

**Joint Special Meeting of the
Environment and Sustainable
Communities Overview and Scrutiny
Committee and the Economy and
Enterprise Overview and Scrutiny
Committee**



16 May 2022

**Street Lighting Energy Reduction
Project II Update (SLERP)**

**Report of Alan Patrickson, Corporate Director of Neighbourhoods
and Climate Change**

Electoral division(s) affected:

Countywide

Purpose of the Report

1. The purpose of this report is to provide Environment and Sustainable Communities Overview and Scrutiny Committee with a mid-project review of SLERP 2 - Year 2 (2021/2022) regarding retrofit installations, confirm the cumulative position year to date and comment on energy savings, carbon reduction and financial information.

Executive Summary

2. SLERP 2 is a 3 year invest to save project that commenced in 2020/2021 and is programmed to retrofit 17,328 streetlights with energy efficient LED's. 2022/23 is the final year of the project.
3. The project is funded through invest to save capital funding with payback from the revenue energy budget over a 25-year period.
4. Currently at the Year 2 mid-project review the project is progressing well despite project delays because of Covid-19 and some issues with component deliveries.
5. The project delivery (retrofit installations) and capital funding payback have been reprofiled to reflect performance to date.
6. The project is still anticipated to complete in the original 3-year timescale.

Recommendation

7. That the Environment and Sustainable Communities Overview and Scrutiny Committee note the report and its contents, and the committee receive an end of project update once the overall scheme is completed in 2023.

Background

8. The Street Lighting Energy Reduction (SLERP) project has been delivered in 2 phases, SLERP 1 which was a 6 year invest to save project which converted 59,851 streetlights with energy efficient LED's. The project has been the biggest single contributor to date to the Council's reduction in carbon emissions.
9. SLERP 2 is a 3 year invest to save project which commenced 2020/2021 and is programmed to retrofit 17,328 streetlights with energy efficient LED's.
10. Following the completion of both projects there will remain a number of streetlights which have not been retrofitted as these units at this current point in time exceed the Council's invest to save criteria.
11. Appendix 2 details the December 2012 SLERP I Cabinet Report.
12. Appendix 3 details the end of SLERP I project report.

Retrofit Installations

13. In Year 1 (2020/2021) of SLERP 2 the original retrofit installation target of 4,618 was not achieved as a result of Covid 19 and component deliveries. The actual retrofit installations were 1,986 resulting in an under achievement of 2,632, this figure was carried forward into Year 2 (2021/2022) increasing the original target of 6,575 to 9,207.
14. The SLERP 2 project at the Year 2 mid-year position confirmed that the six-monthly target for retrofit installations has been achieved. Target 4,706 against 4,979 actual retrofit installations.
15. The cumulative retrofit installation target for Year 2 (2021/2022) is 9,207 units. Progress in Quarters 3 and 4 of Year 2 has been severely affected by the worldwide shortage of semiconductor components and has resulted in 7,394 retrofits being completed, 1,813 behind target.
16. The Year 2 (2021/2022) under achievement of 1,813 retrofit installations will be included in the Year 3 (2022/2023) target, increasing the original target of 6,135 to 7,948 retrofit installations.

17. The table below summaries this data:

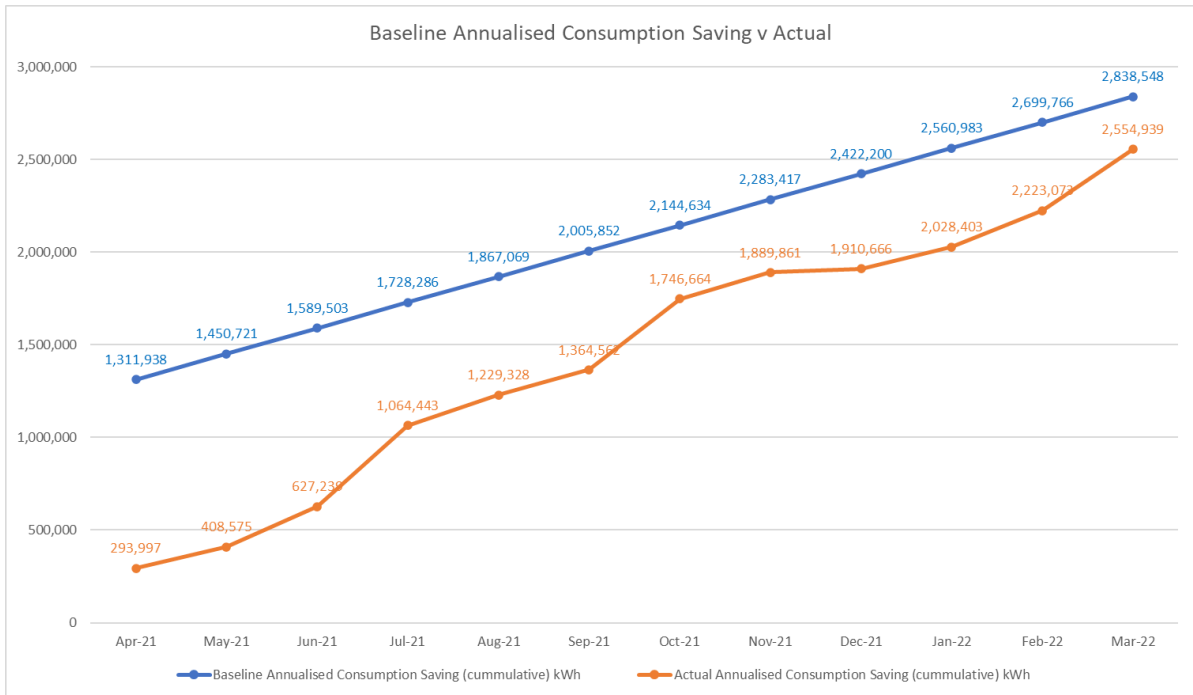
Year	Target Installs	Completed / Projected Installs	Year End Position
2020/2021	4,618	1,986	Under achieved by 2,632
2021/2022	9,207 (6,575 + 2,632 carryover)	7,394	Projected under achievement of 1,813
2022/2023	7,948 (6,135 + 1,813 carryover)	Projected 7,948	Project planned to complete on target
Project Total	17,328	Project Duration 3 Years	Anticipate completing on time

18. Although the revised target for Year 3 (2022/2023) is ambitious, it is anticipated at this moment in time that the overall project will still complete in the original 3-year project timeline (March 2023).

Energy Savings

19. As a consequence of an underachievement in retrofit installations at the end of Year 2 the cumulative annualised target of 2,838,548 kWh's energy savings has not been achieved. The energy savings achieved are 2,554,939 kWh's, an underachievement of 2,838,548 kWh's behind the cumulative target.
20. The average annualised consumption saving target for the 17,328 units is 253.72kWh. Owing to advances in LED technology, the average actual consumption saving of the 9,380 retrofits completed to date is, however, 302.23kWh, an increased saving of 48.51kWh per unit.

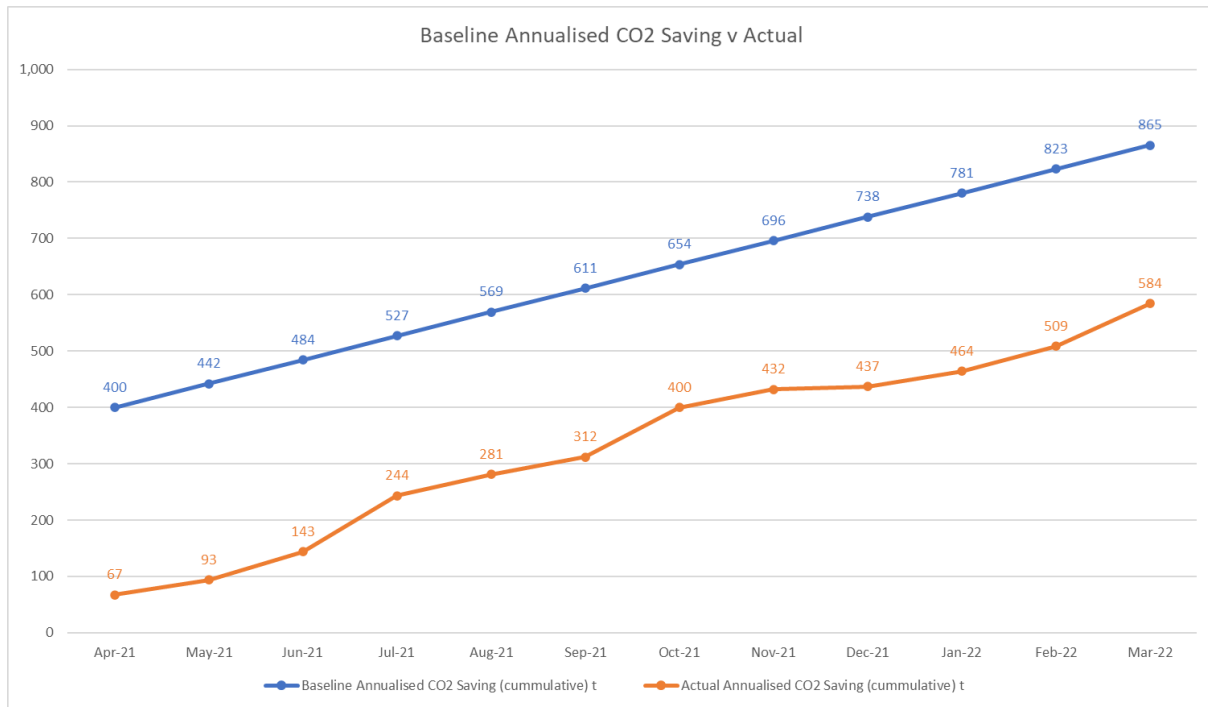
21. The graph below outlines this data:



Carbon Reduction

22. As a consequence of an underachievement in retrofit installations at the end of Year 2 the cumulative annualised target of 865 tonnes reduction in CO² has not been achieved. The CO² savings achieved are 584 tonnes, an underachievement of 281 tonnes behind the cumulative target.
23. Carbon conversion factors have reduced by 17% since the submission of the original business case based on the sustainable energy generation; consequently the carbon reduction savings are further impacted.

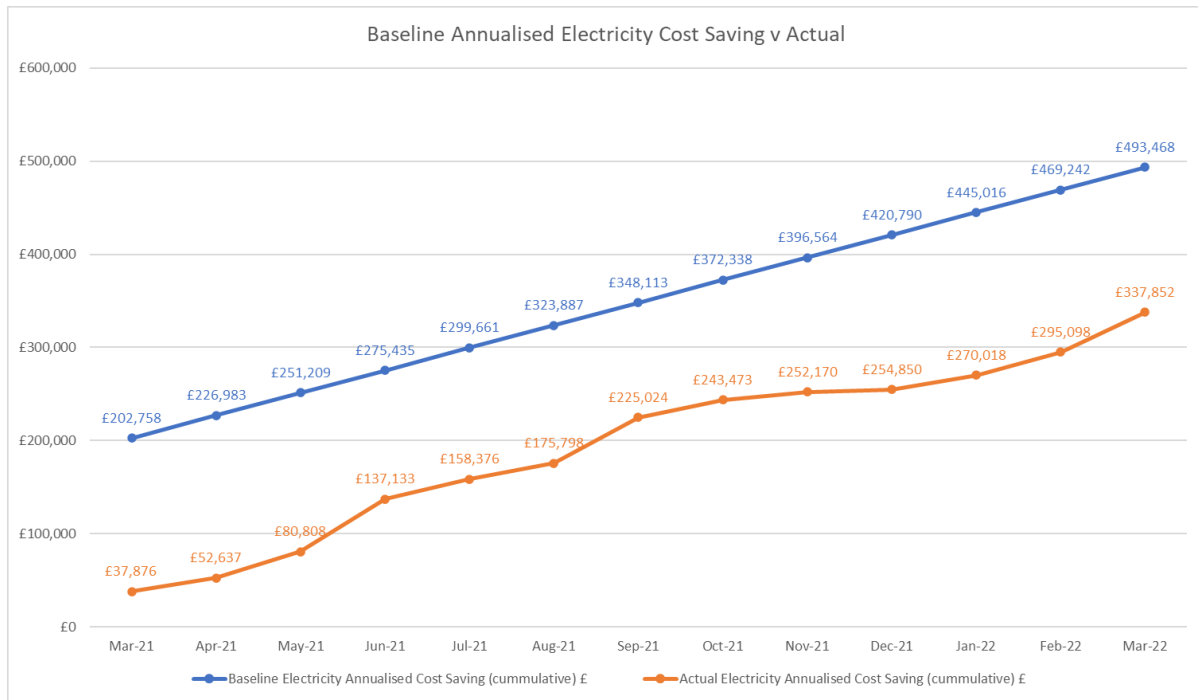
24. The graph below outlines this data:



Electricity Cost Savings

25. As a consequence of an underachievement in retrofit installations at the end of Year 2 the cumulative annualised savings target of £493,468 has not been achieved. The cumulative savings achieved are £337,852, an underachievement of £155,616 behind the cumulative target.
26. The electricity rates have been lower than those used in the original business case following a corporate procurement tender process, however rates have now changed from a daily flat rate to separate rates for night/ day consumption and increased by 72% and 112%.

27. The graph below outlines this data:



Payback

28. As a consequence of an underachievement in retrofit installations at the end of Year 2 the payback on the invest to save project has been reprogrammed accordingly. Payback on this invest to save project is linked directly to capital spend, the detail below confirms the current payback profile based on performance to date.
29. Invest to save payback is comprised of time limited reductions (25 years) in the revenue energy budget for Street Lighting. The energy savings that are realised from the retrofit project directly lead to reduced energy costs, meaning that the impact of energy cost increases on the revenue budget should be reduced after taking account of the payback reductions. At the end of the 25-year payback period, the revenue budget will be fully reinstated.
30. The table below outlines the invest to save payback:

Year of Project	Capital Spend £	Budget Reduction £	Repayment Timeline
2019/20 (actual) + 2020/21 Projected	1,276,689	73,318	Budget reduced in 21/22 for 25 years (ends 46/47)
2020/21 Adjustment + 2021/22 Projected	4,740,856	272,257	Budget reduced In 22/23 for 25 years (ends 47/48)
2022/23 Estimated	3,271,901	187,898	Budget reduced in 23/24 for 25 years (ends 48/49)
	9,289,446	533,473	

Conclusion

31. Environment and Sustainable Communities Overview and Scrutiny Committee note the report and its contents.
32. The project is planned to be completed in the original 3-year programme.
33. The invest to save payback will be reprofiled to reflect the actual delivery programme throughout the project.
34. Environment and Sustainable Communities Overview and Scrutiny Committee to receive an end of project report in 2023 at the conclusion of the project.

Background papers

- None

Other useful documents

- None

Contact:	Mark Readman – Highway Services Manager	Tel: 03000 269261
	Paul Watson – Strategic Highways Manager	Tel: 03000 268166

Appendix 1: Implications

Legal Implications

Durham County Council, as the local Highway Authority, has a statutory duty under the Highways Act 1980 to maintain the adopted highway at public expense.

Finance

As detailed in the report.

Consultation

Public consultation undertaken on the updated Street Lighting Policy

Equality and Diversity / Public Sector Equality Duty

None.

Climate Change

Delivery of the SLERP project contributes to the councils declaration of a climate emergency in respect of energy and carbon reduction through the installation of LED units,

Human Rights

None.

Crime and Disorder

None

Staffing

SLERP II is delivered by the Council's in-house Highway Services team supported by a supply chain of competitively procured external sub-contractors.

Accommodation

None.

Risk

None.

Procurement

External sub-contractors are procured through a competitive tendering process which is reviewed on a regular basis to ensure value for money is achieved.

Lighting units are purchased through a local company following a competitive procurement exercise.