

PART NIGHT LIGHTING INITIATIVE

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1. Summary

- 1.1 The purpose of this report is to examine the decision to continue undertaking the part night lighting programme following the receipt of a petition seeking the conversion back to all night lighting and that alternative measures are implemented to achieve the required savings.

2. Recommendations

- 2.1. The recommendation of this report is that the Scrutiny Committee support the following: -
- a) Part night lighting currently provides the best feasible option offering best value to the tax payer with minimal impact to the community as a whole.
 - b) The existing processes in place are appropriate and that the Policy is being applied in an equitable and consistent manner.
 - c) The existing checks and balances that are in place to enable the Authority to work in conjunction with the Bronze Level Tasking Group (BLTG) to minimise the impact of crime or anti-social behaviour which occurs between midnight and 5:30am are appropriate.
 - d) That the part-night lighting initiative continues to enable it to meet the required carbon & energy savings commitment as set out by Council.

3. Background

- 3.1 Some 4-5,000 street lights out of a proposed 12,600, have been converted to operate between the hours of dusk and midnight and then turn off until 5:30 am when the lighting will re-ignite if the lighting level is appropriate until dawn.
- 3.2. By continuing with the current Policy the Authority will meet the following key objectives: -
- To reduce carbon emissions by 811.5 tonnes annually on completion of the initiative.

- To reduce by approximately £12,800, the annual amount on the carbon tax levy imposed on street lights under the Government's Carbon Reduction Commitment (CRC) on completion of the scheme.
- To save approximately £165,600 in a year on energy bills by reducing its energy consumption.

4. Report

4.1 Petition

- 4.1.1 Shropshire Council has received a Petition that has the necessary amount of signatories to trigger referral to scrutiny. The stated aims of the organisers are as follows:-

Please keep our communities safe by turning the street lighting back on after mid-night which does deter crime and makes residents feel safer. We encourage you to invest in LED Lighting to reduce our carbon footprint and help save the environment.

- 4.1.2 The Petition was instigated following a burglary at the proposers address over the Easter weekend 2013.

- 4.1.3 The Petition was signed by some 854 people who generally reside in the area bounded by the Bagley, Battlefield, Castlefields and Ditherington, Harlescott, Sundorne and Quarry and Coton Hill Wards in the north suburbs of Shrewsbury. There are, however, a number of signatories who have included addresses in the wider West Midlands area and indeed other parts of the UK.

- 4.1.4 These same Wards have some 13,459 properties within them, therefore the Petition would, as best, represent around 6.3% of the electorate in those areas.

4.2 Police Crime Data for the Petition Area

- 4.2.1 The police have provided crime data for the area for the months April, May and June for the years 2012 (when lights were on all night) and 2013 (when part night lighting was introduced). We have not included March this year as we do not have the complete months data as it was through that month that the part night-lighting change took place. The data shows;

April, May and June 2012 (Total of 11 Crimes recorded)

- 3 x Actual Bodily Harm
- 1 x Grievous Bodily Harm
- 1 x Violent Behaviour
- 1 x Burglary from a Dwelling
- 3 x Criminal Damage to a Dwelling
- 1 x Burglary not from a Dwelling

- 1 x Theft of a cycle

All but one of these, are crimes which have occurred at Private addresses rather than commercial or other premise types.

April, May and June 2013 (Total of 10 Crimes recorded)

- 1 x Affray
- 2 x Actual Bodily Harm
- 1 x Assault by Beating
- 1 x Harassment
- 2 x Criminal Damage not to a Dwelling
- 1 x Arson of Motor Vehicle
- 1 x Theft not from a Dwelling
- 1 x Possession of a Controlled Drug

4.2.2 Although numbers are shown to be fairly comparable year on year, it would appear that the types of premises which have recorded Crimes are different. Only 3 are shown as Private addresses and these were all in 2012 when light were on throughout the night. The remainder are shown at the Railway Station, Night shelter, a Motor dealership and some where the exact incident location on the street is unknown.

4.2.3 There has been a National reduction in Crime which has replicated across West Mercia. This will also have an impact on these figures.

4.2.4. Where there is a burglary the police have a very robust response. Experience has shown that when there is one burglary in an area, then the perpetrator, who got away with it, is likely to strike in the same area again. For this reason the local police commander has put in place "Operation Defend", where additional patrols, advice to neighbours, surveillance and other measures to protect the area are used. This has had great success in both reducing repeat crimes and catching the criminals.

4.2.5 Shropshire Policing Area has had the largest reduction in crime when compared to any other area in the West Mercia force. Overall crime is down 11% (year to date in 2012 it was 5720, this year it is 5111), the largest reduction is burglary, down 36% (344 down to 219), injury of the person down 30% (699 to 487). Anti-social behaviour is also down 14% (5879 down to 5053). This is the period that part-night lighting has been introduced. Whilst the police are continuing to effectively target criminal activity, the change to our street lights is not showing great increases in crime.

4.2.6 Once we had determined which street lights could be converted to part-night operation, using the method and criteria laid out below, we laid our proposals before the Silver Level Tasking Group, a multi-agency group tasked with monitoring and reducing crime in the county. They set up a protocol for any

crimes, where part-night lighting might have been a contributory factor to be referred to the Bronze Level Tasking Group, the more tactical on the ground multi-agency group (there are 5 throughout Shropshire) so that they may apply the intelligence that they were party to. Where the Bronze Level Tasking Group could identify a rising trend in crime, it was agreed that we would re-examine the lighting in such an area to minimise any further deviation in that trend. In the three instances where such problems have been noted, only one was borne out by the relevant Bronze Level Tasking Group and resulted in a single street light being converted back to all night operation.

4.2.7. To date no requests have been received from the Bronze Level Tasking Groups for either a review in the approach to, or application of part night lighting, nor have we received any requests to reinstate lighting to all night operation.

4.3 Street Lighting General

4.3.1 Street lighting is not a statutory requirement but a discretionary service provided by local authorities to help safe pedestrian and vehicular movements on the highway.

4.3.2. Where provided, lighting is frequently operated during the hours of darkness and the level of illumination is varied according to circumstances, which relates to road type, traffic speed and volume, pedestrian footfall and setting (e.g. rural, urban etc.)

4.4 Carbon and Energy Savings

4.4.1. The Council set a target of reducing its carbon emissions by 35% by April 2014. Street lighting is a large consumer of electricity having used some 6,698,000 Kwh of electricity and at the same time producing 3,491 tonnes of carbon in the 2010/11 Year.

4.4.2. Various options to make the necessary levels of savings were explored and these include:

- Dimming – a process that decreases the lighting output whilst at the same time reducing the energy consumed;
- Trimming - where the time that each street light is lit is marginally reduced by a combination of a later switch on and an earlier switch off time;
- Switch Off – this is where certain lights are completely removed from operation entirely;
- Part-night Lighting – where the hours that a street light is in operation are reduced and the light is turned off for part of the night when the impact upon the community is at its lowest.
- LED Lighting – this would involve the conversion of high energy street lighting to low energy LED lighting.

- 4.4.3. Each of these options has been deployed by other Authorities with varying degrees of public approval and success. For example wholesale switch off of street lighting was tried in a large number of Authorities, however due to public concerns and adverse press comments a significant number called a halt to the roll out of their programmes and eventually opted for less draconian measures.
- 4.4.4. Dimming will achieve energy savings; however the level of savings would not permit the target set by Council to be achieved. This form of energy savings has already been in operation since 2010 within the County and is being used predominantly on main traffic routes to supplement savings achieved by other measures. Typically this will permit energy savings of between 15 and 25%.
- 4.4.5. Trimming allows the Authority to make savings by shortening the overall operating times, however, due to the method of energy purchase by the Authority these are at best marginal and do not accrue the likely savings that other energy purchase schemes would. That said, this process is used across the County wherever changes are made to photocell controls as part of normal maintenance operations. Energy savings which are in the order of 0.5% are being achieved by this method of control.
- 4.4.6. Part-night lighting permits the actual number of hours of operation by street lighting to be significantly reduced whilst causing the least amount of inconvenience to members of the public. Typically this will produce savings of around 50% each of the street lights which are converted.
- 4.4.7. LED Lighting will make significant reductions in the energy consumed, typically around 50% where it is deployed on residential roads, however this level of savings decreases to around 25-30% for main traffic routes. The main disadvantages to deploying these types of lighting are the very high capital costs which would be in the region of £250 per unit on residential roads and the fact that the number of lanterns needed to light such a road to the British Standard would need to be increased by between 25 and 50% to maintain current lighting levels.
- 4.4.8. On the basis of the pros and cons for each of the above options, the Authority chose to adopt a policy of part-night lighting, supplemented by dimming and trimming where appropriate and to utilise LED technology when funding and refurbishment works permitted their deployment.

4.5 Exemption Criteria for Part-night Lighting

- 4.5.1. Rather than look at which street lights could be extinguished for part of the night, it was felt that it would be better to determine those lights which had to remain lit throughout the night.
- 4.5.2. The criteria, as to when a light was to remain on, were achieved through a series of three workshops in early 2012, where Members together with town and Parish Council as well as Technical Officers from the Authority were present.
- 4.5.3. From discussions at these venues we were able to determine those areas of most concern to participants and formulate risk assessments appropriate to such concerns. These included:-

Situation	How Measures are to be applied
A significant night-time road accident record	Accidents that occurred between midnight and 05:30 recorded over a 5 year Period and where a demonstrable cluster of accidents occurs street lighting within 100 will remain lit. Accidents which have an indication that alcohol may have played a part in the collision will be excluded.
Where CCTV is present	Within 50m radius of any CCTV equipment
Subways or enclosed footpaths	Where there is a Subway or enclosed footpath present
Alleyways where one end links to a street that is lit all night	Where either end of an Alleyway is lit, as defined by all other criteria, all lighting present will be lit.
Where there are hazards in highway (Signalised Junctions, Roundabouts, and Pedestrian Refuges etc.)	Where there is some form of encroachment or hazard in the carriageway and between sites if less than 100m apart
	Where a junction is formed with either an A, B or C Class Road lighting in the immediate 20m Radius will remain lit as will any lighting between junctions which are less than 100m apart
	Where a Level Crossing is found and within a 25m radius of that crossing
Main traffic routes	All Principal and A Routes
Sheltered housing for vulnerable people	To Be Advised by Housing Department
Controlled crossing points (Zebra, Pelican or Toucan Crossings)	Where lighting is present over the Zig-Zag markings on either side of the crossing
Town centres	Where there is significant night-time activity likely to be present
Where a water feature is present	Where a footpath is immediately adjacent to a river
Public Car Parks	To be decided on a site by site basis determined by the Car Park operator
An above average crime rate as identified by the Police	To be decided by Performance Management and Commissioning Group, BLTG

- 4.5.4. In introducing part-night lighting across Shropshire, it was also felt that whatever system was to be rolled out it was extremely important that the application could demonstrate that it was being applied in a fair, consistent and equitable manner and did not show fear or favour to any one body or person.
- 4.5.5. The exemption criteria, above, was applied to each street light in turn and where a street light passes each level of assessment then it will be included in the Part-night lighting initiative. If however, it fails just one of the exemption criteria, the operation of the street light remained as an all-night unit.
- 4.5.6. The final criteria relating to crime rates were subjected to scrutiny by the Sliver Level Tasking Group prior to works proceeding. This examination did not highlight any areas of concern.
- 4.5.7. There are arrangements in place to revisit any areas where part-night lighting has been introduced if the BLTG should raise a concern that the absence of street lighting between midnight and 5:30am has led to an increase in either crime or anti-social behaviour.

4.6 Programme Extent and Roll-out

- 4.6.1. The Authority operates some 18,302 street lights across the County of which some 6,048 were identified as being crucial to public safety and hence have not been scheduled to be converted to part-night lighting and as a result will remain in operation throughout the hours of darkness. The remaining 12,254 street lights are being switched off between midnight and 5:30 a.m.
- 4.6.2. The works are programmed to be completed over a three year period and during the first year some 4,540 lamps were changed to operate as part-night lighting across the County (442 in the Central Division, 1,165 in the Ludlow Division, 1,544 in Shrewsbury (North) and 1,389 in Shrewsbury (West)).
- 4.6.3. Our Contractor has already embarked on the second year and some 3,714 lights will be converted in the remaining areas of Shrewsbury as well as the Oswestry Division. The final year (2014/15) will see a further 4,000 street lights being converted in North Shropshire and the Bridgnorth Area.

4.7 Energy Consumption

- 4.7.1. When completed our energy consumption, assuming that our inventory remains the same, will fall by some 1,557,365 kWhs and the resultant carbon produced will reduce by around 811.5 Tonnes p.a.
- 4.7.2 This equates to a financial saving of some £165,600 on energy and £12,800 on Carbon Tax per annum based on 2013/14 figures
- 4.7.3. Implementation costs for part-night lighting will be of the order of £200k and the payback period will be just 2 years.

5. Conclusions

- 5.1 The existing process of risk assessments has been applied fairly, consistently and equitably across all street lighting which is owned and maintained by Shropshire Council.
- 5.2. Checks and balances are already in existence to account for any changes in crime or anti-social behaviour patterns that may arise between the hours of midnight and 5:30am and to make the appropriate changes when such problems are identified through the Bronze Level Tasking Group.
- 5.3. In implementing the part-night lighting programme the Authority has acted with due diligence, in keeping with the remit handed down by Council and that it is best placed, with the processes in place, to identify any clear and present issues with a high degree of flexibility.
- 5.4. Street Lighting will be able to meet the required carbon and energy savings commitment as set out by Council, by 2014, with any savings accrued accounting for the conversion expenditure by 2016.

List of Background Papers (This MUST be completed for all reports, but does not include items containing exempt or confidential information)

Street Lighting Energy and Carbon Reduction: Part-Night lighting Cabinet Report 28th September 2011.

Part-night Lighting Initiative – Scrutiny Report 5th December 2011

Communication Plan – Street Lighting: “Help us save the night sky”.

Part-Night lighting Workshop Agenda

Cabinet Member (Portfolio Holder)

Councillor Claire Wild

Local Member

This is a county wide matter which impacts upon all Members.

Appendices

None

Human Rights / Equalities Appraisal. EINA completed and all low risk