

HAMPSHIRE COUNTY COUNCIL

Decision Report

Decision Maker:	Executive Member – Environment and Transport
Date:	6 March 2012
Title:	Street Lighting Dimming Policy
Reference:	3754
Report From:	Director of Economy, Transport and Environment

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1. Executive Summary

1.1. The County Council commenced its Street Lighting Private Finance Initiative (PFI) in April 2010. Currently, the PFI is 22 months into a 5 year Core Investment Period rolling out the installation of new lighting columns and lanterns across the County. There are now significant numbers of lighting units installed in various communities and there is potential for the County to make environmental savings by changing the current dimming policy.

1.2. This paper seeks to

- set out the background to the project;
- consider the environmental and finance impacts to the County Council; and
- recommend a new dimming policy for the County Council.

2. Background Information

2.1. The Street Lighting PFI will replace a total of approximately 145,000 lighting units across Hampshire in its 5 year core investment period. The replacement programme is on schedule to be completed in 2015 and has currently replaced 26,000 units in various locations across the County. This includes Eastleigh, Hedge End, Gosport, Basingstoke, Rushmoor and Winchester.

2.2. The new lanterns are, through a Remote Monitoring System, able to be dimmed to provide appropriate illumination levels and hence provide energy and carbon savings to the County Council.

2.3. The original objectives of the PFI were;

- improved /appropriate lighting levels;

- improved road safety;
- crime reduction;
- maximise energy efficiency;
- improved maintenance standards; and
- improved structural and electrical integrity.

3. Contextual information

- 3.1 Currently the dimming policy adopted by the County Council and contained as part of the PFI contract allows for 25% dimming between the hours of midnight and 5am, with the remaining lighting periods being at 100% illumination. This dimming regime is being rolled out in parallel with the installation of the new units.
- 3.2 It should be noted that on the sites where new lanterns were erected within the first roll out of new lanterns, there have been complaints that the new 'white' lights were considered to be too bright and far exceeded the illumination levels previously afforded by the orange 'sodium' lighting.
- 3.3 A demonstration of the capabilities of the remote monitoring system, being installed as part of the PFI, was presented to the Leader of the County Council and the Executive Member for Environment and Transport in the Autumn of 2011. The purpose of this was to demonstrate the flexibility of the remote monitoring system and to consider optimum lighting levels that could be achieved, given the pressures on further reducing energy consumption and carbon emissions, whilst still retaining a safe night time environment for the travelling public.
- 3.4 Trials on site with varying illumination levels of the 'white' light demonstrated that dimming lights by 25% displayed no discernable change to the perception of the lighting levels when compared to the previous 'orange' sodium light. Good advanced visibility and facial recognition of pedestrians under the reduced illumination was retained.
- 3.5 With 26,000 new lighting units erected there are now sufficient numbers to look at the opportunity to gain further energy and carbon savings for the County Council.
- 3.6 At the commencement of the PFI contract in April 2010 energy consumption for street lighting across the County was 49m kW/hrs, with carbon emissions 26,000 metric tonnes.
- 3.7 By dimming the lights by 25% between sunset and midnight, then a further 25% between midnight and 5am, rising back to 25% between 5am and

sunrise, it will allow additional energy savings to be made whilst retaining a safe night time illumination level for the travelling public.

- 3.8 This revised dimming regime, at the end of the Core Investment Period in 2015, is forecast to reduce energy consumption from 49m kW/hrs to 36mkW/hrs (savings of approximately 13m kW/hrs/ year) and carbon emissions reduced from 26,000 to 19,000 metric tonnes of CO2.
- 3.9 At present this dimming regime is applicable to all street lighting except those in town and city centres where the light source being used in the PFI will only enable us to drop to 35% maximum dimming between midnight and 5am.
- 3.10 Importantly, the flexibility of the remote monitoring system will enable light levels to be adjusted, where necessary, for example in locations where crime, or fear of crime, is considered to be of concern.

4. Finance

- 4.1. On current energy contract rates the proposed dimming regime change equates to £1.3 million saving per annum for the remainder of the contract (on completion of the core investment period) subject to fluctuations in wholesale energy costs.

5. Future Direction

- 5.1. The original objectives of the Street Lighting PFI can be adhered to by adopting a new policy for dimming. The amended policy should reflect a 25% dimming of lighting units between sunset and midnight, a further 25% between midnight and 5am, rising back to 25% between 5am and sunrise.

6. Recommendation

- 6.1. That the following street lighting dimming policy be adopted on an on-going trial basis for the PFI Core investment period up to April 2015;
 - a) Lighting Illumination levels following installation of new lanterns are;
 - 25% dimming between sunset to midnight;
 - a further 25% dimming between midnight and 05.00hrs; and
 - 25% dimming between 05.00hrs and sunrise.
 - b) That provision is made for limited departures from this general policy, in exceptional circumstances, for example, areas of high crime where greater levels of illumination may be provided, .

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CORPORATE OR LEGAL INFORMATION:**Links to the Corporate Strategy**

Hampshire safer and more secure for all:	yes
Corporate Improvement plan link number (if appropriate):	
Maximising well-being:	yes
Corporate Improvement plan link number (if appropriate):	
Enhancing our quality of place:	yes
Corporate Improvement plan link number (if appropriate):	

Section 100 D - Local Government Act 1972 - background documents

The following documents discuss facts or matters on which this report, or an important part of it, is based and have been relied upon to a material extent in the preparation of this report. (NB: the list excludes published works and any documents which disclose exempt or confidential information as defined in the Act.)

DocumentLocation

None

IMPACT ASSESSMENTS:

1. Equalities Impact Assessment:

1.1. No adverse effect on Equalities.

2. Impact on Crime and Disorder:

2.1. The proposed dimming trial has no impact on crime and disorder.

3. Climate Change:

a) How does what is being proposed impact on our carbon footprint / energy consumption?

The trial dimming strategy potentially reduces the energy consumption and therefore the carbon footprint of the County Council.

b) How does what is being proposed consider the need to adapt to climate change, and be resilient to its longer term impacts?

This proposal is adapting to climate change by reducing the amount of CO₂ used in energy consumption.