



**SOUTH  
KESTEVEN  
DISTRICT  
COUNCIL**

## Environment Overview and Scrutiny Committee

15 December 2020

**Report of:** Councillor Dr Peter Moseley

Cabinet Member for Commercial and Operations



# SKDC Street Light Upgrade to LED - Project Update

This report provides the Environment Overview and Scrutiny Committee with a progress update in respect of South Kesteven District Council's street light LED upgrade project design and delivery.

### Report Author

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Corporate Priority:	Decision type:	Wards:
Growth	Administrative	All Wards

<b>Reviewed by:</b>	Paul Stokes, Head of Corporate Operations	30 November 2020
<b>Approved by:</b>	Gary Smith, Strategic Director, Commercial and Operations	30 November 2020
<b>Signed off by:</b>	Councillor Dr Peter Moseley, Cabinet Member for Commercial and Operations	30 November 2020

### Recommendation (s) to the decision maker (s)

1. It is recommended that Members of the Environment Overview and Scrutiny Committee consider the contents of this report and note the progress to upgrade the Council's street lights to LED.

# 1 The Background to the Report

- 1.1 Cabinet decisions based on the report dated the 11<sup>th</sup> June 2019 provided a mandate to develop and deliver a project to upgrade existing 35/36 watt low pressure sodium bulbs to LED (Light-emitting Diode).
- 1.2 Since the report, the technical and financial aspects of the plan have been reviewed to ensure that the project delivers both value for money and maximum long-term benefits in respect of durability, savings against running costs and carbon reductions. In addition, we have established the project management protocols, governance, reviewed the risks, addressed planning requirements, reviewed repairs and maintenance, surveyed a random sample of existing lanterns (to facilitate the procurement), set up a trial network of intelligent street lights, reviewed technology options/requirements and agreed the scope of the procurement specification with the Cabinet Member for Commercial and Operations.
- 1.3 The project has been designed to facilitate the upgrade of 3593 lanterns funded via the General Fund (GF) along with 303 funded through the Housing Revenue Account (HRA) – 3896 units in total.
- 1.4 The procurement specification has been designed to secure unit costs based on two purchase options:
  1. Upgrade the lanterns with LED luminaires complete with NEMA socket to facilitate further (future) upgrades to enable network connectivity.
  2. Upgrade lanterns with LED luminaires along with the necessary hardware/software (intelligent street lighting) to facilitate the use of a Central Management System.

As we have developed tender packs in respect of the above, **along** with our future repair and maintenance requirements, project delivery timelines have diverged. However, Welland Procurement has worked hard to facilitate the award of the two contracts (upgrade and future maintenance/repair requirements) very early in 2021.

In response to the falling cost of components/LED fitments there may be opportunity to scale up the rate of delivery. We therefore anticipate that the project will complete well within with the original 12-year project delivery plan.

- 1.5 A successful pilot project ran from October 2019 to March 2020 in partnership with funding from the Digital Catapult, the UK's leading advanced digital technology innovation centre. Arbnco was the winning supplier that delivered the project. 12 LED streetlights were installed which connected to a central management system allowing functionality to be controlled remotely. 4 x 90w LEDs were installed at Stamford cattle market carpark. 4 x 30w lights were installed at Stamford bus station along with a smart air quality sensor. Finally, 4 x 30w LEDs were installed at Winchester Road, Grantham on the public footpath with motion sensors for automatic dimming when no movement was detected.
- 1.6 As a result of the trial we were able to quantify the additional savings dimming via motion sensors and timed schedules could achieve. The air quality sensor data was able to be used to show the effects that the Covid lockdown had on the air quality. The data and knowledge gathered during the pilot project have been used to inform the wider LED procurement project.
- 1.7 Example savings are shown below:

1 Month Period	Original lights	LEDs with Dimming profile\Motion	Saving	LEDs only with no Dimming	Saving
Cattle market car park	282 kWh	105 kWh	63%	146 kWh	48%
Bus station	130 kWh	37 kWh	72%	49 kWh	62%
Footpath	130 kWh	28 kWh	78%	49 kWh	62%

- 1.8 Prices obtained against the two options along with the data gathered from the intelligent streetlights trial will provide information required to make informed purchase decisions around the options detailed under 1.4. Any dimming functionality provides additional options and if deployed can be done in a way that complies with the Council's Street Lighting Policy.
- 1.9 In addition to the project development work required to facilitate delivery of the LED upgrade, current maintenance and repair arrangements have also been reviewed.
- 1.10 As the delivery of the new LED lanterns is rolled out the number of old-style lanterns in need of repair and maintenance will diminish. Logic therefore determined that a new contract for the maintenance and repair of both old and new streetlight stock be developed in tandem with the upgrade project.
- 1.11 Planning concerns in respect of the upgrade of streetlighting sited within conservation areas have been addressed during the project's development.
- 1.12 As we are currently part way through the tender process, the Authority is well placed to commence delivery of the LED upgrade during in the early part of 2021 (subject to any ongoing restrictions resulting from the Coronavirus pandemic).
- 1.13 The Invest to Save finance model dictates the delivery pace of the LED project.
- 1.14 Contracts for both the LED upgrade and repairs and maintenance will initially run for 3 years, with options to either extend or terminate thereafter.

## **2 Consultation and Feedback Received, Including Overview and Scrutiny**

- 2.1 After much debate, the Environment Overview and Scrutiny Committee recommended to Cabinet to invest an initial £100,000 from the invest to save budget to provide an upfront investment which will release savings for reinvestment in future years. This would accelerate the programme of upgrading to energy efficient LED lighting across the district to realise both energy and maintenance savings.
- 2.2 Arbnoc has provided evidence to back up its claims that intelligent streetlights provide additional benefits as verified under 1.7 of this report.

## **3 Available Options Considered**

- 3.1 LED upgrade with or without smart technology: Tender documents have been prepared to secure costs against a straightforward LED upgrade as per the Cabinet's mandate along with costs against the option to incorporate networking technology.
- 3.2 Repairs and maintenance: The current repairs and maintenance agreement with E.ON is not designed to accommodate our future needs. In response and to ensure that maintenance and repair arrangements align with the roll out of the upgraded lighting, it is opportune to procure a new contract in tandem with the LED upgrade.
- 3.3 Procurement options: Welland Procurement have guided the procurement arrangements in respect of both the LED upgrade project and the repairs and maintenance contract.

## **4 Preferred Option**

- 4.1 LED upgrade with or without smart technology: Specification and contract documents prepared to secure tenders against both options.
- 4.2 Repairs and maintenance: Procure a new repairs and maintenance contract which aligns with the roll out of the LED upgrade project.
- 4.3 Procurement options: Utilise a framework agreement (YPO Highway and Electrical installations – ref 925) to procure both the LED upgrade and repairs and maintenance contract.

## **5 Reasons for the Recommendation (s)**

- 5.1 LED upgrade with or without smart technology: Whilst the Cabinet's mandate is to upgrade the lighting to LED there is also an option to consider the use of network enable lighting (the internet of things) which provides additional functionality, potential efficiencies and further future proofing. Hence the decision to obtain costs against both options.
- 5.2 Repairs and maintenance: To comply with our contract rules, to ensure that repairs and maintenance is tailored around a diminishing number of existing lanterns and increasing number of LED units.
- 5.3 Procurement: With an initial 3-year contract value in excess of the OJEU (Official Journal of the European Union) threshold, procurement rules apply.

## **6 Next Steps – Communication and Implementation of the Decision**

- 6.1 In accordance with the Cabinet's decision, a Communications plan has been developed to support delivery of the LED upgrade.

## **7 Financial Implications**

- 7.1 The allocation of £100,000 from the invest to save reserve was approved by Cabinet in June 2019 in order to facilitate the process of converting General Fund street lights to energy efficient LED as part of a 12 year overall programme. Approval was also given towards the replacement of Housing Revenue street lights to energy efficient LED fully funded from the HRA (at a cost of approximately £80,000). This report provides an update on progress that has been made on this initiative.

**Financial Implications reviewed by: Richard Wyles, Interim Director of Finance**

## **8 Legal and Governance Implications**

- 8.1 There are no legal issues arising from this report

**Legal Implications reviewed by: Shahin Ismail, Interim Head of Legal & Monitoring Officer**

## **9 Equality and Safeguarding Implications**

- 9.1 There are no specific equality or safeguarding implications resulting from this report, however, consideration will be given to mitigate any potential for negative impact in relation to the practical function of streetlighting going forward.

## **10 Risk and Mitigation**

- 10.1 No significant risks have been identified in relation to this report.

## **11 Community Safety Implications**

- 11.1 No key issues identified relating to this report.

## 12 How will the recommendations support South Kesteven District Council's declaration of a climate emergency?

- 12.1 LED lanterns provide the potential to deliver a 60% carbon saving when compared to Low Pressure Sodium. On completion of the project that will equate to an annual carbon reduction of 181.2 tonnes of carbon equivalent (CO2e).
- 12.2 The contract specification underpinning this request to commence procurement is designed to ensure that we deliver against this potential.
- 12.3 LED lanterns equipped with smart technology (intelligent streetlights) will potentially deliver greater carbon savings

## 13 Other Implications (where significant)

- 13.1 None.

## 14 Background Papers

<http://moderngov.southkesteven.gov.uk/ieListDocuments.aspx?CId=630&MId=3691&Ver=4>

[Cabinet Report 11.6.19](#)

<b>Report Timeline:</b>	Date of Publication on Forward Plan (if required)	Not applicable
	Previously Considered by: Environment Overview and Scrutiny Committee	20 November 2018
	Final Decision date	Not applicable