

HAMPSHIRE COUNTY COUNCIL

Decision Report

Decision Maker:	Executive Member for Economy, Transport and Environment
Date:	10 March 2020
Title:	Transformation to 2021 Street Lighting LED Replacement Project
Report From:	Director of Economy, Transport and Environment

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Purpose of this Report

1. The purpose of this report is to advise the Executive Member for Economy, Transport and Environment of an opportunity to reduce the cost of managing Hampshire's streetlighting network through varying the street lighting Private Finance Initiative (PFI) to replace high-power lamps with LEDs. The report seeks approval to vary the PFI Project Agreement to facilitate this change in apparatus maintained through the PFI, and to invest £3.2million, funded from the departmental Cost of Change reserve, to replace 12,000 (approx.) high-power lamps with more energy efficient LEDs.

Recommendations

2. That the Executive Member for Economy, Transport and Environment gives approval to vary the street lighting Private Finance Initiative (PFI) to enable high power lamps to be replaced with more energy efficient LEDs, and delegates authority to the Director of Economy, Transport and Environment, in consultation with the Head of Legal Practice, to make the necessary changes to the PFI Project Agreement, and to approve any associated modification.
3. That, subject to the technical agreement of the variation to the Street Lighting PFI, the Executive Member for Economy, Transport and Environment approves the replacement of 12,000 (approx.) high-power lamps with more energy efficient LEDs at a cost of £3.2million to be funded from the departmental Cost of Change reserve to deliver the street lighting Transformation to 2021 (Tt2021) savings in full.
4. That the Executive Member for Economy, Transport and Environment confirms that further dimming or extension of part-night lighting will no longer be required as part of Transformation to 2021 savings, subject to successful completion of the LED proposal.
5. That authority to make the arrangements to implement the proposal, including minor variations, be delegated to the Director of Economy, Transport and Environment.

6. That authority be delegated to the Director of Economy, Transport and Environment, in consultation with the Executive Member for Economy, Transport and Environment, to vary the programme and financial arrangements should LEP or other external funding be secured.

Executive Summary

7. This paper sets out savings achieved to date to reduce the cost of managing Hampshire's streetlighting network and seeks to identify opportunities for further savings.
8. At its meeting on 7 November 2019 the County Council approved a package of proposals to meet the £80million Transformation to 2021 savings target including a £500,000 saving from street lighting through opportunities offered from advances in technology and/or other service efficiencies including extending dimming and part-night lighting.
9. It is estimated that the savings achievable through service efficiencies (i.e. through dimming and part-night lighting) is £263,000; some way short of the £500,000 target.
10. It is estimated that replacing high-power street lights with low energy LEDs would deliver the £500,000 savings target in full.
11. The report concludes that replacing high powered lanterns with low energy LED lanterns is the best way to reduce energy consumption at this time.

Contextual information

12. Street lighting in Hampshire is maintained and operated under a Private Finance Initiative (PFI). As part of the PFI Core Investment Programme, all street lighting units have been fitted with a remote monitoring and control system that enables the County Council to control the light output from these units. This facility has been utilised in previous savings rounds to deliver energy cost saving through dimming and more recently part-night lighting on residential streets.
13. Since 2010, the County Council has reduced the brightness of street lights, predominantly in residential streets.
14. Street lights on residential roads are dimmed by 45% from switch on until 23:30, 65% from 23:30 until 05.00, and then back to 45% until switch off. Street lights on principal roads are dimmed by 25% from switch on until 23:30, 50% from 23:30 until 05.00, and then 30% until switch off. Cosmopolis light sources (approximately 18,000 units) which can only be dimmed by a maximum of 40%, are dimmed by this full 40% continuously from dusk (switch on) to dawn (switch off).
15. By the end of 2018, the County Council had more than halved its energy consumption compared with 2010.
16. Following consultation in 2018, the County Council introduced part-night lighting, switching off some street lights on residential streets for part of the night (1am to 3am), every night from April 2019, saving a further £230,000 per annum.

17. At its meeting on 7 November 2019 the County Council approved a package of proposals to meet the £80million Transformation to 2021 savings target including a £500,000 saving from street lighting through opportunities offered from advances in technology and/or other service efficiencies including extending dimming and part-night lighting.
18. The current energy budget for street lighting is £2.7million (2019/20). The target saving of £0.5million equates to a 19% reduction. This is on top of a 60% reduction in energy consumption achieved through the PFI and earlier transformation programmes.
19. As the County Council had predominantly focussed earlier savings on residential streets and these are now at their maximum, further service efficiencies would need to come from increasing dimming and extending part-night lighting on the classified road network.
20. The 'classified road network' generally comprises roads other than residential streets and are numbered and prefixed with A, B or C e.g. A272, B3004, C42. 'Residential streets' are generally roads that are used to access housing rather than commercial properties and include housing estate roads and other similar roads.
21. It is estimated that the savings achievable through service efficiencies (i.e. through dimming and part-night lighting) is £263,000; some way short of the £500,000 target.
22. Energy savings can also be achieved by replacing traditional street lights with more energy efficient LEDs. LED lights are currently installed in the South Downs and New Forest National Parks and are being introduced, as standard, on all new housing developments.
23. It is estimated that replacing high-power street lights with low energy LEDs would deliver the £500,000 savings target in full.
24. As replacing high-power street lights with low energy LEDs is anticipated to deliver the savings target in full, the option for further dimming and extending part-night lighting is not required as part of Transformation to 2021 savings, and subject to successful completion of the LED proposals, would not be implemented at this time.

Finance

25. The capital cost of replacing 12,000 (approx.) high-power lamps with more energy efficient LEDs is £3.2 million and will deliver the targeted Tt2021 annual energy savings of £500,000.
26. Funding for the LED replacement and associated legal work required to vary the PFI Project Agreement will be met from the Departmental Cost of Change reserve. The proposed spend profile for the investment is spread over three years as set out in the table below. The County Council will investigate options to establish whether it is financially and operationally advantageous to consider an accelerated implementation timeline.

	2020/21	2021/22	2022/23	Total
	£'000	£'000	£'000	£'000

Installing LED lighting units	1,255	1,307	644	3,206
Legal work for changes to PFI contract	70	0	0	70
Total cost	1,325	1,307	644	3,276

27. Discussions with the Solent and Enterprise M3 LEPs are ongoing, and will continue, to establish whether there could be funding available to support the acceleration of this project, if it is operationally feasible and financially advantageous.
28. The report seeks authority to be delegated to the Director of Economy, Transport and Environment to make minor amendments to the arrangements to implement the proposal.
29. It is anticipated that increasing the LEDs installed in this programme or subsequent programmes of LED replacement can be facilitated without a further variation to the PFI Project Agreement using the change mechanisms within the contract.

Performance

30. With over 150,000 lighting units in Hampshire, street lighting is a major contributor to the County Council's energy consumption and is an indirect generator of carbon emissions.
31. In order to reduce energy consumption, the County Council is proposing to replace high-powered street lighting with low energy LED lanterns on principal roads. There are approximately 32,400 high-powered street lighting units on principal roads in Hampshire. This project is prioritising the replacement of a smaller number (12,000 approx.) of the most high-powered street lighting units.
32. This project is in accordance with the growing awareness of the Climate Change Agenda and the Climate Emergency which was declared by the County Council in 2019.
33. Over the last ten years or so the County Council has replaced or upgraded the street lighting throughout Hampshire with units which are more efficient than previous lighting installations and varied the light output from these units to further reduce energy consumption. In 2018 the County Council introduced limited part-night lighting in residential streets, reducing carbon dioxide output by a further 720 tonnes per annum. Despite these significant savings, street lighting will continue to consume high levels of energy, and with limited scope to reduce dimming further, replacing high powered lanterns with low energy LED lanterns is considered the best way to reduce future energy consumption.

Consultation and Equalities

34. This project is anticipated to have a neutral impact on groups with protected characteristics as the lighting will not change other than to replace 12,000 approx. (of 32,500 approx.) high pressure sodium street lights with equivalent LEDs.

35. New LED street lights will increase the County Council's ability to be flexible about lighting and dimming regimes in the future.

Conclusions

36. At its meeting on 7 November 2019 the County Council approved a package of proposals to meet the £80million Transformation to 2021 savings target including a £500,000 saving from street lighting through opportunities offered from advances in technology and/or other service efficiencies including extending dimming and part-night lighting.

37. An investigation into options to deliver savings estimates that the savings achievable through service efficiencies (i.e. through dimming and part-night lighting) is £263,000, whereas replacing high-power street lights with low energy LEDs will deliver the savings in full.

38. This project is also in accordance with the growing awareness of the Climate Change Agenda and the Climate Emergency which was declared by the County Council in 2019.

REQUIRED CORPORATE AND LEGAL INFORMATION:

Links to the Strategic Plan

Hampshire maintains strong and sustainable economic growth and prosperity:	yes
People in Hampshire live safe, healthy and independent lives:	yes
People in Hampshire enjoy a rich and diverse environment:	yes
People in Hampshire enjoy being part of strong, inclusive communities:	yes

Other Significant Links

Links to previous Member decisions:	
<u>Title</u>	<u>Date</u>
Executive Member for Economy, Transport and Environment. Transformation to 2021 – Revenue Savings Proposals	17 September 2019
County Council Cabinet. Medium Term Financial Strategy Update and Transformation to 2021 Savings Proposals	7 November 2019
Direct links to specific legislation or Government Directives	
<u>Title</u>	<u>Date</u>

Section 100 D - Local Government Act 1972 - background documents

The following documents discuss facts or matters on which this report, or an important part of it, is based and have been relied upon to a material extent in the preparation of this report. (NB: the list excludes published works and any documents which disclose exempt or confidential information as defined in the Act.)

<u>Document</u>	<u>Location</u>
Street lighting workings for business case	SharePoint

EQUALITIES IMPACT ASSESSMENT:

1. Equality Duty

The County Council has a duty under Section 149 of the Equality Act 2010 ('the Act') to have due regard in the exercise of its functions to the need to:

- Eliminate discrimination, harassment and victimisation and any other conduct prohibited by or under the Act with regard to the protected characteristics as set out in section 4 of the Act (age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation);
- Advance equality of opportunity between persons who share a relevant protected characteristic within section 149(7) of the Act (age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex and sexual orientation) and those who do not share it;
- Foster good relations between persons who share a relevant protected characteristic within section 149(7) of the Act (see above) and persons who do not share it.

Due regard in this context involves having due regard in particular to:

- The need to remove or minimise disadvantages suffered by persons sharing a relevant characteristic connected to that characteristic;
- Take steps to meet the needs of persons sharing a relevant protected characteristic different from the needs of persons who do not share it;
- Encourage persons sharing a relevant protected characteristic to participate in public life or in any other activity which participation by such persons is disproportionately low.

2. Equalities Impact Assessment:

This project is anticipated to have a neutral impact on groups with protected characteristics as the lighting will not change other than to replace 12,000 approx. (of 32,500 approx.) high pressure sodium street lights with equivalent LEDs.

New LED street lights will increase the County Council's ability to be flexible about lighting and dimming regimes in the future.