Appendix 2

Street Lighting Energy Saving Progress report

The consumption of energy by street lighting is continually reducing due to various energy saving opportunities being implemented.

- Savings are being achieved through converting some lights to part-night, dimming, requiring LEDs in new highway schemes,
- Replacement of high-wattage lamps with energy efficient lamps within the lighting maintenance contract energy saving obligation,
- Renewal of knock-downs with LEDs. ,
- Replacement of most failed units which cannot be repaired.

The largest contributor to energy saving is currently the part-night switching off of some inefficient lights within residential areas as previously set out.

The roll-out of this project is currently in its 14th month and is currently on target for the planned completion in April 2016

The project has produced the following benefits:

Number of lights switched to part night illumination	-	11,000
Annual energy saving	-	1,354,000 kWh
Annual energy cost saving (@ 11p per kwh)	-	£150,000
Annual carbon commitment charges saving per annum (@ £16 per tonne)	-	£9700

Comments

To date, approximately 400 comments have been received from residents and stakeholders. Many requests from residents are for individual lights to be switched back on or for the initiative to be halted giving reasons such as that crime may increase, vehicles are left vulnerable on unlit highways and people do not feel safe to use the highway after midnight. However, there is no hard evidence from the police that reduced lighting is directly linked to individual crimes.

The project team have ongoing discussions with local policing teams however, to date, none of these have resulted in lights being switched back on.

All of these comments are reviewed and responded to individually by the project team however there is no dedicated resource for this project so responses are given within the authorities standard timescales.

Information and Communication

All of the mapping showing which assets are to be part-night illuminated and which will remain on all night are published on the County Council's website. Alongside this, each plan is sent the local library to which it relates as soon as it is finalised so that it can be displayed. Initially the team ran sessions in local supermarkets to promote the initiative and field questions but the take up of this was very low. To make better use of limited project team staff resources more emphasis is given to promoting the initiative through local media and to direct readers of the website to the Worcestershire Hub and libraries for more information.

Since the initial Scrutiny report was published, the use of LED lighting has become common place in highway lighting applications throughout the country including within Worcestershire. Almost all replacement units required in the lighting maintenance contract are now LED. As expected, the cost of LED units has steadily fallen over the past 4 years and now in many applications provides to be a cost effective, energy-efficient solution when compared to traditional light sources.

In order to obtain long-term energy savings across more of the asset requires capital investment.

Options to convert for different sectors of the asset and the benefits are shown below

Lamp Type	**Quantity**	**Estimated cost to convert total asset to LED**	**Energy saving following completion (per annum)**	**Lamp replacement cost saving following completion (per annum)**	**Payback – Years (all figures have been rounded up)**
35w Low pressure sodium	19,500	£5,000,000	£400k	£100k	10
55w Low Pressure sodium	2500	£700k	£70k	£15k	8
50w High Pressure Sodium	6500	£1,700,000	£150k	£8k	11
70w High Pressure sodium	3100	£800k	£100k	£4k	8
35w Compact fluorescent	50	£15k	£800	£200	15
50w Compact fluorescent	270	£70k	£8k	£800	10
100w High pressure sodium	2700	£1,100,000	£80k	£5k	13
150w High Pressure Sodium	6100	£3,100,000	£215k	£11k	14
250w High Pressure Sodium	1300	£600k	£40k	£2k	14
45w Cosmopolis	3000	£720k	£50k	£20k	11
60w Cosmopolis	3000	£715k	£55k	£20k	10

Lamp types highlighted in green are currently affected by the Part night lighting initiative.

The team are currently working these options into a business case and considering a number of factors including potential financing arrangements.