

Street Lighting Energy Reduction Project (SLERP) Update

Environment and Sustainable Communities Overview
and Scrutiny Committee

October 2023



Agenda

Background

Benefits

Considerations

SLERP 1
overview

SLERP 2
overview

SLERP 3

Background

- **Highways Street Lighting stock- 83,676 street lights**
- The SLERP project has been the biggest single contributor to date to the Council's reduction in carbon emissions
- Total investment £ 31.8million
- "Invest to save" - project financed through Capital Investment with payback from energy and maintenance cost savings
- On average energy savings are reduced by up to 54% compared to previous installations
- Delivery - in-house Street Lighting Team supported by external sub-contractors
- Dimming
 - 25% between 10pm- 12am
 - 50% between 12am – 5am
- Collaborative Regional procurement of LEDs – current supplier is Thorn



Benefits

- Energy reduction
- Carbon reduction
- Better quality white light – colour rendition
- Reduction in light pollution and light spillage
- Maintenance savings
- Reduced lifecycle replacement costs
- Average annual revenue savings over a 25 year period £1.2m/year
- Reduced road traffic accidents
- Reduction in severity of road traffic accidents
- Promotes the night time economy
- Reduces the fear of crime thereby making people feel safer
- Increased light control



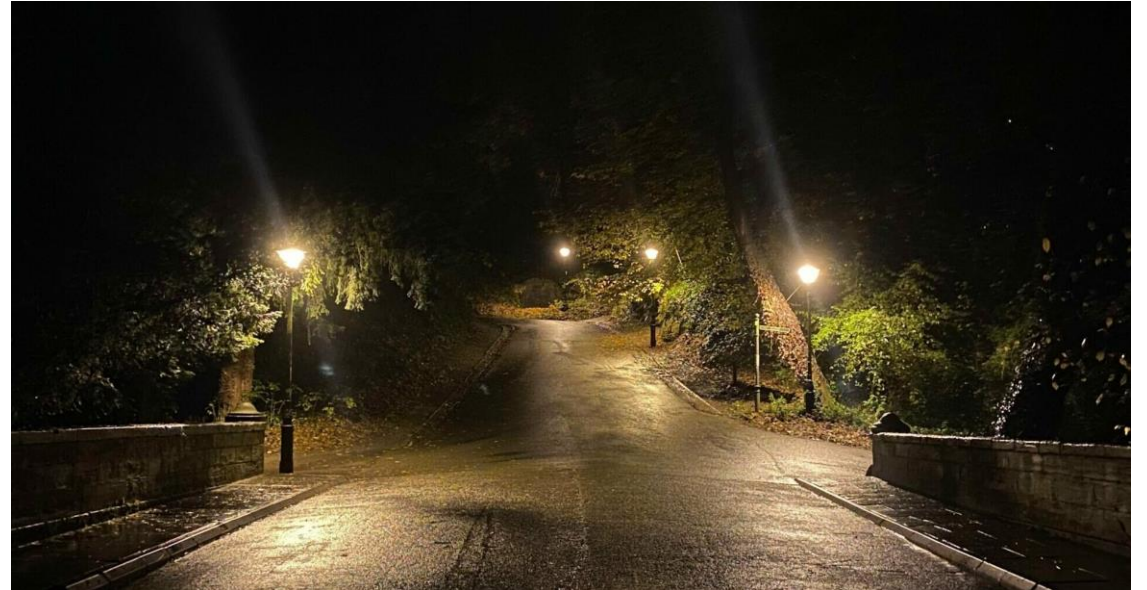
Before



After

Considerations

- Column Locations
- Road/Speed
- Average Cost of the conversion
- Crime statistics
- Traffic Flows
- British Standards for Street Lighting
- Relevant Regulations/Codes of practice
- Topography



SLERP 1

- SLERP 1 – 6-year “Invest to save” project which converted approx. 60,000 streetlights
- Original project estimate £22.552million
- Started 2013 and completed in 2019
- Cost £22.532million
- Energy Reductions 16,948,934 kWh
- Carbon Savings 8,413 tonnes
- Annualised Electricity Savings @ 2023 rates £5,596,199
- Project underspend £20k, however, original conversion target 41,000 streetlights actual 60,000
- Reduced conversion costs facilitated an increase in the number of lanterns converted

SLERP 2

- SLERP 2 – 3 year “invest to save project” which converted approx. 16,000 street lights
- Project estimate £9.26million
- Started 2020 until 2023
- Extended by 6 months completed September 2023
- Cost £6,364,268
- Energy Reductions 5,317,434 kWh
- Carbon Savings 1,184 tonnes
- Annualised Electricity Savings @ 2023 rates £1,755,710
- Project underspend £2.9million
- Advances in LED technology have extended the energy savings.
- Project underspend enabled the commencement of SLERP 3

SLERP 3

- SLERP 3 – 1 ½ years “invest to save project” which will convert approx. 1,900 street lights
- Project estimate £2.9million
- Started September 2023
- Projected completion date March 2025
- Carbon Reduction TBC
- Energy Savings TBC
- As the number of lanterns available for conversion are reducing, the cost of conversion is increasing
- Many conversions will require the replacement of columns

Out of scope lanterns

From the 83,676 streetlights only 3,500 lanterns will remain outstanding

These remaining conversions will be completed as part of the ongoing Capital replacement programme

Any Questions?

