

**Communities Overview & Scrutiny Committee
19 September 2012**

**Report of the Street Lighting Energy Savings
Task and Finish Group**

Recommendation

To consider the Task and Finish Group report and forward the recommendations to Cabinet for approval, with any necessary amendments or additions.

	Name	Contact Information
Report Author	Dave Abbott	daveabbott@warwickshire.gov.uk
Chair of the Task and Finish Group	Councillor Jim Foster	cllrfoster@warwickshire.gov.uk



Street Lighting Energy Savings FINAL REPORT

CONTENTS	PAGE
1.0 Introduction	
1.1 Executive Summary	3
1.2 Members and Contributors	3
1.3 Evidence	4
1.4 Dates and Timescales	5
2.0 Overview	
2.1 Background	6
2.2 Rationale	7
2.3 Objectives	7
3.0 History of the Review	8
3.1 Technology	8
3.2 Feedback from local authorities	13
3.3 The impact of street lighting	14
3.4 Public engagement	16
4.0 Recommendations	19
5.0 Financial and Legal Implications	21
Appendix A – Scrutiny Action Plan	
Appendix B – Scrutiny Review Outline	
Appendix C – Cost Estimates for Part-night Lighting	
Appendix D – Feedback from Local Authorities	
Appendix E – WCC part-night lighting public engagement document pack	
Appendix F – Warwickshire Observatory, Part-night operation consultation responses	

1.0 Introduction

1.1 Executive Summary

- 1.1.1 Warwickshire County Council (WCC) made a commitment as part of the 2011/12 budget, set at a meeting of Full Council on 15 February 2011, to achieve savings of £500,000 per year from the street lighting energy budget starting in 2013/14. The method selected by Officers to achieve these savings was to utilise a Central Management System to operate 80% (39,000) of WCC owned lights on a part-night basis – which means that they will be switched off between midnight and 5.30am.
- 1.1.2 A public engagement process took place from May to the end of July to allow residents to give their views on the exemption criteria that was used to determine which lights would remain lit all night.
- 1.1.3 Due to concerns from Councillors and the County-wide impact of part-night lighting, the Communities Overview and Scrutiny Committee proposed that a Task and Finish Group was set up to give members the opportunity to scrutinise the potential impact of the scheme on crime and road safety, consider the technology chosen to facilitate part-night lighting and alternate options, and to review the responses to the public engagement exercise.
- 1.1.4 Following the completion of the review, the Task and Finish Group identified five recommendations which aim to ensure the safety of residents through extensive monitoring of crime and road safety figures, a consistent approach to the service across the County, and better communication with the public.

1.2 Members and Contributors

- 1.2.1 The members of the Task and Finish Group were Councillors Martyn Ashford, Richard Chattaway, Jose Compton, Jim Foster (Chair of the Task and Finish Group), David Johnston, Barry Longden, Carolyn Robbins, Martin Shaw, and Ray Sweet.

During the course of the review, the Task and Finish group met with Officers of WCC's Transport & Highways department, including Street Lighting and County Highways Engineers. Members also liaised with Street Lighting Engineers from a number of Local Authorities (see **Appendix D**). Members were supported by Officers from Democratic Services.

1.3 Evidence Used

- 1.3.1 In order to achieve an understanding of the review topic, the Task and Finish Group considered both primary and secondary evidence from a range of sources. This included:
- a. WCC public engagement documents
 - b. Questions to the Portfolio Holder for Transport and Highways
 - c. WCC Briefing Paper - 'Expensive Energy - it's a people thing'
 - d. Correspondence with eight local authorities who have implemented part-night lighting (Appendix D)
 - e. Warwickshire Observatory – Street Lighting Part-Night Operation – Consultation Responses Report
 - f. Home Office Research Study 251 - Effects of improved street lighting on crime: a systematic review (2002), David P. Farrington and Brandon C. Welsh
 - g. Street Lighting and Crime: The Cardiff Project (1991), Professor David Herbert and Dr. Laurence Moore
 - h. Avon and Somerset Police Crime figures
 - i. Street Lighting And Crime: Diffusion Of Benefits In The Stoke-on-Trent Project (1999), Kate Painter and David P. Farrington
 - j. The Influence of Street Lighting on Crime and Fear of Crime (1991), Stephen Atkins, Sohail Husain and Angele Storey
 - k. Investigating whether a crime reduction measure works (2006), Paul Marchant
 - l. Milton Keynes Council, Grid Road Street Lighting Cabinet Report (25 July 2012)

1.4 Dates and Timescales

1.4.1 Membership was reviewed and finalised at the 9 February 2012 meeting of Communities Overview and Scrutiny Committee.

1.4.2 Scrutiny Review Work Programme:

8 March 2012 – Overview of the project, presentations from street lighting engineers, dimming vs part-night lighting, setting the work programme

22 March 2012 – Presentation on the Telensa central management system, consideration of the public engagement documentation

12 April 2012 - Engagement through the Community Forums, Full Council briefing, community safety

15 May 2012 (Full Council) – Street lighting briefing following Full Council

7 June 2012 – Consideration of responses from other local authorities that have implemented part-night lighting

8 August 2012 – Consideration of responses to the public engagement

The Task and Finish Group will be presented to the Communities Overview and Scrutiny Committee on 19 September 2012.

2.0 Overview

2.1 Background

- 2.1.1 WCC currently operates all-night street lighting throughout the County, this costs approximately £2.2 million in electricity charges per year.
- 2.1.2 There is no statutory requirement on Local Authorities in the UK to light the highway. The Highways Act empowers Local Authorities to light roads but does not place a duty on them to do so. However, WCC does have a duty of care to road users and has an obligation to light permanent obstructions on the highway, such as speed humps and central refuges. These statutory obligations form part of the exemption criteria.
- 2.1.3 As part of the County Council savings plan, street lighting has been set a £500,000 savings target from the annual electricity budget starting from the financial year 2013/14. To achieve this saving, part-night lighting will be implemented throughout the County, requiring approximately 80% (39,000) of the street lights owned and maintained by WCC to be switched off between midnight and 5.30am.
- 2.1.4 The Telensa PLANet Central Management System was identified to operate part-night lighting, and a budget of £1.64 million was allocated over financial years 2011/12 and 2012/13 for purchase and installation of the system.¹
- 2.1.5 The Central Management System operates by communicating with 34 base stations placed strategically around the County, which then in turn communicate with individual lighting columns. The base stations are mounted on standard lamp columns and are fitted with an uninterrupted power supply to ensure continuous operation. Upgrading existing street lighting stock to the new system simply requires replacement of the current photocell controls (used to determine when lights switch on and off) with the new radio receiver controls (that communicate with the base stations). The radio receiver controls are designed to use the same fitting as the photocells so they can easily be fitted in place during routine maintenance.
- 2.1.6 Each radio control automatically scans for the base station with the strongest signal if they lose connection, ensuring they maintain communication with the central management system at all times. The radio receivers can send information back to the central management system about the status of the lamps and determine if they are faulty or not by monitoring the power supply to the column; if the lamp is drawing too much electricity then the system will alert engineers that the lamp might need replacing.
- 2.1.7 The Central Management System allows all street lights in Warwickshire to be controlled and monitored from any internet enabled computer in real time.²

¹ The Telensa system is industry standard equipment used by street lighting professionals in the UK, Europe and North America. More information can be found at www.telensa.com.

The flexibility and speed provided by the system is a powerful safeguard; for example, the Police can call one of WCC's engineers in the middle of the night and request that road lights on a particular street are switched on because there has been an incident.³ The engineer can access the system via a laptop or their own home computer and turn on the lights while the Police work. Lights can also be grouped so that sections of lighting can be switched back on with ease; for example, if the Police were conducting late-night mobile speed camera operations.

2.1.8 As the project will affect all residents of Warwickshire it was proposed that the local authority engaged with the public about the criteria that was used to identify the 20% of lights which are to remain lit all night. No further public engagement has been planned.

2.1.9 Parish, Town, District and Borough Councils are responsible for operating various street lights in their areas and those lights will not be affected by WCC's changes.

2.2 Rationale

2.2.1 The purpose of the Task and Finish Group was to give Councillors the opportunity to scrutinise both the impact of part-night lighting on local communities, and the public engagement work on the criteria used to identify which lights are to remain lit all night.

2.3 Objectives

2.3.1 The objectives of the review were:

- To ensure that the proposed part-night street lighting scheme will achieve the necessary savings required by the 2011-12 budget;
- To ensure the scheme would not have a significant impact on communities, particularly with regards to road safety, crime and anti-social behaviour, and;
- To ensure that the public engagement process was fit for purpose and gave residents a real opportunity to influence the proposals.

2.3.2 The Scrutiny Review Outline which was agreed by the Overview and Scrutiny Board is attached as **Appendix B**.

² The central servers for the central management system are located offsite in Cambridge and aren't dependent on the WCCs servers or IT systems.

³ Street lighting engineers operate a duty rota so that someone is on call 24/7 in the event of an emergency.

3.0 History of the Review

- 3.0.1 During the review the Task and Finish Group considered three distinct areas related to part-night lighting:
1. The technology used for part-night lighting and the alternative options that were considered;
 2. The impact on crime and road safety; and
 3. The criteria used to determine which lights remain on all night and the public engagement related to the criteria.
- 3.0.2 Each section has supporting information which are attached as Appendices to the report.

3.1 Technology

- 3.1.1 When the Task and Finish Group was commissioned on 25 January 2012, the Street Lighting team had already approved the decision to use a centrally managed part-night lighting system. Despite this, members thought it was important to review the alternative technology options that had been considered to ensure the chosen option would deliver the necessary savings and be a good investment for the future.
- 3.1.2 When faced with making significant energy savings, the most common alternatives to part-night lighting are dimming and LED technology. A less common approach, albeit one that some local authorities have taken, is to leave lights on all night but switch every other one off. Members questioned street lighting engineers about each of these options and requested briefing notes and financial breakdowns for the two main options. The key factors that members considered were safety, capital costs, energy savings, and return on investment. The findings for each of the options are summarised below.
- 3.1.3 **Alternatives to part-night lighting – Dimming**
- 3.1.4 In 2007 WCC undertook a dimming trial to test the technical suitability of the technology and gauge reactions from the public. The equipment that was trialled was found to be incompatible with older lanterns and resulted in a number of failures.
- 3.1.5 A further trial was undertaken in 2009 using a central management system (CMS) that included dimming technology. Whilst the performance of the CMS was found to be successful, there were difficulties in retrofitting dimming equipment into the Council's ageing lanterns. During both trials the Council received no comments from residents.

- 3.1.6 Of WCC’s total lighting stock of 49,000 street lights, approximately 18,000 cannot be dimmed due to the age and type of equipment. To change this equipment to a type which can be dimmed would cost in the order of £9 million. Only around 4,100 units (8%) of the existing lighting stock could be upgraded to enable dimming easily and relatively cheaply. To fit dimming equipment to the remaining 31,000 street lights would cost in the order of £2.5 million.
- 3.1.7 The estimated cost of upgrading the 4,100 lanterns would be approximately £150.00 each. This would lead to an approximate energy saving of just over £44,000 per annum from dimming, giving a return on investment of just over 14 years. A breakdown of the savings and costs of a dimming scheme are shown below in **Table 1**.

Table 1 - Dimming Conversion Costs/Savings⁴

Conversion Cost ⁵	£626,400.00
Energy Saving per Annum ⁶	£44,170.56
Return On Investment	14 Years

- 3.1.8 Having assessed the findings of the trials and determined the level of investment required to implement the dimming option, Officers decided that the level of savings was too low.
- 3.1.9 Members agreed with the Officer assessment and noted that dimming could not be considered as an option in isolation if it could not deliver the required savings.
- 3.1.10 **Alternatives to part-night lighting - LED Lighting**
- 3.1.11 LED lighting technology is unquestionably more energy efficient and longer lasting than the traditional discharge lighting that form the majority of Warwickshire street lighting stock. LED lights also have a considerably longer life than current lamps (anticipated to be in excess of ten years for LED compared with around six years for discharge lamps).
- 3.1.12 Using LED lighting would reduce both energy and maintenance costs; however, the capital outlay to change the County’s lighting to LED technology would cost in the region of £29 million with an estimated annual saving of £1.4 million. This would give a return on investment of approximately 23 years. A breakdown of the savings and costs of an LED scheme are shown below in **Table 2**.

⁴ Cost of energy is based on current rate of 9.654p kWh.

⁵ Conversion rate is based on estimated cost of £150.00 - including replacement gear and labour. Additional costs for traffic management are not included.

⁶ Dimming energy based on lights being dimmed between 19.00 and 06.00 to 50% light output (63% power). This may not be possible in all locations due to columns being located within conflict areas (Roundabouts, traffic signal junctions) which are lit to a required standard and currently dimming is not recommended.

Table 2 - LED Installation Estimated Costing

	Quantity	Cost per unit ⁷	Total installation ⁸	Energy per unit per year ⁹	Total Energy per year
Residential Road	32,000	£474.00	£15,168,000.00	£11.66	£373,120.00
Estate Road	10,000	£684.00	£6,840,000.00	£26.07	£260,700.00
Main Road	7,500	£924.00	£6,930,000.00	£38.96	£292,200.00
Total	49,500		£28,938,000.00		£926,020.00

Current Energy	£2,200,000.00
New Energy ¹⁰	£926,020.00
Annual Energy Saving	£1,273,980.00
Estimated Annual Maintenance Saving ¹¹	£100,000.00
Total Estimated Annual Saving	£1,373,980.00
Return on Investment	23 years

3.1.13 WCC has been using LED lighting where engineers feel it is the most appropriate solution, for example, in Belisha Beacons, sign lights, and bollards. WCC has also started to utilise LED road lighting lanterns; LED lamps are currently being used to illuminate Fishers Walk, Atherstone and on side roads at Bedworth, Melrose Avenue, and Compton Close in Leamington Spa, as well as sites in Rugby and Kenilworth.

3.1.14 Where the capital cost of installation is to be met with external funding and subsequent maintenance is being passed to Warwickshire, for example new

⁷ Lantern cost is based on estimated rate from manufacturer of LED units.

⁸ The installation cost is for lantern replacement only. This does not include any traffic management costs or any units which may require complete replacement at an additional cost of approximately £1,000 each. It is estimated that 15% of units would require complete replacement which could add an estimated additional £8 million to the cost of the project, increasing the return on investment to approximately 27 years.

⁹ Cost of energy is based on current energy cost of 9.654p kWh.

¹⁰ Energy is based on best case scenario and all LED units being dimmed to 63% power (50% light output) between 19.00 and 06.00.

¹¹ The estimated annual maintenance saving based on not carrying out a bulk lamp change and clean. The reliability of units and potential cost of replacement parts is unknown. Electrical testing would need to be carried out on a 6 year cycle.

housing developments, our standard specification is dimmable LED equipment that is compatible with part night operation.¹²

- 3.1.15 LED technology is likely to be the standard for street lighting in 4 to 5 years but at the moment it is a relatively new and expensive technology and Officers felt the investment was too large when compared to the savings that would result. A number of authorities that have implemented LED lighting have had to enter into lengthy Private Finance Initiative contracts that would deny flexibility when cheaper, more efficient products come on to the market in the future.
- 3.1.16 The part-night lighting equipment and central management system currently being implemented is fully compatible with LED technology so it would be entirely possible for the Council to pursue an all-LED lighting scheme in the future.
- 3.1.17 Task and Finish Group members believed that while LED lighting was likely to play a big role in the future of street lighting, the level of investment required to facilitate it at this time would be too great to justify. However, members were encouraged that the chosen part-night Central Management System was compatible with LED technology and believed it would be a viable option in the future.
- 3.1.18 **Alternatives to part-night lighting - Switching off alternate lights**
- 3.1.19 Some authorities (e.g. Northamptonshire County Council) have chosen to keep street lights on all night but permanently switch off every other light, thereby maintaining all night street lighting (albeit at reduced levels) while still reducing energy costs.
- 3.1.20 WCC decided against this option for two reasons. Firstly, Officers advised members that it would not be possible to implement in Warwickshire without seriously compromising the safety of drivers due to the stroboscopic effect that is created when passing incorrectly spaced lights at speed.¹³ Secondly, the savings generated by the scheme would be significantly lower than the level of savings required by the budget. The option is also heavy on maintenance costs and inflexible.
- 3.1.21 Members believed that this option would only provide a short-term solution and the risks to road safety could not be justified.

¹² The first large scheme of this type is the new roundabout on the A3400 in Stratford outside Waitrose. WCC have also specified LED equipment on a number of new estates which will ultimately be adopted by WCC.

¹³ A relatively benign version of this effect can be seen when driving on a motorway at night illuminated by street lights, the wheels of passing cars can appear to be turning backwards.

3.1.22 **Part-night lighting**

3.1.23 Part-night lighting means that lights will switch on at dusk (as usual) but switch off between the hours of midnight and 5.30am. WCC has chosen to switch 80% (39,000) of its lights to part-night lighting in order to deliver savings of £500,000 per year from 2013/14 onwards.

3.1.24 To operate the lighting on a part-night basis, a central management system was identified and a budget of £1.64 million was allocated over financial years 2011/12 and 2012/13 for the purchase and installation of the system. To make Warwickshire's street lights compatible with the Central Management System all street lighting columns had to be fitted with radio receiver controls and 34 base stations were installed around the County.

3.1.25 The life expectancy of the lamps used at the moment is four to six years, equivalent to 16,000 to 24,000 hours 'burn time'. The lamps are replaced on a phased basis every four or six years (dependent on lamp type). The lanterns installed now are flat glass, which means that the light is directed straight downwards, minimising light pollution.

3.1.26 Detailed cost estimates for part-night lighting are attached as **Appendix C**.

3.1.27 Other key benefits of part-night lighting:

- a) Part-night lighting will save WCC more money the higher the energy costs are, making it a good solution for a future of increasing energy costs.¹⁴
- b) Operating part-night street lighting will reduce WCC's greenhouse gas emissions by approximately 3,000 tonnes per year, which equates to 5.77% of the 2050 national target.¹⁵
- c) The Carbon Reduction Commitment Energy Efficiency Scheme is a mandatory carbon emissions reporting and pricing scheme. Starting this year, organisations using more than 6,000MWh per year of electricity will have to buy allowances from Central Government on a yearly basis to cover their emissions. The price of allowances was set at £12 per tonne of carbon dioxide in the 2011 Budget. Officers estimate that part-night lighting could save WCC around £36,000 per year from future CRC charges.

3.1.28 Members noted that, despite the initial investment of £1.64 million, part-night lighting was a relatively low-cost option when compared with the investment needed for LED lighting, and had a relatively short return-on-investment period. The system was also fully compatible with WCC's existing lighting

¹⁴ WCC buys energy from ESPO in 12 month blocks. A new contract is due to begin on 1 October 2012 and the expectation is that energy costs will increase by approximately 10%.

¹⁵ WCC has a long term climate change target in line with the 2050 national target to, "contribute to meeting and exceeding the county target to reduce emissions of CO2 by 80% (baseline 2002/3 – 52,000 tonnes per year)." More information can be at the following link - Energy policy for Warwickshire County Council physical assets Jan 2011 (pdf, 316Kb)

stock and LED technology, giving flexibility to WCC when considering street lighting options in the future.

3.2 Feedback from other local authorities operating reduced lighting schemes

3.2.1 The Task and Finish Group contacted around 30 local authorities who had implemented energy saving reduction schemes to find out if they had consulted with the public, what the public response was, if there was any measurable impact on crime or road safety, if they were on track to make their projected savings, and whether there were any lessons learned or improvements that could have been made. Detailed responses were received from eight of those authorities and of those the two issues detailed below were highlighted as particularly relevant to Warwickshire.

3.2.2 Issue 1 – Crime and safeguards

3.2.3 Members were interested to find out if any Local Authorities had reported increases to the level of crime following implementation, and whether the safeguards that the Central Management System provided were effective in real world scenarios.

3.2.4 Suffolk County Council took a very similar approach to part-night lighting as WCC, even using the same Telensa Central Management System technology. Like WCC, they had been working closely with the Police and developed a similar system for ad-hoc illumination of street lights. The Street Lighting team took requests from the Police to switch lights on in specific areas for a limited period to allow Police Officers to carry out searches and other light-dependent operations. Suffolk reported that since implementation they had been contacted by the Police with these requests a handful of times and both the County Council and the Police force were very satisfied with the results of the arrangement.

3.2.5 None of the authorities contacted could provide reports of any measurable impact on crime or road safety at this stage. A number of authorities mentioned that reviews were scheduled to take place after 6 or 12 months of operation.

3.2.6 Issue 2 – A comprehensive communications strategy

3.2.7 An issue that was highlighted by the responses was the need for a comprehensive communications strategy to ensure members of the public were aware of the part-night lighting policy change and had an opportunity to give their views in advance of the switch-off date.

3.2.8 Northamptonshire County Council's Street Lighting team received a very high volume of requests for changes from members of the public following implementation of their reduced lighting scheme. To properly manage the

high volume of calls, the Council had to set up an in-house communications and review team.

- 3.2.9 Northamptonshire also highlighted the need to work more closely with the District and Borough Councils to ensure a consistent approach for local communities because members of the public did not understand why some lights were left all night while others were switched off.
- 3.2.10 Members confirmed with Officers that calls to WCC will be processed by the WCC call centre which has the capacity to deal with high call volumes. Call centre staff have been briefed about the part-night lighting changes and have been instructed to record details and forward them to the Street Lighting team for review against the agreed criteria.
- 3.2.11 Devon County Council also noted that they had received a high volume of calls following implementation of part-night lighting, with a significant number of people claiming they were not made aware that lights were going to be switched off. Devon highlighted the need for good communication with the public, and suggested that an information leaflet included with the annual Council Tax documents would have been a good solution to ensure as many people as possible were made aware of the upcoming changes.
- 3.2.12 Although the public engagement for street lighting has been and gone, the Task and Finish Group recommend that when looking to communicate with a County-wide audience in the future, WCC include relevant consultation and / or engagement documents and leaflets for the coming year with the annual Council Tax mailing or another appropriate County-wide publication.
- 3.2.13 The full set of questions and responses from the contacted authorities is attached as **Appendix D**.

3.3 The impact of street lighting on crime and road safety

- 3.3.1 The actual effect that street lighting has on crime and road safety is still a subject of serious debate.

3.3.2 Crime

- 3.3.3 The first authority to implement part-night lighting was Essex County Council and according to figures published on their website, crime levels have fallen, although fear of crime is still an issue.¹⁶ Other authorities, including Gloucestershire County Council have reported minor reductions in crime levels following the implementation of part-night lighting schemes. Although encouraging, the figures referenced above are taken from very small rural localities with total area crime figures in the low hundreds and therefore are not very representative.

¹⁶ It's worth noting that crime levels across the Country tend to fall slightly year-on-year so attributing that decrease to part-night lighting may not be appropriate.

- 3.3.4 At the time of writing, no local authority has released comprehensive figures for either crime or road accidents before and after the implementation of part-night lighting; however, a number of authorities that the Task and Finish Group contacted have committed to doing reviews in the next twelve months.
- 3.3.5 Nationally recognised papers are similarly inconclusive. The most widely referenced paper claiming that increasing street lighting reduces crime is called Home Office Research Study 251 (2002) and was written by two criminologists, Farrington and Welsh. The study was an important justification for Central Government policy at the time. However, Paul Marchant, a Statistician at Leeds Metropolitan University, makes the claim in his essay, ‘Shining a light on evidence-based policy: street lighting and crime’, that the use of statistical methods in the study lacked rigour and that the claims made in the paper were not properly supported by the data.
- 3.3.6 The paper, ‘The influence of street lighting on crime and fear of crime’ (1991), written by Stephen Atkins, Sohail Husain and Angele Storey, directly contradicts Home Office Research Study 251 by concluding that, “better street lighting has had little or no effect on crime.” However, they did find that improved street lighting “provided a measure of reassurance to some people.”
- 3.3.7 Road Safety**
- 3.3.8 Milton Keynes Council recently made national headlines after a decision to switch a significant number of their street lights back to all night operation following two major road accidents in darkened areas. It is important to note that, in terms of road safety, Milton Keynes is unique in that it has a US-style grid road system that allows cars to reach very high speeds and removing lights along certain sections meant that it was possible drivers would have seen a disorienting stroboscopic effect which may have contributed to the accident.
- 3.3.9 Street lights have also been switched back on at five of 46 part-night lighting locations in Buckinghamshire because of increases in the number of accidents at four of the five sites.¹⁷ Despite increases in the levels of accidents at a small number of sites, the average number of injury collisions across the County fell by 26%.
- 3.3.10 The majority of Local Authorities that responded to the Task and Finish Group’s questionnaire reported that part-night lighting had no measurable impact on road safety.
- 3.3.11 Evidence on both sides of the debate is far from conclusive but members were largely encouraged by the figures published so far, that show no significant increases in the levels of crime or road accidents following the operation of part-night lighting.

¹⁷ Three of the four sites where collisions increased were roundabouts which are covered by WCC’s exemption criteria.

- 3.3.12 WCC's Street Lighting team liaised with the Police, Ambulance, and Fire services, as well as WCC's own Road Safety and Community Safety teams. The criteria determining which lights would be left on throughout the night came out of those discussions.
- 3.3.13 Following advice from the Police, engineers have also liaised with District and Borough Councils to determine the locations of local authority operated CCTV cameras to ensure they remain fully lit throughout the night. The Police also requested that lighting was left on all night in specific 'Police priority areas'.
- 3.3.14 Working with the Police, WCC has developed a process for allowing lights to be quickly switched back on in cases of emergency. Police Officers will direct requests for lights to be switched on through the central Police Command Centre, the Centre will then call WCC's on-duty street lighting engineer and ask for a specific area to be illuminated. Lights can be controlled from the engineers home laptop so the time elapsed from the initial Police call to lights being illuminated on the ground should be very short. Ultimately the Police's Commanding Officer will be responsible for which requests are sent through to WCC engineers.
- 3.3.15 WCC's Street Lighting team will continue to work closely with the Police and its own internal Community Safety and Road Safety teams to monitor the situation following implementation and any significant changes to crime or road safety figures will be carefully investigated. To ensure any changes to the levels of crime or road safety are highlighted early, the Task and Finish Group recommend that Officers report review data to the Communities Overview and Scrutiny Committee and monitor the situation at other authorities who have switched street lights back on due to accidents and safety concerns.

3.4 Public engagement on the criteria used to determine which lights stay lit throughout the night

- 3.4.1 After consultation with the Police, Road Safety and Community Safety teams certain locations were identified by WCC's Street Lighting engineers where lighting would remain on all night. The final locations that formed the public exemption criteria were:
- 1) Where there are potential hazards on the highway such as roundabouts, traffic signal controlled junctions, central carriageway islands, traffic calming features, road humps etc.
 - 2) At formal pedestrian crossings (Zebra, Pelican, Puffin, Toucan, and Pegasus).
 - 3) Areas covered by permanent Local Authority/Police CCTV cameras.

- 4) Areas adjacent to elderly people care homes, sheltered accommodation complexes and Accident and Emergency departments.
- 5) Lighting adjacent to operational taxi ranks.
- 6) Lighting on public footpaths, alleyways and cycle paths which are located away from roads.

3.4.2 Members were satisfied that the exemption criteria covered the areas of most concern, particularly with regards to vulnerable people and areas of risk for drivers.

3.4.3 Full Council Briefing

3.4.4 The Task and Finish Group were disappointed that there was no briefing planned for Councillors on part-night lighting. To address this, Members requested a briefing following the Full Council meeting held on 15 May 2012. The purpose of the briefing was to inform members about the part-night street lighting scheme ahead of the summer round of Community Forums where the topic would inevitably be a major issue. Councillor Peter Butlin, Portfolio Holder for Transport and Highways, delivered the briefing and held a question and answer session.

3.4.5 Public Engagement

3.4.6 Public engagement was provided through the Community forums that ran from May to July 2012; each of the forums was provided with a manned exhibition stand, leaflets about part-night lighting, maps of each area, and paper versions of the online questionnaires to be filled in and returned. The senior officers who attend each of the Community Forum meetings were also briefed about part-night lighting and were available to answer questions.

3.4.7 The County Council's website had a dedicated part-night lighting page with all of the relevant information for members of the public, including FAQs, illustrated locality maps, and a link to the online questionnaire.¹⁸ Press releases coordinated through WCC's internal communications department were also sent out to local media establishments in the weeks preceding the Community Forums.

3.4.8 Responses to the Public Engagement

3.4.9 The Warwickshire Observatory produced a report analysing the responses from the public engagement exercise. A total of 310 respondents within the Warwickshire area took part in the survey.

3.4.10 Overall, survey participants declared that they strongly agreed (65%) with Warwickshire County Council's exemption criteria, due to cover from potential

¹⁸ www.warwickshire.gov.uk/partnightlighting

traffic hazard areas and public footpaths located away from roads to sheltered accommodation complexes and A&E departments.

- 3.4.11 Of those that suggested locations, the most common recommendation was to use crime and anti-social behaviour indicators as criteria for keeping the lighting system on all night, as issues such as burglaries, car thefts and house break-ins rank high on their priority lists. Roads with large amounts of traffic, sharp bends, narrow streets and road junctions were also highlighted as potential areas where street lights should remain on.
- 3.4.12 All of the specific issues highlighted by respondents have been investigated and have led to alterations based on the exemption criteria. There was an acknowledgement from the Street Lighting team that due to the scale and complexity of the network, there will need to be an on-going process of reviewing and tweaking the scheme.
- 3.4.13 The majority of the respondents who fundamentally disagreed with switching street lights off stated that this was due to the perceived increased risk of crime. To address this problem, the Task and Finish Group recommend that the WCC's Communications department work with Street Lighting Engineers to produce a media campaign with the aim of reducing the population's fear of crime around part-night street lighting.
- 3.4.14 The full report from Warwickshire Observatory and all of the responses from the public engagement exercise are attached as **Appendix F**.

4.0 Recommendations

R1. Regular monitoring to ensure the safety of people in Warwickshire

The WCC street lighting team will be continually reviewing data with the Police and WCC's Road and Community Safety teams to monitor the situation in localities before and after the implementation of part night street lighting.

Recommendation 1

The Task and Finish Group recommend that Officers present a report summarising review data to the Communities Overview and Scrutiny Committee at both 6 and 12 month periods following the initial implementation date.

In the event that there are statistically significant increases in either crime or road accidents following implementation, that data should be presented to the Communities Overview and Scrutiny Committee at the soonest possible opportunity.

R2. Monitor findings from other local authorities that operate part-night lighting

During the review it was noted that Milton Keynes Council, Northamptonshire County Council, and Buckinghamshire County Council had switched sections of part-night lighting back on following road safety incidents. Members believed it was important that Officers monitor these issues and ensure that any relevant lessons are learned and actions are taken to prevent similar incidents from happening in Warwickshire.

Recommendation 2

The Task and Finish Group recommend that Street Lighting Engineers monitor the situation at other authorities who have switched street lights back on in certain locations due to accidents and safety concerns.¹⁹

R3. A unified approach to street lighting

During the review members learnt that while District and Borough Councils were aware of the planned implementation of part-night lighting, they were not contacted about bringing the sections of the street lighting network that they control under the same scheme. This has meant that certain areas will have 'patches' or lines of street lights left on all night while the surrounding lights are switched off. Most members of the public do not distinguish between the various levels of Local Government and will be confused as to why there appears to be an inconsistent approach to part-night lighting in certain areas.

¹⁹ Specifically with reference to Milton Keynes Council, Northamptonshire County Council, and Buckinghamshire County Council

Recommendation 3

The Task and Finish Group recommend that Officers explore a consistent approach to street lighting across the County by encouraging District, Borough, and Town Councils to adopt the same scheme and offering our assistance in helping them set up the necessary systems.

R4. Communicating with the County

Recommendation 4

The Task and Finish Group recommend that when looking to communicate with a County-wide audience in the future, WCC include relevant consultation and / or engagement documents and leaflets for the coming year with the annual Council Tax mailing or another appropriate County-wide publication.

This approach would ensure mass coverage and, in the case of a consultation, a statistically useful set of responses.

R5. Addressing the fear of crime

The overwhelming response from the public engagement was negative and the majority of comments included references to a fear of crime, despite a lack of compelling evidence.

Recommendation 5

The Task and Finish Group recommend that the WCC's Communications department work with Street Lighting Engineers to produce a media campaign with the aim of reducing the population's fear of crime around part-night street lighting.

5.0 Financial and Legal Implications

No comments received.

Street Lighting Energy Savings - Scrutiny Action Plan

	Recommendation	PfH Comments	Cabinet Comments	Target Date for Action	Lead Officer	OSC Update	Progress Notes
R0	<i>Exact wording of the recommendation</i>	<i>Comments of the PfH from the informal meeting.</i>	<i>i.e. accepted, rejected and reasons why.</i>	<i>To be set by senior officer during informal meeting</i>	<i>To be assigned by senior officer during informal meeting</i>	<i>Date due for update to OSC</i>	<i>The Lead Officer to include progress updates on the implementation of the recommendation.</i>
R1	<p>The Task and Finish Group recommend that Officers present a report summarising review data to the Communities Overview and Scrutiny Committee at both 6 and 12 month periods following the initial implementation date.</p> <p>In the event that there are statistically significant increases in either crime or road accidents following implementation, that data should be presented to the Communities Overview and Scrutiny Committee at the soonest possible opportunity.</p>						
R2	The Task and Finish Group recommend that Street Lighting Engineers monitor the situation at other authorities who have switched street lights back on in certain						

	locations due to accidents and safety concerns.						
R3	The Task and Finish Group recommend that Officers explore a consistent approach to street lighting across the County by encouraging District, Borough, and Town Councils to adopt the same scheme and offering our assistance in helping them set up the necessary systems.						
R4	The Task and Finish Group recommend that when looking to communicate with a County-wide audience in the future, WCC include relevant consultation and / or engagement documents and leaflets for the coming year with the annual Council Tax mailing or another appropriate County-wide publication.						
R5	The Task and Finish Group recommend that the WCC's Communications department work with Street Lighting Engineers to produce a media campaign with the aim of reducing the population's fear of crime around part-night street lighting.						

Proposed Scrutiny Review Outline

Review Topic (Name of review)	Street Lighting Energy Savings
Working Group Members	Councillors Martyn Ashford, Richard Chattaway, Jose Compton, Jim Foster, David Johnston, Barry Longden, Carolyn Robbins, Martin Shaw, and Ray Sweet
Key Officer Contact	Simon Moseley and David Abbott
Relevant Portfolio Holder(s)	Cllr Peter Butlin, Portfolio Holder for Transport and Highways Cllr Richard Hobbs Portfolio Holder for Community Safety
Relevant Corporate Ambition, Outcome and Measures	Redesign services provided by the Council by 2013 to optimise effectiveness and efficiency. - from the Transformation 2013 core aims
Timing Issues	<ul style="list-style-type: none"> • In order to achieve £500,000 saving in 2013/14 the switch to part-night operation needs to start in April 2013. • Public consultation is scheduled to begin at the June/July 2012 round of Community Forums. • The Task and Finish Group is set to be commissioned at the 25 January 2012 meeting of the O&S Board. Members will then be invited to participate. • Membership of the group will be reviewed and finalised at the 9 February 2012 meeting of Communities O&S. • The TFG will report back to Communities O&S at the 19 September 2012 meeting.
Type of Review	In-depth review.
Rationale (Key issues and reasons for the review)	The purpose of the Task and Finish Group is for members to scrutinise both the impact of the move to part-night street lighting operation on communities, and the public consultation on the criteria used to identify which lights are to remain lit all night.
Objectives of Review (What should the review achieve?)	The objectives of the Task and Finish Group will be: To ensure that the proposed part-night street lighting operation will achieve the necessary savings and won't have a significant impact on communities (particularly in terms of road safety, crime, and anti-social behaviour). To ensure that the public consultation is fit for purpose and can have an impact on the proposals.
Scope of the Topic	The following is included in the scope of the review: <ul style="list-style-type: none"> • The timing of switching to part-night operation, either adopting a phased approach or all at once. • The criteria used to identify the 80% of lights required to be switched to part-night operation. • A review of the consultation proposals and results. • The impact on the residents of Warwickshire in terms of road safety, crime, and anti-social behaviour. • Benchmarking against other Local Authorities who are currently operating on a part-night basis or in the process of moving to part-night operation. • Gathering alternative views from organisations and members of the public.

<p>Indicators of Success – Outputs (What factors would tell you what a good review should look like?)</p>	<ul style="list-style-type: none"> • Recommendations are accepted and implemented to deliver improvements to the street lighting energy saving proposals. • Feedback from the public consultation is properly considered and helps to inform the final proposals.
<p>Indicators of Success – Outcomes (What are the potential outcomes of the review e.g. service improvements, policy change, etc?)</p>	<p>Warwickshire County Council makes savings of £500,000 on street lighting without compromising people's safety.</p>
<p>Other Work Being Undertaken (What other work is currently being undertaken in relation to this topic, and any appropriate timescales and deadlines for that work)</p>	<p>Public consultation is due to begin at the June/July 2012 round of Community Forums. The results of the consultation will be reviewed by the task and finish group.</p>

Energy Cost	0.085		
Qty Base Stations	40		
Residential	80%	Potential Total Savings CMS	
35W SOX (Conventional Gear)	1638	£12,306	6.0
35W SOX (Low Loss Gear)	6309	£40,011	7.1
35W SOX (Electronic Gear)	1	£3	14.2
55W SOX (Conventional Gear)	142	£1,515	4.2
55W SOX (Low Loss Gear)	800	£6,280	5.7
50W SON (Conventional Gear)	20	£140	6.4
70W SON (Conventional Gear)	13882	£162,460	3.8
70W SON (Electronic Gear)	1126	£10,910	4.6
100W SON (Conventional Gear)	1610	£25,310	2.8
100W SON (Electronic Gear)	78	£1,220	2.9
45W CPO (One type of gear)	72	£372	8.7
60W CPO (One type of gear)	42	£340	5.6
140W CPO (One type of gear)	14	£312	2.0
35W CDM (One type of gear)	159	£716	9.9
70W CDM (One type of gear)	18	£206	4.0
70W CDO (Low Loss Gear)	182	£2,004	4.1
70W CDO (Electronic Gear)	2	£16	4.6
100W CDO (Electronic Gear)	14	£226	2.8
100W CDO (Low Loss Gear)	57	£893	2.8
150W CDO (Low Loss Gear)	126	£3,110	1.8
250W CDO (Low Loss Gear)	54	£2,359	1.0
150W CDO (Electronic Gear)	2	£58	1.9
28W LED	16	£24	30.1
31W LED	8	£15	24.6
	26,371	£270,805	4.4
	Cost to Implement	£1,179,605.60	

Traffic Routes	80%	Potential Total Savings CMS	
90W SOX (Conventional Gear)	494	£6,521	2.6
90W SOX (Low Loss Gear)	3463	£34,730	3.0
135W SOX (Conventional Gear)	223	£4,893	1.8
135W SOX (Low Loss Gear)	1825	£35,114	2.0
180W SOX (One type of gear)	134	£4,027	1.4
150W SON (Conventional Gear)	2302	£49,319	1.8
150W SON (Electronic Gear)	288	£5,397	2.0
250W SON (One type of gear)	3305	£130,033	1.1
	12,034	£270,034	2.4
	Cost to Implement	£634,807.20	

Combined residential and traffic routes	38,406	£540,839	3.0
	Cost to Implement	£1,636,912.80	

Street Lighting - Local Authority Responses

Suffolk County Council

Telephone conversation

They have had part-night lighting in place since July 2011 - they initially had 40k units live with part-night operation. They are currently in the process of moving all 80k of their lighting units to the part-night CMS system.

They use the same Telensa CMS that WCC is using.

Q1 Did your Authority hold a public consultation before making the changes? If so, what impact did the consultation have?

They didn't hold a public consultation. This was because nearby counties that did hold consultations received a lot of complaints and bad press ahead of implementation.

They didn't send letters out to all residents, as has been done in some authorities, due to cost.

The communications department publicised the change through newspapers, radio, a comprehensive web page with information about lighting in all areas, FAQs, and an online survey for public feedback.

The exception criteria they used is detailed on their website.

Q2 Following implementation, what has been the public response to the changes?

1 week after switch-off there was around 200 complaints (phone calls) - but this dropped off to nothing over the following few weeks.

Q3 Has there been any measurable impact on crime and disorder in areas where street lighting has been switched off?

There was a measurable reduction in crime - they can provide statistics from the Police to back that up. They will be emailing the information over to us.

The team provide an out-of-hours phone number for the Police, Fire Service, and Ambulance Service. The Fire Service and Ambulance Service have never used it but the Police have on occasion and have reported that it has worked well. The example given was - on a Friday night the lights in an area were switched on for 30 min while the Police searched for a suspect - he was found and the lights were then switched back off.

Q4 Has there been any measurable impact on road safety in areas where street lighting has been switched off?

None. The areas that they were worried about were covered by the criteria and retained lighting.

Q5 Has there been any measurable impact on the natural environment?

Lots of positive feedback from amateur stargazers.

Q6 Are you on track to achieve your projected savings targets?

Yes, they are on track.

Q7 Did you experience any major problems? If so, how could they have been avoided?

No major issues.

Q8 If you had to go through the process again, what would you have done differently? (Talk to certain partners from the beginning, better communication with the public etc.)

It was important to gain strong political support.

The Communications department were reluctant to publicise the changes early-on in the process.

Norfolk County Council

Email

Gavin Broad (BEng, IEng), Project Engineer, Highways Group, Environment, Transport and Development

Tel: 01603 224203

Email: gavin.broad@norfolk.gov.uk

Gavin is overseeing the consultation on part-night lighting.

There is some more information on their website, which can be found here:

http://www.norfolk.gov.uk/Travel_and_transport/Roads/Road_maintenance/Street_lighting/NCC074610

There is also a report that went to the County Council's Cabinet on 25 January 2010:

www.norfolk.gov.uk/Council_and_democracy/Committees/Committees_Archive/index.htm?SS_Year=2010&SS_PaperType=Agenda&SS_Committee=Cabinet&vNextRow=11#nccMainPageContent

Q1 Did your Authority hold a public consultation before making the changes? If so, what impact did the consultation have?

Initial consultation work on the policy of part night lighting was undertaken before deciding to introduce this. Consultations were undertaken with key stakeholders, such as the police, parish councils etc. We also consulted the Norfolk Citizens Panel.

Implementation is being undertaken on a parish by parish basis over a 3 year period. A selection criteria, that can be applied evenly across the county, is being used to identify roads proposed for part night lighting. For each parish we have undertaken a two stage consultation process on these roads:

1) Firstly a stakeholder consultation with County Councillors, District, Councillors, the Parish Council and the Police Safer Neighbourhood Team

2) Then a consultation with residents of roads where part night lighting is proposed - each household on these roads receives a consultation letter.

For both consultations the selection criteria still forms the basis of the review of the responses received, but we have agreed some further exemptions to part night lighting as a result of the consultations.

The response rate was probably slightly lower than expected. For Norwich the response rate was 2%, for King's Lynn it was 1%.

Q2 Following implementation, what has been the public response to the changes?

We do get some correspondence from residents after the implementation. Comments are mainly associated with the fear of potential crime rather than actual incidences. Again the amount of correspondence regarding this has generally been lower than expected.

Q3 Has there been any measurable impact on crime and disorder in areas where street lighting has been switched off?

We are monitoring the roads after implementation using local feedback. We also maintain regular contact with the police and no major issues have been raised by them to date. There have been the odd local issue raised by the police, but nothing that has resulted in a significant number of lights having part night lighting reversed.

With regard to all the monitoring questions we probably only 50% through the implementation programme, so monitoring is still on-going.

Q4 Has there been any measurable impact on road safety in areas where street lighting has been switched off?

This has not been reviewed in any detail but no significant issues have been raised after implementation with regard to this. This is mainly due to the type of roads where it has been implemented - generally on the more minor roads, e.g. residential roads. Part night lighting has

not been implemented in town centres, more major roads, remote footpaths, areas of CCTV cameras or where lights were implemented as part of a road safety scheme.

Q5 Has there been any measurable impact on the natural environment?

We haven't measured this in detail but have had comments during the consultation that it would be nice to see the night sky.

Q6 Are you on track to achieve your projected savings targets?

Implementation is slightly behind programme because Amey, our street lighting contractor, are introducing it at the same time as they undertake the routine improvement and maintenance work.

Q7 Did you experience any major problems? If so, how could they have been avoided?

Norfolk has a mixture of lights owned by either the County, District or Parish Council. Part night lighting only applies to County Council owned lights and this has caused some confusion to residents when they see the lights on one road off but the lights on a similar nearby road still on.

Q8 If you had to go through the process again, what would you have done differently? (Talk to certain partners from the beginning, better communication with the public etc.)

We have tried to tie our consultations into Amey's improvement and maintenance programme, so that the consultations time place in the 5 months before they visit the particular parish. This has caused issues when their programme changes.

Northamptonshire County Council

Email

Contacts: Max Andrews MAAndrews@northamptonshire.gov.uk and Zoe Blunsom Zoe.Blunsom@bbivingplaces.com

Q1 Did your Authority hold a public consultation before making the changes? If so, what impact did the consultation have?

The decision to cut the budget for the street lighting service was consulted on as part of the council's budgetary consultation process for 2011/12. There was not a separate consultation for this budgetary decision. This consultation did not alter the decision that was made.

Q2 Following implementation, what has been the public response to the changes?

Mixed. Some have supported the need to reduce expenditure on energy, seeing the benefit for the environment. Others have been concerned with the reduced levels of lighting and as a consequence, we have received nearly 4,000 requests for changes to the switch off regime we

have adopted.

Q3 Has there been any measurable impact on crime and disorder in areas where street lighting has been switched off?

No. We have worked closely with the Police on this project and they intend to do an analysis on the impact of the switch off, based on a full year's statistics, this summer. Early indications does suggest that crime has reduced in those areas where lighting has been reduced, but this reduction may also have links to the current economic climate.

Q4 Has there been any measurable impact on road safety in areas where street lighting has been switched off?

Same as above – a full year analysis will be undertaken this summer.

Q5 Has there been any measurable impact on the natural environment?

No.

Q6 Are you on track to achieve your projected savings targets?

Yes. Full year savings have been achieved as projected.

Q7 Did you experience any major problems? If so, how could they have been avoided?

We didn't anticipate the level of correspondence that we would receive on this project – it was highlighted as a risk, but the whole project became very political. Therefore our original communications plan was insufficient. We had to setup an additional in-house communications and review team, to manage the level of enquiries we received.

Q8 If you had to go through the process again, what would you have done differently? (Talk to certain partners from the beginning, better communication with the public etc.)

Improve the comms plan as highlighted above, but also to work more closely with the Districts and Boroughs as we did with the Police.

Devon County Council

Email

Contact: Maurizio D'Alesio, Team Leader Street Lighting - maurizio.d'alesio@devon.gov.uk

Q1 Did your Authority hold a public consultation before making the changes? If so, what impact did the consultation have?

The County Council did not consult directly with members of the public, but instead consulted with local parish and town councils, local police and local County Councillors. Some of these local councils carried out consultation within their communities via web-sites, local journals etc. The County Council issued press releases about the policy generally, produced a leaflet that

was available in libraries and local highway offices and issued to all parish and town council as part of their consultation.

Q2 Following implementation, what has been the public response to the changes?

The County Council has converted over 30,000 lights, out of a total of 60,000 lights that are considered suitable for part-night operation. The County Council is responsible for 76,000 lights and the remaining lights are on designated A and B roads and large urban centres that will remain operational all night. The response has been mixed, with some support and the objections tend to be split with shift workers wanting lights on in the early morning and many people just wanting lights on because of fear of crime.

Q3 Has there been any measurable impact on crime and disorder in areas where street lighting has been switched off?

The conversion work has been ongoing for over two years and there is no evidence to suggest that crime, or accidents have risen as a result and in some locations incidents have fallen.

Q4 Has there been any measurable impact on road safety in areas where street lighting has been switched off?

While there were initial suggestions that road safety would be compromised, this has not so far become apparent. From the outset the County Council stated that any issues raised by local councils and/or the police would be considered and where necessary, lighting would be restored to all-night operation. This has occurred at a small number of locations, mainly to deter anti-social behaviour.

Q5 Has there been any measurable impact on the natural environment?

The main environmental impacts are the benefits gained when the lights are switched off, namely reductions in carbon and energy, sky glow and obtrusive light into adjacent properties. There have been a number of compliments received as to how good it was to see stars again in the night sky.

Q6 Are you on track to achieve your projected savings targets?

The principle targets at the outset was to reduce carbon emissions by 4,000t, from a base of just over 17,000t and reduce the annual energy bill by £450,000. The carbon reduction is so far over 2,000t and costs have reduced, but the price of energy has gone up in the meantime, however, without the part-night policy, energy in 2011/12 would have cost approximately £400,000 more.

Q7 Did you experience any major problems? If so, how could they have been avoided?

The main problem was the time taken in carrying out limited consultation with local councils, which delayed the issue of work and completion of the programme sooner. The intention was to complete the programme in two to three years, this may actually turn out to be four to five years. This is difficult to avoid if some form of consultation is to take place. The other factor to be considered is the volume of enquiries from the public, both good and bad, particularly when

the clocks change twice a year and the part-night controls do not, your lighting engineer will be able to give details in this respect.

Q8 If you had to go through the process again, what would you have done differently? (Talk to certain partners from the beginning, better communication with the public etc.)

Communication is key and the number of people who claimed not to know about the policy was high, despite press releases and news items on local and national tv, radio and national newspapers. I think an information leaflet issued with the annual council tax documents would have been very helpful. Engage with the emergency services and major city councils as soon as possible and particularly where there are areas of high night-time activity, especially where there is a student population.

Wokingham Borough Council

Email

Contact: Karuna Kachhwaha, Highways & Transport, Place & Neighbourhood

Tel: 0118 974 6995

karuna.kachhwaha@wokingham.gov.uk

Q1 Did your Authority hold a public consultation before making the changes? If so, what impact did the consultation have?

Public consultation was done over 18 months and we received 224 responses during trial period, 26% of the respondents were in favour of part-night lighting trial. Targeted residential areas, estimated properties affected were 6,710 by part night lighting trails.

Q2 Following implementation, what has been the public response to the changes?

After trial there has been minimal public reaction.

Q3 Has there been any measurable impact on crime and disorder in areas where street lighting has been switched off?

Crime and RTA (Road Traffic Accident) figures were analysed on all part night roads, comparing the trial period to the previous year. Crime figures decreased slightly and there was no impact on RTA.

Q4 Has there been any measurable impact on road safety in areas where street lighting has been switched off?

Safety audits were and still are conducted before a street light is converted to part night operation, thus minimising crime and road safety concerns.

Q5 Has there been any measurable impact on the natural environment?

Carbon consumption reduction of 130 tonnes during the trial period was achieved. As more lights are converted, this figure will increase.

Q6 Are you on track to achieve your projected savings targets?

We are on the way to achieving further savings as more lights are added to the scheme.

Q7 Did you experience any major problems? If so, how could they have been avoided?

Old lanterns with 2 part photo-cells not economical to convert. "Self calibrating" part-night photo-cells cause problems if power supply is interrupted or mains voltage surge/drop as they require approximately 3 days of uninterrupted operation to calibrate.

Q8 If you had to go through the process again, what would you have done differently? (Talk to certain partners from the beginning, better communication with the public etc.)

Updating lantern types to remote monitoring, communication with the street lights are more accurate as faults are shown on the system.

Dorset County Council

Email

Contact: Rod Mainstone, County Lighting Engineer at Dorset County Council
Tel. 01305 22 5355

Q1 Did your Authority hold a public consultation before making the changes? If so, what impact did the consultation have?

No, local councils, councillors and police are only informed of the changes as each geographical area is planned. We ask for any areas of concern to be highlighted, for comparison to the policy criteria for all night lighting to remain.

Q2 Following implementation, what has been the public response to the changes?

With around 8,000 of the total 20,000 lights converted so far, we have received a small but time consuming number of negative complaints - as well as positive reactions. Press attention has been extensive but with little result.

Q3 Has there been any measurable impact on crime and disorder in areas where street lighting has been switched off?

No investigation of this subject carried out or planned. A small number of ASB incidents in one town led to a press campaign and the Police comparing their recorded crime levels before and after the change occurred, with no appreciable differences noted.

Q4 Has there been any measurable impact on road safety in areas where street lighting has been switched off?

No investigation of this subject carried out or planned.

Q5 Has there been any measurable impact on the natural environment?

No investigation of this subject carried out or planned.

Q6 Are you on track to achieve your projected savings targets?

There is no predicted pay-back period, as no funding was identified to implement the change. The intention to switch 20,000 residential lights off, for 5.5 hours per night, will deliver at least the £150,000 reduction which has been made in the street lighting energy budget.

Q7 Did you experience any major problems? If so, how could they have been avoided?

None yet.

Q8 If you had to go through the process again, what would you have done differently? (Talk to certain partners from the beginning, better communication with the public etc.)

Nothing.

Oxfordshire County Council

Email

Contact: David Cookson, Maintenance Contract/Admin Manager, Street Lighting

Tel: 01865 815573

Oxfordshire County Council have only converted approx 1300 units (approx 0.5% of their stock) in mainly rural areas.

Q1 Did your Authority hold a public consultation before making the changes? If so, what impact did the consultation have?

We did not, we wrote to every parish in the County and the scheme was optional. Roughly 1/3 said yes, 1/3 no and 1/3 were undecided or did not correspond.

Q2 Following implementation, what has been the public response to the changes?

Negligible.

Q3 Has there been any measurable impact on crime and disorder in areas where street lighting has been switched off?

Q4 Has there been any measurable impact on road safety in areas where street lighting has been switched off?

Q5 Has there been any measurable impact on the natural environment?

Sorry, we cannot answer questions 3-5 for sure. We only included rurally located units.

Q6 Are you on track to achieve your projected savings targets?

No, as our electricity supplier has altered the charges, therefore our energy has become cheaper to buy after midnight and more expensive in the day.

Q7 Did you experience any major problems? If so, how could they have been avoided?

Nothing major, apart from the energy issue.

Q8 If you had to go through the process again, what would you have done differently? (Talk to certain partners from the beginning, better communication with the public etc.)

We probably didn't convert enough to have any problems.

Street Lighting Part-Night Operation

Frequently Asked Questions

[What is part-night lighting?](#)

[What savings are being made by going to Part-Night operation?](#)

[What other benefits are there?](#)

[Will all lights be affected?](#)

[How many lights will be affected?](#)

[Can the Council legally turn off the lights?](#)

[Will any lighting be switched back on?](#)

[Have lights been switched off in other parts of the Country?](#)

[I live in a rural village will my light be affected?](#)

[Will 30mph speed limits be affected if lights are switched off?](#)

[Can't you just dim lights instead of switching them off?](#)

[Why can't you switch off every other light?](#)

[Can't you just fit lower power bulbs?](#)

[Can I choose the times the light outside my house operates?](#)

[I park my car on the road, will part-night lighting affect this?](#)

What is part-night lighting?

Part-night lighting is the term we use for a light that switches off for part of the night. The affected lights will switch on at dusk (as usual) but switch off between the hours of midnight and 5.30am. The times are not affected by the change from Greenwich Mean Time to British Summer Time.

What savings are being made by going to Part-Night operation?

The Council currently spends £2.2 million a year on energy for street lighting. It is anticipated that operating street lighting on a part-night basis will save approximately £500,000 a year.

What other benefits are there?

As well as saving money we will reduce our CO2 emissions. The annual carbon emissions for Warwickshire County Council in 2009/10 totalled around 60,700 tonnes, of which street lighting accounted for about 21%.

Using current figures it is estimated that the measures we are taking could save approximately 3,000 tonnes of CO2 per year (which is about 25% of our current street lighting carbon emissions). These emissions savings will help us to meet both the national and local emissions reduction targets.

In addition to the money and carbon savings, 'sky glow' or light pollution will be significantly reduced, allowing for better viewing of night sky.

[Back to top](#)

Will all lights be affected?

No. There are certain locations where we will not be operating part-night lighting, these are:

- Where there are potential hazards on the highway such as roundabouts, traffic signal controlled junctions, central carriageway islands, traffic calming features, road humps etc.
- At formal pedestrian crossings (Zebra, Pelican, Puffin, Toucan and Pegasus).
- Areas covered by permanent Local Authority/Police CCTV cameras.
- Areas adjacent to elderly people care homes, sheltered accommodation complex's and A&E departments.
- Lighting adjacent to operational taxi ranks.
- Lighting on public footpaths, alleyways and cycle paths which are located away from roads.

How many lights will be affected?

It is difficult to say exactly how many lights will be operated on a part-night basis until all assessments have been undertaken. However, we are looking at operating approximately 80% of the County Council owned lights on a part-night basis throughout the County. This equates to approximately 39,000 lights.

[Back to top](#)

Can the Council legally turn off the lights?

Yes. There is no statutory requirement on Local Authorities in the UK to light the highway. The law states that:

- The Highways Act empowers local authorities to light roads but does not place a duty to do so.
- The Council has a duty of care to road users and has an obligation to light permanent obstructions on the highway, such as speed humps and central refuges.

Will any lighting be switched back on?

The County Council Road Safety and Community Safety teams will monitor traffic accidents and crime levels and if there is a significant increase, which could be put down to the part night operation of the lighting, the area will be reviewed by officers and lights may be turned back to all night operation.

Full-time lighting will not be reinstated in the following cases:

- Where there is a fear of increased crime
- To provide increased lighting to aid recreational or social activities

[Back to top](#)

Have lights been switched off in other parts of the Country?

Yes. Part-night lighting has been introduced in Buckinghamshire, Devon, Dorset, Essex, Gloucestershire, Leicestershire, Powys and Oxfordshire. There are many other Councils who are now considering part-night lighting.

I live in a rural village will my light be affected?

Only lighting owned and maintained by Warwickshire County Council will be affected. Some villages and small towns own and maintain the lighting which is classed as footway lighting. A list of Parish and Town Councils with their own footway lighting is attached. ([Link to document](#))

Will 30mph speed limits be affected if lights are switched off?

No. A 30mph speed limit automatically applies in any road containing a system of street lights not more than 200 yards apart, unless signposted with different speed limit. There is currently no law stating that these lights have to be switched on all night for the speed limit to be applicable. Therefore, motorists are advised that the usual 30mph speed limit will be in place regardless of whether the lights are switched on or not.

[Back to top](#)

Can't you just dim lights instead of switching them off?

Not all types of light can be dimmed and those that could be dimmed require additional equipment which is very expensive to purchase and fit meaning savings take many years to achieve. In future years we will be looking at dimming new installations where the necessary dimming equipment is installed by the manufacturer at the factory which reduces the cost.

Why can't you switch off every other light?

Switching off every other light would not give us the required savings.

Can't you just fit lower power bulbs?

No. The bulbs or lamps are controlled by specific gear within the lantern. To change the lamp to a lower energy type would require replacing the control gear which would not be cost effective. Where we are replacing or upgrading the lighting in an area we do always look at using lower energy equipment but this will still be operated on a part night basis to achieve the required savings.

[Back to top](#)

Can I choose the times the light outside my house operates?

No. All lighting will be treated the same throughout the County and affected lights will be switched off between midnight and 5.30am.

I park my car on the road, will part-night lighting affect this?

We recognise that in many residential estates there is no off-road parking, or that the demand for parking exceeds that which is available off-road, and residents then park their vehicles on the road. With the change to part-night lighting it is even more important to ensure that if you park over-night on the road, you do so in accordance with the requirements of the highway code to ensure your vehicle is visible to other road users. The highway code has the following rules for parking at night:

http://www.direct.gov.uk/en/TravelAndTransport/Highwaycode/DG_069860

[Back to top](#)

DRAFT



Street Lighting Part-Night Operation Questionnaire

Warwickshire County Council is committed to promoting and achieving equality and fairness for all our customers, so it would be helpful if you could answer a few more questions which will help us ensure that we are reaching out to all sections of the community. The information requested below helps us monitor and understand who we deliver services to and will be used to improve our services to you and other customers. It is confidential and not attributed back to you. Thank you for your contribution.

What is your gender?

- Male
- Female

Which age category are you in?

- Under 17 Years
- 17 to 24 years
- 25 to 44 years
- 45 to 64 years
- 65 to 74 years
- 75years or older

Do you have a long-standing illness or disability? (Long-standing means anything that has troubled you over a period of time or that is likely to affect you over a period of time)

- Yes
- No

What is your religion, even if you are not currently practising?

- Christian
- Buddhist
- Hindu
- Jewish
- Muslim
- Sikh

Other (please specify) _____

Do you consider yourself to be ...?

- Heterosexual or straight
- Gay or lesbian
- Bisexual
- Other
- Prefer not to say

Which Ethnic Group do you belong to?

- White - British
- White - Irish
- White - Any other White background
- Mixed - White and Black Caribbean
- Mixed - White and Black African
- Mixed - White and Asian
- Mixed - Any other Mixed background
- Asian or Asian British - Indian
- Asian or Asian British - Pakistani
- Asian or Asian British - Bangladeshi
- Asian or Asian British - Any other Asian background
- Black or Black British - Caribbean
- Black or Black British - African
- Black or Black British - Any other Black background
- Other Ethnic Group - Chinese
- Other Ethnic Group - Gypsy or Traveller
- Any other Ethnic Group

Street Lighting Part-Night Operation Questionnaire

Warwickshire County Council is changing its street lighting policy. A decision has been made by the County Council to operate approximately 80% of County Council owned street lights on a part-night basis. This will mean approximately 39,000 street lights will switch off between the hours of midnight and 05.30.

After consultation with the Police, Road Safety and Community Safety, certain locations have been identified where we will not be operating part-night lighting. Lighting on roads with road humps will not be switched off as lighting is a requirement under The Highways (Road Hump) Regulations 1999

Below are the locations identified which have been used to assess whether street lighting will be exempt from part-night operation. For each location, please indicate whether you agree or disagree with its use as one of the exemption areas.

Please shade one circle only	Strongly agree	Tend to agree	Tend to disagree	Strongly disagree	Don't know
Where there are potential hazards on the highway such as roundabouts, traffic signalised junctions, central carriageway islands, traffic calming features etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At formal pedestrian crossings (Zebra, Pelican, Puffin, Toucan and Pegasus).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Areas covered by permanent Local Authority/Police CCTV cameras.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Areas adjacent to elderly people care homes, sheltered accommodation complex's and A&E departments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lighting adjacent to operational taxi ranks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lighting on public footpaths, alleyways and cycle paths which are located away from roads.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If there are any other criteria that you think should be used to assess whether street lighting should remain lit all night, please write them in the box below:

If there are any locations that would not be covered by the list above that you think should be exempt, please write them in the box below: (Please be as specific as possible)

Thank you for taking the time to complete this questionnaire.

Street Lighting Part-Night Operation – Consultation responses

Introduction

Context

Warwickshire County Council currently spends approximately £2.2 million on electricity for street lighting. It is anticipated that operating the lights on a part night basis for 80% of Warwickshire's 49,500 street lights will save approximately £500,000 and reduce carbon emissions by 3,000 tonnes annually.

In addition to saving money and reducing carbon emissions, 'sky glow' or light pollution will be significantly reduced. However, not all street lights will be affected by the changes. After consultation with the Police, Road Safety and Community Safety certain locations have been identified where we will not be operating part night lighting, these are:

- Where there are potential hazards on the highway such as roundabouts, traffic signal controlled junctions, central carriageway islands, traffic calming features, road humps etc.
- At formal pedestrian crossings (Zebra, Pelican, Puffin, Toucan and Pegasus).
- Areas covered by permanent Local Authority/Police CCTV cameras.
- Areas adjacent to elderly people care homes, sheltered accommodation complexes and A&E departments.
- Lighting adjacent to operational taxi ranks.
- Lighting on public footpaths, alleyways and cycle paths which are located away from roads.

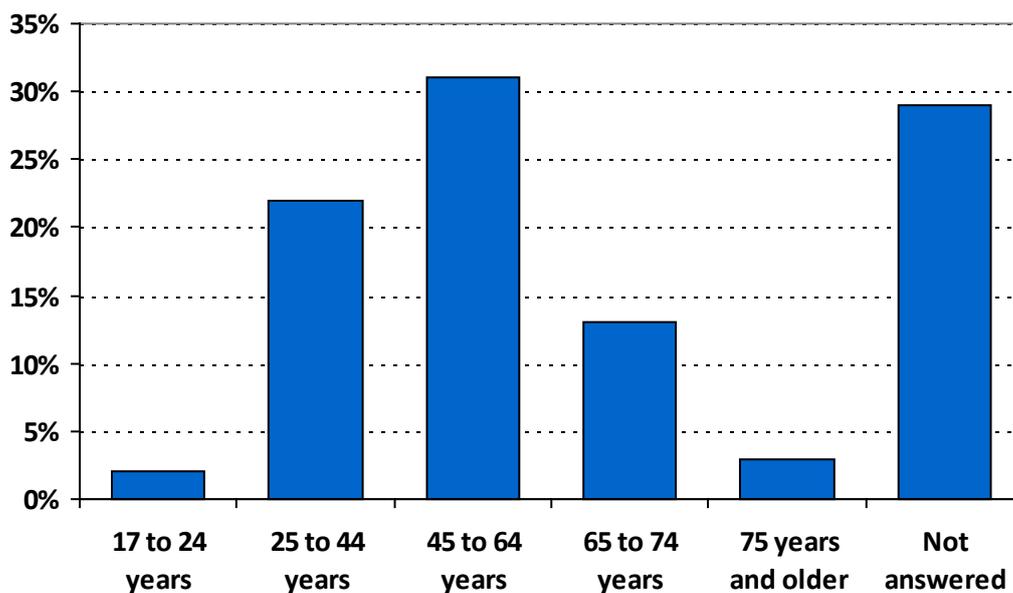
Parish, town, district or borough council owned lighting will not be affected by Warwickshire County Council's changes. Warwickshire County Council has engaged with residents and interest groups over the summer which included providing details to all Community Forums, Parish and Town Councils and other groups such as disability forums.

The County Council's Communities Overview and Scrutiny Committee has set up a Task and Finish Group which will be examining all aspects of the project and will be scrutinising crime and road safety figures from other authorities currently operating the part night system.

Profile of respondents

In total, 310 respondents took part in the Street Lighting Survey within the Warwickshire area, with 29% being female and 39% male, the remaining 99 individuals preferred not to state their gender (32%). The majority of respondents belong to the 45-64 age range (31%), closely followed by those not willing to disclose their age (29%) and those with ages between 25 and 44 (22%). With 48 participants above the age of 65, all age groups have been represented in the survey.

Figure 1: Age band of respondents



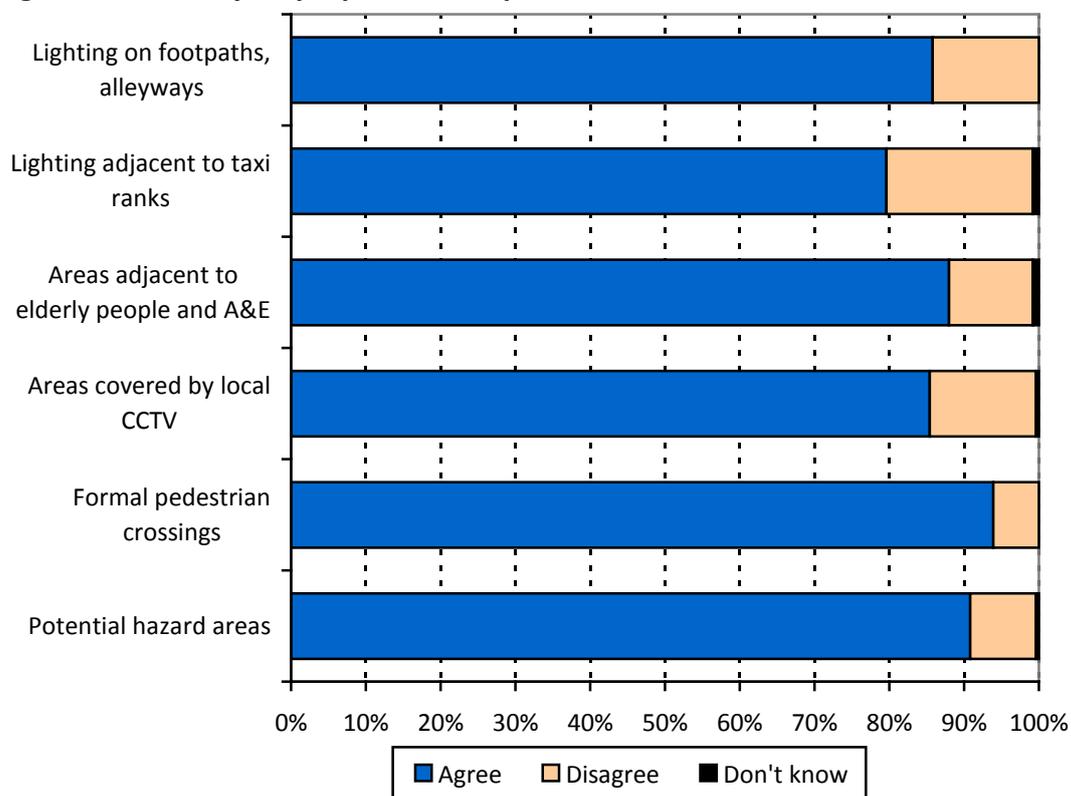
The majority of respondents declared being White British (61%), whilst Asian Indian and White Irish/White Other account for 0.6% each. The remaining 105 participants preferred not to state their ethnicity (34%).

Overall, 56% of all respondents stated they do not have any disability, whilst 13% said they experience difficulties with daily activities due to infirmity, disability or long-term illness. The remaining respondents decided not answer this question.

Results

Figure 2 shows that the majority of respondents agree with each of the areas where the part night lighting system will not be operating, as proposed by Warwickshire County Council. Overall, survey participants declared that they strongly agree (65%) with Warwickshire County Council's exemption criteria, due to cover from potential traffic hazard areas and public footpaths located away from roads to sheltered accommodation complexes and A&E departments.

Figure 2: Summary on proposed exemptions



The survey also asked two open response questions to assess whether other standards might be adopted in order to deter the part night lighting system, and to take into account other locations that should be exempted and not previously mentioned in the part night lighting plan. The most frequently stated criteria are presented in Figure 3; all further comments and locations have been passed on to the street lighting team for further consideration.

Figure 3: Other criteria that should be used to assess whether street lighting should be kept on

Issue	No. of respondents
Areas known for high rates of crime and anti-social behaviour	37
High traffic areas and road junctions	23
Roads with sharp bends and narrow access streets to cul-de-sacs	17
Areas where disabled and/or elderly people reside	14
Public footpaths and alleyways from the town centre to estates	6
Areas in proximity to pubs/hotels/restaurants/nightclubs	6
Areas where children and/or teenagers congregate	4
Areas exposed to extreme weather conditions	2

Many of the respondents who left comments stated that they disagreed with the proposal to switch off street lights generally. Of those that suggested locations, 37 of all participants state their main recommendation would be using crime and anti-social behaviour indicators as criteria for keeping the lighting system on all night, as issues such as burglaries, car thefts and house break-ins rank high on their priority lists. Roads with large amounts of traffic, sharp bends, narrow streets and road junctions were also highlighted as potential areas where street lights should remain on.

Further information

For further information on this report, please contact David Gardiner (davidgardiner@warwickshire.gov.uk) on 01926 418049.