



SOUTH  
KESTEVEN  
DISTRICT  
COUNCIL



# Environment Overview and Scrutiny Committee

11<sup>th</sup> July 2023

Report of Councillor Ashley Baxter,  
Deputy Leader and Councillors Patsy  
Ellis and Rhys Baker Cabinet Members  
for Environment and Waste

## Proposals for the upgrading of District Council Streetlights to LED units

### Report Author

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### Purpose of Report

This report provides an overview regarding South Kesteven District Council's potential to upgrade District Council operated streetlights to energy efficient LED units.

### Recommendations

**The Committee is requested to take into account the feedback from the Finance and Economic Overview and Scrutiny Committee and make recommendations to Cabinet:**

- 1) To proceed (or not) with the strategy for upgrading streetlights with LED lamps.
- 2) To proceed with 'overnight dimming' between the hours of midnight and 6AM or to turn off some streetlights between 1AM and 6AM.

## Decision Information

Does the report contain any  
exempt or confidential  
information not for publication?

No

What are the relevant corporate  
priorities?

Clean and sustainable environment

Which wards are impacted?

All wards

## 1. Implications

Taking into consideration implications relating to finance and procurement, legal and governance, risk and mitigation, health and safety, diversity and inclusion, safeguarding, staffing, community safety, mental health and wellbeing and the impact on the Council's declaration of a climate change emergency, the following implications have been identified:

### ***Finance and Procurement***

1.1 The financial implications, should there be a faster paced rollout of energy efficient units, will incur a significant financial outlay. However, the ongoing revenue savings will also be a significant contribution towards reducing the Council's operating expenditure. The funding of any accelerated replacement programme will be required to be funded from reserves as no budget allocation in this financial year has been made. The Finance and Economic Overview and Scrutiny Committee recommended that either option 1 or 2 is taken forward. In order to finance the outlay required it was recommended that a specific reserve is established utilising balances from the invest to save reserve, local priorities reserve and the Budget Stabilisation Reserve. The specific balance movements will depend upon the decision of the preferred option. Given the potential financial implications, the decision will either be taken by Cabinet or Council.

Completed by: Richard Wyles, Chief Finance Officer (s151 Officer)

### ***Legal and Governance***

1.2 Councils do not have a duty to provide streetlighting, however once provided, the local authority does have a duty to maintain the system in a safe condition.

1.3 Regarding considerations to continue to upgrade lamps to LED, any further changes to the project to allocate further funding would need to comply with the Council's Financial Regulations and Contract Procedure Rules.

Completed by: Graham Watts, Assistant Director of Governance and Monitoring Officer

### ***Climate Change***

- 1.4 The energy reduction potential of upgrading the Council's stock of lamps to LED is significant, with streetlighting being the single largest area of electricity consumption for the Council. Annual carbon savings are modelled within the report which will contribute towards the Council's carbon reduction target.

Completed by: Serena Brown, Sustainability and Climate Change Officer

## **2. Background to the Report**

- 2.1 South Kesteven District Council is responsible for managing a total of 3893 streetlights within the district all of which are funded from the Council's General Fund. These lights are predominantly for providing lighting to footways, as opposed to the separate stock of streetlights provided for highways, which are managed by Lincolnshire County Council.
- 2.2 The majority of lights operated by the Council are 35W (or 36W) low pressure sodium lamps and are responsible just over 4% of the Council's total carbon emissions – a significant contribution.
- 2.3 Several different options have been considered in the past regarding the most efficient management of the Council's stock of streetlights. Following a recommendation by Environment Overview and Scrutiny Committee, Cabinet on the [12<sup>th</sup> July 2018](#) considered and approved a policy, attached at Appendix A, addressing how the Council's streetlights shall be managed.
- 2.4 Notably, the policy at Appendix A includes the objective: "To ensure South Kesteven District Council streetlights provide illumination during the hours of darkness.". This is a distinction from streetlights managed by Lincolnshire County Council, where lamps are dark between the hours of midnight to 6AM in order to maximise energy savings and achieve cost savings.
- 2.5 The inventory of streetlights managed by South Kesteven District Council is also currently being mapped. This will help to better illustrate to those working with the Council the exact location of assets as well as how they are distributed throughout the district.
- 2.6 Following a decision at Cabinet on the [11<sup>th</sup> June 2019](#), a project was initiated to accelerate upgrade of the Council's stock of streetlights to Light Emitting Diode (LED) lamps, replacing the existing policy to upgrade only failed lamps. This allocated £100,000 from the Council's Invest to Save reserve to energy efficient LED as part of a 12-year overall programme. Benefits noted from the upgrades included a reduction in energy use and associated cost, with a consequent reduction in carbon emissions associated with energy use.

2.7 In tandem with project development work required for the main LED upgrades, repair and maintenance arrangements for existing lamps have also been reviewed. Current arrangements are for ongoing reactive maintenance of non-LED lamps where feasible, and where lamps are beyond repair these are now being updated to LED lamps. Currently, the budget does not allow for upgrade to LED of every failed unit identified.

2.8 The main contract for the upgrade of streetlights to LED was subsequently awarded, effective from August 2021. The below table is provided regarding the current number of streetlights upgraded to LED:

	<b>August 2021</b>	<b>May 2023</b>
<b>Standard streetlights</b>	3438	2907
<b>LED streetlights</b>	152	283
<b>LED streetlights with dimming profile</b>	-	403
<b>TOTAL LED units</b>	<b>152</b>	<b>686</b>

2.9 Through upgrading existing units to LED with dimming, the energy reduction achieved in the latest month, across the whole stock of lights, is 12%.

2.10 Since agreement of the Invest to Save budget, South Kesteven District Council, like many other organisations, has seen vastly escalating cost for utilities. The electricity budget for streetlighting for 2022/23 was set at £171k and the total spend for 2022/23 was £221k.

2.11 Therefore, the original expectations of reinvesting savings from reduced electricity use can no longer be met, as the increased cost of energy has outpaced the savings made through reduction. Currently there is no agreed standalone budget for upgrading the streetlights to LED, beyond an existing fund for reactive maintenance of broken lights.

2.12 As a result of the sharp escalation in energy costs, the business case for an accelerated programme of upgrades to LED across the whole stock of streetlights has become stronger. Prices for wholesale electricity and gas appear to have spiked this winter. Nevertheless, current costs remain at a historic high and given the volatility of energy markets and potential for further disruption this winter, it is reasonable to expect a continuation of high prices for both gas and electricity.

2.13 Reducing energy consumption from streetlighting also will contribute to the Council's declared carbon reduction target of at least 30% by 2030.

2.14 Three options below have been explored in order to fulfil our obligations to provide lighting where needed in the most cost and environmentally effective way. It is

recognised there are a number of other options that could be considered but these will depend upon the scope and scale of any replacement programme. In order to assist in the consideration of the options, four have been selected.

2.15 The Finance and Economic Overview and Scrutiny Committee met on 22<sup>nd</sup> June 2023 to review the same three below options, with particular regard to the financial and service level implications. They agreed to pursue the full upgrade programme of Option 1 or 2, with the decision to allocate required funding from Council reserves.

**2.15.1 Option 1: Accelerate programme to upgrade all existing lights to LED.**

Indicative costs have been obtained to upgrade all possible streetlight units to LED within a year of contract commencement. This includes an allocation for potential upgrade of obsolete street light columns where required, estimated at 5% of the total stock of lights. A dimming schedule between midnight and 6AM is assumed, where lights are dimmed to 50% of full illumination, in line with current policy. An overall energy saving by upgrading to LED with 6 hours of dimming of 63% is assumed based on supplier projections.

**2.15.2 Option 2: Accelerate programme to upgrade all existing lights to LED and implement policy to switch off lighting between midnight to 6AM.** This option uses the same assumptions as Option 1, but rather than using the existing dimming profile assumes streetlights will be dark between midnight and 6AM, with an assumed energy saving of 75%.

**2.15.3 Option 3: Review provision of streetlighting with the aim to upgrade every other unit to LED and decommission remaining units.** The potential to reduce the overall stock of streetlights which the Council are responsible to illuminate has also been explored.

2.15.4 Regarding option 3, consideration would need to be made on the placement of individual lamps to ensure the remaining provision of lighting is adequate around decommissioned columns. Once agreed, the Council would need to remove fuses from streetlights to be decommissioned at a cost per lamp. The lamps would remain liable for a standing charge for electricity when not in use. Once the light is declared as obsolete, the Council is obliged by National Grid to potentially disconnect and remove lighting columns after a 2 year period, at a further cost. The Council also has a duty of care to ensure the obsolete lighting column is inspected annually to ensure they remain safe. Finally, adequate signage would need to be added to every lighting column decommissioned, to help minimise the number of reports to the Council of faulty lights. Given the number of impediments to decommissioning and removing lamps, detailed costs have not been provided here.

**2.15.5 Option 4: The Council could choose not to pursue a proactive programme of LED upgrades. This would require no upfront investment and lamps would**

**only be replaced by LED when a streetlight has failed.** This would mean a significantly longer programme of replacement and would need to consider a potential scarcity of replacement parts for existing lamps.

2.16 Simple payback has been calculated for Options 1 and 2 in the below table. This is based on the most up to date present and expected future costs for electricity. However, given ongoing utilities market volatility, costs may change as the programme develops. Therefore, the following calculations need to be viewed in that context.

	<b>Option 1</b>	<b>Option 2</b>
Estimated replacement cost	£1,003,765	£1,003,765
Energy saving cost estimated 63%*	£232,660	-
Energy saving cost estimated 75%*	-	£266,273
Annual carbon reduction (tonnes)	156	179
<b>Pay back</b>	<b>5.3 years</b>	<b>4.5 years</b>

\*Less a deduction for a statutory safety check every two years

2.17 A compliant procurement route is under review in order to accelerate upgrades of remaining streetlights to LED.

### **3. Key Considerations**

3.1 As included at Appendix A, a policy exists for South Kesteven District Council to ensure streetlights provide illumination during hours of darkness. In order to consider amending the current Street Lighting Policy in place, a consultation exercise would need to take place if the Committee is minded to support pursuing Option 2 or Option 3.

3.2 This would seek to engage at a minimum with statutory bodies including Lincolnshire County Council in their function as Highways Authority to consider any potential areas of poor illumination as a result of the lamps not in use between midnight and 6AM, as well as consultation with the Police to consider any anti-social behaviour implications.

### **4. Other Options Considered**

4.1 The four available options are listed above.

## **5. Consultation**

- 5.1 Following the discussion at Finance and Economic Overview and Scrutiny Committee on the 22<sup>nd</sup> June 2023, the Committee noted their support for the development of an accelerated replacement scheme.
- 5.2 No formal consultation has taken place on the Council's approach to provision of streetlights to date. If Option 2 is pursued, to switch off streetlights during hours of darkness, further consultation with other statutory bodies would need to take place to understand the wider impacts.

## **6. Background Papers**

- 6.1 Cabinet 12<sup>th</sup> July 2018 - [South Kesteven District Council - Agenda for Cabinet on Thursday, 12th July, 2018, 2.00 pm](#)
- 6.2 Cabinet 19<sup>th</sup> June 2019 - [2019-6-11 - Cabinet Street Lighting Report.pdf \(southkesteven.gov.uk\)](#)
- 6.3 Environment Overview and Scrutiny Committee 15<sup>th</sup> December 2020 - [Street Light Upgrade to LED.pdf \(southkesteven.gov.uk\)](#)
- 6.4 Finance and Economic Overview and Scrutiny Committee 22<sup>nd</sup> June 2023 - [Streetlights report.pdf \(southkesteven.gov.uk\)](#)

## **7. Appendices**

- 7.1 Appendix A SKDC Street Lighting Policy [approved by Cabinet June 2018]