

## West Suffolk Council streetlighting upgrade to LED

### Background

From summer 2022, West Suffolk Council (WSC) has been undertaking a review of street lighting in the district – looking at ownership of lights by all three tiers of councils but also the condition of the Council’s current stock.

This has involved internal and external research, principally undertaken with Suffolk County Council (SCC) and town and parish councils. At Cabinet on 8 November 2022, it was agreed that the work to date will feed into a wider review of WSC’s relationship with town and parish councils, starting later in 2023, which will seek to ensure that, where WSC continues to own street lights itself, this is done consistently across the whole of the district.

The review identified WSC currently owns 693 streetlights that have yet to be updated to LED or be incorporated onto SCC’s Central Management System. These are mostly lighting council assets and likely to remain WSC lights irrespective of any future review. Accordingly, Cabinet also noted that there was chance to review the cost-saving benefits involved in updating the Council’s own stock using invest-to-save budgets. WSC asked SCC to provide a full quote to upgrade the remaining stock of streetlights to LED.

### Costs

SCC have provided a quote of £402,227 to upgrade the streetlights to LED (558 of the 693).

Some may have additional costs depending on works that maybe required as further corrosion or other factors may be visible from a closer inspection at height. The prices quoted do not allow for any tree trimming, where this is found to be necessary the details would be passed back to WSC to arrange pruning. SCC have assumed clear access to all units including units located within car parks. No allowance has been made for any traffic management above basic signing and guarding.

To cover some of the costs omitted above, an additional ten percent allowance has been included. This means the total capital sum required is as detailed in the table below.

Capital Cost assumption	£
Cost of lighting upgrades as per SCC recommended option	402,277.16
Add: 10% for contingency / admin	40,227.72
	<b>442,504.88</b>

## Revenue

The borrowing costs associated with the above capital cost are just over £34,000 per annum, based on a life of 20 years at an interest rate of 4.50%.

The total current electricity budget for street lighting within the West Suffolk Council budget is circa £75,000. Taking 80 percent of the electricity budget as a baseline for savings (as some lights may not be viable to upgrade) – this figure is circa £60,000.

The table below details the revenue implications of upgrading street lighting to LED as well as the implications of dimming the lights to either 50 percent or 75 percent. Dimming of lights is proven to be effective with existing LED lights on the County Council management system and is usually undetectable to the human eye.

	As is	Upgrade to LED	Upgrade to LED with 50% dim	Upgrade to LED with 75% dim
Street Lighting Electricity Budget (pro-rate 80%)	60,000.00	60,000.00	60,000.00	60,000.00
Energy consumption estimate (kWh)	216,441	48,986	36,725	30,594
Energy price per kW estimate (£)	0.40	0.40	0.40	0.40
Energy cost estimate (£)	86,576.58	19,594.38	14,689.88	12,237.64
<b>Gross Cost / (Saving) against current budget</b>	<b>26,576.58</b>	<b>( 40,405.62)</b>	<b>( 45,310.12)</b>	<b>( 47,762.36)</b>
Borrowing Costs	-	34,018.07	34,018.07	34,018.07
<b>Net Cost / (Saving) against current budget</b>	<b>26,576.58</b>	<b>( 6,387.55)</b>	<b>( 11,292.05)</b>	<b>( 13,744.30)</b>

The energy price per kW of £0.40 was provided by SCC as they pay the initial street lighting bills and then recharge to West Suffolk. If the energy price was lower per kW then the savings would increase.

## Other options considered and rejected

West Suffolk could decide to take no action at this time and not upgrade the streetlights in its ownership to LED. However, it should be noted that at some point the light columns will need works doing to them and upgrading to take place and the Council would have lost the opportunity to reduce its carbon footprint earlier along with achieving financial savings through reduced energy consumption.

An alternative option around the level of investment was also considered. The costs included in this decision notice are based on completing all works required over the medium term as opposed to just the minimum work required to enable LED installation. This is to avoid additional costs of the engineer's time across the medium to longer terms of having to make multiply visits.

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## **Recommendation**

In conclusion we would recommend we proceed with the upgrade and dim the LED lights by 75 percent (to match the level of SCC owned lights). This would create a saving of 82.25 tonnes carbon and a budget saving after borrowing costs of just under £14,000.