
Report to Council

Date of Meeting: 13 October 2016

**Subject: Street Lighting LED Lantern Replacement Programme
Acceleration**

Report by: Head of Development & Environment

1.0 Purpose

- 1.1. To update Council on progress with the LED Lantern Replacement Programme, seek Councils approval to accelerate the programme and the associated energy and revenue savings through the programme and street light dimming.

2.0 Recommendations

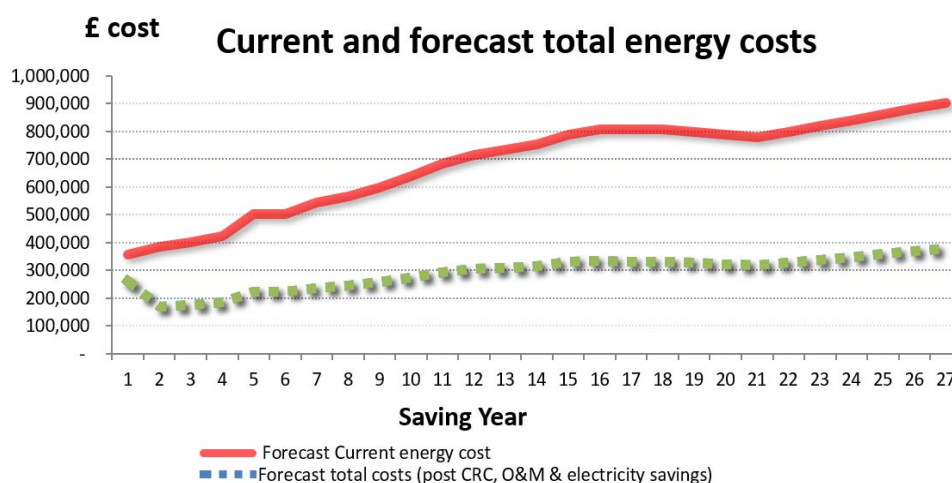
It is recommended that Council approve :

- 2.1. Amendments to the Council's Capital Programme to increase the funding available for the street lighting LED lantern replacement in financial years 2016/17 and 2017/18 as set out in paragraph 3.6.
- 2.2. Dimming of street lights to 75% luminance between midnight and 6 am.
- 2.3. Application to, and acceptance of a Scottish Government backed interest free loan of £400,000 from SALIX Ltd as part funding towards the Street Lighting Replacement Programme.

3.0 Considerations

- 3.1. The Street Lighting Replacement Programme aims to replace halogen lanterns with modern, energy efficient LED lanterns that reduce energy costs by half, reduce the maintenance through life expectancy of the lanterns and improve the lumination visibility on our roads.
- 3.2. As of April 2016 around 1,500 of the Council's 8,900 lanterns had been replaced with modern LED equivalents. Installations in Clackmannan and Tullibody are complete, resulting in a saving of £60,000 in the energy savings. Lessons learned during the early implementation phase have resulted in subsequent phases being generally well received by the public.

- 3.3. Currently the programme is focused on Tillicoultry and replace all lanterns and those columns approaching the end of their service life, within selected areas.
- 3.4. The Council has approved a Capital Programme to roll-out of the LED lanterns, for completion during 2021. The Service has been working with the Scottish Futures Trust (SFT) to determine the benefits of accelerating this programme. Based on an accelerated completion date of March 2018, the estimated energy saving would be £73,000 per annum for the next two years. This would enable the full programme saving from April 2018, as opposed to April 2021. The figure below offers an illustration of the potential savings.



- 3.5. The approved capital budgets for street lighting replacement are shown in table 3.5.

Table 3.5 – Approve Capital Budgets

Project	2016/17 £000	2017/18 £000	2018/19 £000	2019/20 £000	2020/21 £000
Street Lighting Improvements	975	875	225	225	400
Replacement Lighting Columns	265	250	250	250	250
Total	1240	1125	475	475	650

- 3.6. The amendments proposed would bring forward the 2018/19 – 2020/21 street light improvement funding of £850,000 into the financial year 2016/17, £400,000 and 2017/18, £450,000.

Table 3.6 – Proposed Accelerated Budget

Project	2016/17 £000	2017/18 £000	2018/19 £000	2019/20 £000	2020/21 £000
Street Lighting Improvements	1375	1325			
Replacement Lighting Columns	265	250	250	250	250
Total	1640	1575	250	250	250

- 3.7. The £400,000 for 2016/17 would be obtained from the SALIX loan fund. This is an interest free Scottish Government backed loan, available to local authorities to support efficiency measures. Taking this option would be financially advantageous as this amount of capital would be interest free as

opposed to incoming capital borrowing charges. The £450,000 sought in 2017/18 is proposed to be funded from underspend of the 2016/17 capital programme accrued into 2017/18, as reported to the Finance & Audit Committee in September 2016.

3.8. **Maintenance**

Halogen lanterns require replacement and maintenance on average every 3 years. LED lanterns require minimum maintenance or replacement and are guaranteed for ten years but have an expectant life of twenty years. The accelerated programme will also bring forward potential revenue savings from reduced maintenance. These savings are estimated at £30,000 in 2017/18 and a further £30,000 from 2018/19.

3.9 **Dimming of Street Lighting**

At present street lights are set at the same lumination at all times. This proposal includes an element of reduced spend associated with the dimming of street lights to 75% lighting output between midnight and 6am. This approach is being adopted by a number of Scottish Authorities, following a change to Standards BS 5489 and BS EN 13201. This approach would generate £15,000 of energy savings per annum on LED lanterns (£7,000 in 2017/18). A further benefit of dimming is the additional 10% of carbon reduction savings achievable.

3.10 The cumulative revenue savings through acceleration of the LED Lantern Replacement Programme, reduced maintenance costs and dimming of street lighting is set out below totalling up to £220,000 over 2 years.

Table 3.10 – Estimated Savings

	Annual Savings 2017/18	Annual Savings 2018/19	Total Savings	Annual CO2 Savings (Tonnes)
Energy Without Dimming	£73,000 (Electricity)	£72,000 (Electricity)	£156,600	739
Energy With Dimming	£80,000 (Electricity)	£80,000 (Electricity)	£172,750	812
Future Street Lighting Maintenance	£30,000 (Revenue)	£30,000 (Revenue)	£70,000	
Total Savings (with Dimming)	£110,000	£110,000	£220,000 (over 2 years)	1600

4.0 **Sustainability Implications**

4.1. The accelerated project will result in an annual reduction of around 800 tonnes of carbon dioxide emissions from April 2018, significantly contributing to the Council's duty under the Climate Change (Scotland) Act to reduce greenhouse gas emissions.

- 4.2. Replacement of existing lanterns with modern LED equivalents will result in a reduction of energy usage by up to 55% per lantern. This will limit the effects of future energy cost increases.

5.0 Resource Implications

5.1. *Financial Details*

- 5.2. The full financial implications of the recommendations are set out in the report. This includes a reference to full life cycle costs where appropriate. Yes

- 5.3. Finance have been consulted and have agreed the financial implications as set out in the report. Yes

5.4. *Staffing*

- 5.5. There are no staffing implications arising from this report.

6.0 Exempt Reports

- 6.1. Is this report exempt? Yes (please detail the reasons for exemption below) No

7.0 Declarations

The recommendations contained within this report support or implement our Corporate Priorities and Council Policies.

- (1) **Our Priorities** (Please double click on the check box)

- | | |
|--|-------------------------------------|
| The area has a positive image and attracts people and businesses | <input checked="" type="checkbox"/> |
| Our communities are more cohesive and inclusive | <input type="checkbox"/> |
| People are better skilled, trained and ready for learning and employment | <input type="checkbox"/> |
| Our communities are safer | <input checked="" type="checkbox"/> |
| Vulnerable people and families are supported | <input type="checkbox"/> |
| Substance misuse and its effects are reduced | <input type="checkbox"/> |
| Health is improving and health inequalities are reducing | <input type="checkbox"/> |
| The environment is protected and enhanced for all | <input checked="" type="checkbox"/> |
| The Council is effective, efficient and recognised for excellence | <input checked="" type="checkbox"/> |

- (2) **Council Policies** (Please detail)

The Sustainability and Climate Change Strategy includes a priority to reduce our contribution to climate change, Street Lighting Policy

8.0 Equalities Impact

8.1 Have you undertaken the required equalities impact assessment to ensure that no groups are adversely affected by the recommendations?

Yes No

9.0 Legality

9.1 It has been confirmed that in adopting the recommendations contained in this report, the Council is acting within its legal powers. Yes

10.0 Appendices

10.1 Please list any appendices attached to this report. If there are no appendices, please state "none".

None

11.0 Background Papers

11.1 Have you used other documents to compile your report? (All documents must be kept available by the author for public inspection for four years from the date of meeting at which the report is considered)

Yes (please list the documents below) No

Author(s)

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Approved by

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