year since 2015/16 as detailed in the chart below. The increase is mirrored by all forces across England and Wales.



This increase is not attributed to part-night lighting but can be explained in part by a significant change in how the Police record crime which came into effect around that time. The change in crime recording practice has made more recent analytical pieces of work on this topic difficult and unreliable as we can no longer make a like for like comparison with the years before part-night street lighting came into effect. Briefing notes provided by the Chief Constable for the last three years have provided information on why levels have continued to increase. Warwickshire Police advise that while the levels of recorded crime have increased, the actual levels of day-to-day policing have remained largely the same during this period.

8.0 Conclusions

- 8.1 There is an additional ongoing cost of £535k to reverse part night lighting for which there is currently no budget provision.
- 8.2 The unit rate cost of electricity for lighting has, in recent years, increased on average by 6.9% per annum. This means that, although LED lanterns are being deployed, an amount significantly more than £535k is likely to be required in coming years to accommodate increased usage and electricity costs.
- 8.3 As WCC currently purchase Pure Green electricity the reversal of the part-night lighting policy would not contribute additional emissions. However, a policy reversal would have an effect of reducing the amount of Pure Green electricity available for use nationally. This would be contra to the national agenda on tackling the Climate Emergency.

- 8.4 WCC's street lighting central management system enables the street lighting team to switch lights on immediately in localised areas whilst the Police are dealing with an incident, and when requested. This is also the case when there are extreme weather events and over the Christmas and New Year period.
- 8.5 Analysis of data shows that there has not been any statistically significant change in reported Road Traffic Injury Incidents since part-night lighting was implemented.
- 8.6 Analysis of national and local data shows that crime levels have risen more nationally (34.7%) from a year prior to Warwickshire implementing part-night lighting compared to 2018/19, than they did over the same period in Warwickshire (24.9%).
- 8.7 Neither Warwickshire, Essex or Lincolnshire, all whom have implemented part-night lighting, have any evidence linking part-night lighting to the rise in crime levels experienced locally and nationally. The rise in crime levels have all been documented in previous reports from Warwickshire Police and include national changes to crime data recording and the changing nature and reporting of crime.

Background papers

1. Street Lighting Review, Communities Overview and Scrutiny Committee 16th January 2019.

	Name	Contact Information
Report Author	Mike Cunningham – Street Lighting Cheryl Bridges – Community Safety	mikecunningham@warwickshire.gov.uk cherylbridges@warwickshire.gov.uk
Assistant Director	Scott Tompkins	scotttompkins@warwickshire.gov.uk
Strategic Director	Mark Ryder	markryder@warwickshire.gov.uk
Portfolio Holder	Cllr Jeff Clarke	jeffclarke@warwickshire.gov.uk