

Wiltshire Council

Environment Select Committee

27 October 2015

Subject: Street Lighting Changes

Cabinet Member: Cllr Philip Whitehead – Highways and Transport

Key Decision: No

Purpose of Report

1. To update members on progress made with regard to reducing energy costs and the carbon footprint of the Council's street lighting.

Relevance to the Council's Business Plan

2. The Council's Highways and Streetscene contract helps meet the priorities of the Council's Business Plan, including:
 - Outcome 2 – People in Wiltshire work together to solve problems locally and participate in decisions that affect them
 - Outcome 6 – People are as protected from harm as possible and feel safe

Background

3. The Council has over 50,000 street lights and illuminated signs. Energy costs do vary, and although they may fall in the short term, they are likely to continue to rise in the longer term. The energy cost for street lighting is anticipated to be almost £1.2 million for this year, and with current budget restrictions these costs are becoming unaffordable. The Council's street lighting energy accounts for 12% of the Council's carbon footprint producing.
4. The Council made a start in reducing its energy consumption in connection with street lighting in 2011, with over 1,300 units being converted to part night lighting following community based projects. There was also a Salix funded invest to save scheme which converted the Council's illuminated bollards to low energy units.
5. Proposals to introduce part night lighting with about half the lights being off between midnight and 5.30am were developed following the success of the earlier scheme. Lighting, where there are CCTV systems, in town centres, and in areas where crime is a problem, would remain on and at normal lighting levels.
6. The proposed changes to street lighting were consulted on in 2012, following consideration by the Environment Select Committee on 3 May 2012 and Cabinet on 24 May 2012. The decision to proceed was taken by Cabinet in December 2012.

Main Considerations for the Council

7. The scheme was initially introduced in Trowbridge in July 2014. The scheme was closely monitored with liaison with the Area Board and local police. Where issues in connection with safety, crime or anti-social behaviour were identified, changes were made to the lighting. This included turning some lights off as well as changing some to all night operation.
8. The principles applied to the changes were that lights would be left on in the following cases:
 - Main traffic routes with substantial pedestrian movements, or potential conflict areas such as junctions and roundabouts.
 - Units near to minor residential road junctions.
 - Areas with above average night time pedestrian activity, such as town centres or near 24 hour or early morning facilities.
 - Areas with 24 hour operational emergency services sites such as hospitals and fire stations.
 - Street lights near uncontrolled pedestrian crossings (zebra crossings or informal crossings) and within subways, stairways and ramps, enclosed footpaths and alleyways.
 - Street lights close to potential hazards on the highway (such as roundabouts, central carriageway islands, build-outs and speed-humps).
9. The review of the Trowbridge scheme indicated that creating dark areas in urban residential areas did cause complaints. In the previous rural schemes this had not been an issue, and there had been complaints about lights being left on. Changes were made at a number of locations to ensure a minimum level of lighting.
10. Following the review of the Trowbridge scheme some changes were made to the proposals for the other towns. The scheme was subsequently implemented this year in Amesbury, Bradford on Avon, Calne, Chippenham, Corsham, Devizes, Malmesbury, Marlborough, Melksham, Salisbury, Warminster, Westbury and Royal Wootton Bassett.
11. Information on the scheme and a list of frequently asked questions is available on the Council website at:

<http://www.wiltshire.gov.uk/parkingtransportandstreets/roadshighwaysstreetcare/roadsandtraffic/streetlights.htm>
12. There are about 31,000 street lights in the urban areas. 11,395 lights were converted to part night operation and 4,849 of the more modern units were converted to dim for part of the night. There were 1,053 where dimming and part night operation was introduced.
13. There were a total of 445 queries recorded from the public regarding lighting operation, many of which were reports of lights not working, which had in fact been converted to operate for part of the night. There have been 183 requests for changes to the part night operation of lights, with 85 of those being in connection with the original Trowbridge implementation.

14. A total of 102 units have been changed in response to requests so far. These changes were mainly in connection with safety issues, potential anti-social behaviour or issues at particular locations. It has not been possible to meet every request as it is important that the required savings are met.
15. There are clearly concerns about fear of crime, particularly in the urban areas. The scheme has taken this into account by not changing lighting in alleyways and similar areas, and there has been a programme of upgrading lighting in those vulnerable locations.
16. There was a fatality on the A361 in Trowbridge in September 2014 on a section of road where part night lighting was introduced in 2011. The Coroner's report did not identify the lighting as being a cause of the incident. However, this was not reflected in press reports at the time.
17. Improving technology has meant that modern lighting is more effective and energy efficient. New developments have LED or other energy efficient units. Unfortunately, much of Wiltshire's lighting stock is old and is not suitable for dimming and installation of LED units.
18. Considerable investment would be needed to improve the street lighting stock, especially with regard to life expired lighting columns. A recent bid for DfT challenge funding for £7 million to upgrade older lighting units was unsuccessful, and the condition of street lighting is a concern.
19. The cost of LED lighting has been reducing, and the situation is being monitored on a continual basis to determine whether capital investment can be justified by future savings in operating costs within the lifetime of the units. When a robust business case can be justified a funding bid will be prepared.

Safeguarding Implications

20. None.

Public Health Implications

21. A recent study by London School of Hygiene and Tropical Medicine into the effects of part night lighting, which Wiltshire provided information for, concluded that there was no evidence that reduced street lighting is associated with increases in road traffic collisions or crime.
22. The operation of the scheme is being monitored and changes are being made to the lighting where potential safety issues are identified.

Procurement Implications

23. None at this stage

Equalities Impact of the Proposal

24. A reduction in street lighting, especially in urban areas, can have equality and diversity implications. Fear of crime is a serious consideration even in a safe county like Wiltshire, and walking along streets with unlit areas may inhibit some members of the community from walking at night or early in the morning, or result in parents refusing to let children walk to school. The current scheme only affects lighting between midnight and 5.30am.
25. In areas where there are higher than average crime rates, or where anti-social behaviour is a problem, reducing street lighting may be perceived by many to be increasing the danger to the public. The operation of the changes to the street lighting is being monitored and changes are being made where particular safety issues are identified.

Environment and Climate Change Considerations

26. Carbon emissions associated with street lighting account for 12% of the Council's overall footprint. Street lighting has a key part to play in reducing the Council's energy consumption, and a number of part night lighting schemes have already been installed by this Council successfully.
27. The implementation of the current scheme to further reduce energy consumption is helping towards the Council's carbon reduction targets. It is estimated that the current scheme is reducing CO₂ associated with street lighting from 8,365 TCO₂ to 5,920 TCO₂.
28. The introduction of new energy efficient units, including LED lighting is also helping to reduce energy costs and the Council's carbon footprint. However, it should be noted that with the large number of lighting units and the poor condition of many lighting columns the cost of upgrading all the units would be considerable.

Risk Assessment

29. The identified cost savings for the scheme are based on current energy prices. These can vary in the short term, but longer term price increases are likely. Taking measures to reduce energy consumption for street lighting now will reduce the risk of future energy costs having an adverse impact on budgets in future, with consequent implications for Council services.
30. The street lighting currently uses energy throughout the night, when demand is low. The introduction of energy saving measures, which reduce off-peak energy demand, may not deliver the full value of expected savings if energy suppliers increase their pricing mechanisms to allow for the reduced consumption from street lighting during off-peak hours.
31. There is a risk of adverse publicity and comment in connection with changes to street lighting. The fear of crime and concerns about road safety should not be underestimated.

32. A major concern about the Council's street lighting stock is the age of much of the equipment. Columns are at risk of corrosion and many, both steel and concrete, columns are life expired. A recent bid was made for £7 million of funding from the DfT Challenge funding to reduce this problem, but the bid was unsuccessful. Monitoring of the columns is undertaken, but the risk of a column failure and consequent damage or injury does remain.

Financial Implications

33. The street lighting energy budget has been reduced by £0.710 million since 2013/14 as a result of saving proposals which focused on part night lighting initiatives and energy reduction schemes.
34. The current schemes have delivered an element of the savings, but there is a current forecast spend of £1.170 million against a £0.887 million budget in 2015/16, leaving a pressure of £0.283 million (the forecast spend of £1.170 million represents a reduction of £0.387 million against 2014/15 spend indicating that savings are being achieved, but not to the level of assumptions built into the budget setting process). This pressure is being managed in 2015/16 through 'one off' remedial actions, but will present a future pressure unless actions are taken, i.e. extension of saving schemes or compensating factors from elsewhere in the highways budgets.
35. The street lighting energy costs remain a concern. New developments increase the number of lighting units, and even though they are more efficient the overall consumption will continue to increase. The number of new lights adopted each year varies between 300 and 1,300 depending on the rate of development, which represents an annual increase of between 0.6% and 2.6%.

Legal Implications

36. There is no legal requirement for the Council to provide street lighting, but where lighting is provided there is a responsibility to keep it in safe condition.
37. There is no requirement for the highway authority to provide street lighting on roads, but it is often provided at major junctions and locations where there may be hazards. Street lighting can play a part in improving road safety, and the current proposals will leave lights on at the identified high risk areas. There may still be a risk of accidents on unlit sections of road, but it is unlikely that legal action could be taken against the Council for not providing street lighting.

Options Considered

38. A number of options were considered when the matter was considered by Cabinet in December 2012, when it was concluded that the introduction of a Central Management System to enable better control of the lighting, and the introduction of part night lighting, offered good cost savings and carbon reductions, but without significant adverse impacts on the public.
39. Other options such as turning off street lighting permanently would have had a greater impact on the public, and be likely to create adverse public reactions with increased fear of crime and concerns about road safety. The introduction of new energy efficient units across the network would reduce energy costs, but would require significant capital investment and was not considered to be feasible with current budget limitations.

Conclusions

40. The part night lighting scheme has been successfully introduced in the towns across Wiltshire, with 11,395 units converted to operate for part of the night, and 4,849 dimming. Where issues in connection with safety, crime or anti-social behaviour were identified changes were made to the lighting. This included turning some lights off as well as changing some to all night operation.
41. The number of requests for changes since the introduction of the new lighting timings has been small (445 queries) compared to the large number of units converted to operate for part of the night (11,395 units).
42. The part night scheme has been successful in reducing energy consumption with a reduction of almost 20% between August 2013 and August 2015. Since the further units have been converted, and the scheme is on course to deliver the anticipated savings of £300,000 annually. However, it should be noted that energy costs are likely to rise in the future and new developments introduce additional street lighting.
43. The current part night lighting scheme is expected to reduce the Council's carbon footprint. It is anticipated that CO₂ will reduce from 8,365 TCO₂ before the scheme to 5,920 TCO₂ with the current scheme operating.

Recommendation

44. To note the update and provide comment and guidance as appropriate.

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The following unpublished documents have been relied on in the preparation of this Report:

None

Appendices:

None