



CABINET – 23 JUNE 2023

STREET LIGHTING – PROPOSED SERVICE CHANGES

REPORT OF THE DIRECTOR OF ENVIRONMENT AND TRANSPORT

PART A

Purpose of the Report

1. The purpose of this report is to advise the Cabinet on the possibility of achieving financial savings in the provision of street lighting across the County and to advise on the potential risks associated with the options presented.
2. The context for the need for savings is set out in the Medium Term Financial Strategy (MTFS) 2023-27. This report seeks approval to undertake an engagement/consultation exercise, prior to the development of a risk assessment of the preferred service change.
3. This report also sets out the potential reduction in carbon emissions (CO₂e) that could be achieved from proposed changes to the provision of street lighting across the County.

Recommendations

4. It is recommended that:
 - a) An engagement/consultation exercise be undertaken on Option 2 – to dim all street lights, including those on traffic routes, to 30% from 20:00 across the County – as outlined in this report;
 - b) A further report be submitted to the Cabinet in December 2023 providing feedback on the engagement/consultation exercise and the associated risk assessment and seeking approval for a final scheme proposal; and
 - c) The risks associated with each of the four Options (as detailed in the report) for a reduced provision of street lighting, notably those that would represent a departure from national design standards and an increased exposure to risk, be noted.

Reasons for Recommendation

5. The Council's MTFS requires savings of £150,000 in 2023/24, rising to £500,000 in subsequent years, to be made in the street lighting service.

6. A reduced provision of street lighting would also reduce carbon emissions and therefore contribute to the Council's net zero target on its own operations by 2030.
7. Any reduction in lighting that is a departure from national design standards inherently carries greater risk. Whilst Option 2 is not risk-free, it is considered that this is likely to carry fewer risks whilst delivering the required full-year savings from 2024/25.
8. Undertaking engagement/consultation on the proposals will help further assess the risks involved, the potential effect of the changes, and mitigation measures to be considered.
9. The subsequent report to the Cabinet will enable a decision to be made as to whether the proposed service change should be implemented.

Timetable for Decisions (including Scrutiny)

10. Public engagement/consultation is expected to be undertaken for four weeks starting in late June/early July 2023. Engagement/consultation with the police and emergency services would be carried out during this time and throughout the risk assessment process, which is expected to be completed at the end of October 2023. It is intended that a report will be submitted to the Highways and Transport Overview and Scrutiny Committee in November 2023.
11. The outcome of engagement/consultation and risk assessment, as well as any observations from the Scrutiny Committee, will be reported to the Cabinet in December 2023.
12. To deliver the required savings in 2023/24, the agreed Option, if adopted, would have to be implemented by the end of December 2023.

Policy Framework and Previous Decisions

13. The Cabinet, in December 2009, approved the Energy Reduction for Street Lighting Project to reduce levels of street lighting in the County by dimming lights, permanently switching off lights and switching off lights between 00:00 and 05:30 (part-night lighting). This was a departure from design standards.
14. The Cabinet, in July 2015, approved the implementation of the Street Lighting Transformation Project to convert to LED lighting under Central Management System (CMS) control and to de-illuminate, where permitted, traffic signs and bollards.
15. The Cabinet, in July 2018, approved the Environment Strategy 2018-30; this set out how the activities of the Council affect the environment, the rationale for acting to address this and to address wider environmental issues affecting the County and the people living within it.

16. The County Council, at its meeting on 18 May 2022, approved the Strategic Plan 2022-26 which set out the Council's long-term vision for Leicestershire and its priorities over a four-year period. It is a key strategy which shapes how the Council plans and delivers services. The proposal in this report would contribute to the "clean green future" outcome in that it would reduce energy usage and support achievement of the Council's Net Zero emissions target.
17. The Cabinet, at its meeting on 23 September 2022, noted the significant financial challenges faced by the Council and agreed the approach to updating the MTFs. The MTFs 2023-27 was approved by the County Council on 10 February 2023.

Resource Implications

18. The 2023/24 revenue budget for street lighting energy is £2.85m, which includes a part-year savings target of £150,000. This savings target is expected to rise by a further £350,000 to achieve £500,000 saving by 2024/25 (as detailed in the MTFs 2023-27).
19. Each Option has been treated as being mutually exclusive with net savings ranging from zero to £625,000. The anticipated financial benefit and carbon emission reduction for each Option is outlined in Part B of this report. With the exception of Option 1, associated savings are expected to be deliverable by 2024/25.
20. For each Option, however, the current timeline required to complete the risk-based approach prior to implementation of the necessary changes may not allow the required part-year savings to be fully delivered in 2023/24. The achievable part-year savings will depend wholly on progress to implementation.
21. The Director of Corporate Resources and the Director of Law and Governance have been consulted on the content of this report.

Circulation under the Local Issues Alert Procedure

22. This report will be circulated to all Members.

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PART B

Background

23. The Medium Term Financial Strategy (MTFS) is the key financial plan for the County Council. The Council's financial position has been challenging now for a number of years due to over a decade of austerity combined with significant growth in spending pressures, particularly from social care and special education needs.
24. Historically, the Council was concerned about the ongoing and consequential impact of the Covid-19 pandemic and the uncertainty of future local government finance settlements. Now all services are also being affected by high inflation, especially in relation to construction, fuel, and energy prices.
25. All of these issues and levels of uncertainty are making financial planning extremely challenging and require the Council to be flexible and adaptable.
26. The Council is now also faced with the significant challenges linked to the war in Ukraine, in terms of global energy and food supply and the resultant impact on inflation which has risen to levels not seen for many decades. The level of uncertainty in the MTFS continues to remain much higher than it was before the pandemic and the scale of the challenge to balance the MTFS by its final year is much more significant than has been the case in the past.
27. Since 2010, the Council's Street Lighting service has implemented significant changes to the lighting regime across the County to optimise, where possible, the amount of energy used and to minimise the amount of carbon dioxide equivalent (CO₂e) produced. These measures include:
 - a) Turning off unnecessary lighting.
 - b) Conversion to LED lighting.
 - c) Trimming the switch-on/switch-off times.
 - d) Dimming lighting levels commensurate with traffic flows throughout the hours of darkness.
28. As a result of these measures, energy consumption dropped from circa 27 million kWh in 2010/11 to circa 10 million kWh in 2018/19.
29. Measured against a base line energy usage of 9.2 million kWh in 2019/20, the service has saved a further 0.5 million kWh by implementing incremental changes based on continued compliance with the evolving design standards, including the recent change to reduce switch-on/switch-off ambient lighting levels to 5 Lux. Lux is a standardised unit of measurement of light level intensity.
30. Since 2012/13, the changes to the Council's street lighting infrastructure and its lighting regimes, along with the use of 'greener' energy, has reduced the Council's carbon emissions from 14,802 tonnes CO₂e to 1,818 tonnes CO₂e in 2022/23.

31. With continuing pressure on the Council's budgets, further savings in the form of service changes now need to be explored, including from street lighting. The MTFS 2023-27 imposed an additional saving requirement from street lighting of £150,000 in 2023/24 and £500,000 in subsequent years.

Legislative Framework

32. Under the Highways Act 1980, the County Council has the power to install street lighting, but does not have a duty to do so. Once lighting is provided, however, the County Council has a duty to maintain the assets in a safe condition.
33. The County Council has a duty under the Crime and Disorder Act 1998 to consider the impact of its decisions and to do all it reasonably can to prevent crime and disorder.
34. The County Council also has a duty to collaborate and must plan to reduce and prevent serious violence under the Police, Crime, Sentencing and Courts Act 2022.
35. While street lighting provision is something many residents value, given that there is not a specific legal duty to provide lighting, it is presently considered that a judicial review challenge would be unlikely and unsuccessful. Nevertheless, it is important that any decision fully considers a variety of aspects and also complies with relevant public law principles.

Design Standards

36. The design of safe and appropriate street lighting is governed by relevant British Standards, specialist guidance notes and a Code of Practice (Well-managed Highway Infrastructure 2016). The key principle of this Code is that Highway Authorities will develop their own levels of service and the Code therefore provides guidance for authorities to consider when developing their approach in accordance with local needs, priorities and affordability.
37. One of the over-arching principles of the Code of Practice is the establishment of those local levels of service through risk-based assessment. For street lighting, the Code encourages 'the delivery of the right quality and amount of light in the right place and at the right time'.
38. The Options that move away from compliance with current British Standards are deemed 'Departures from Standards' and will, therefore, require Member approval.

Current Street Lighting Strategy

39. Notwithstanding that much of the highway network features lighting assets designed to the relevant standards of the day – where they existed – the

current lighting regime is close to being optimal in terms of adherence to existing design standards.

40. The current street lighting strategy is split between residential routes and traffic routes, as follows:
- a) Residential routes:
 - i. All-Night Lighting – streets with highway hazards (crossings, speed cushions etc.), significant road junctions, and town centres are lit all night.
 - ii. Part-Night Lighting – streets with low traffic flows have lighting switched off between 00:00 - 05:30, except where specific All-Night Lighting is required (as above).
 - iii. Dimming – all street lights are lit to a regime of 70%/50%/30%, gradually dimming throughout the night according to reducing traffic flows, all in accordance with current design standards.
 - b) Traffic Routes:
 - i. All-Night Lighting – routes with high traffic flows and conflict areas are lit all night.
 - ii. Part-Night Lighting – routes with lower traffic flows are switched off between 00:00 - 05:30.
 - iii. Dimming – all street lights are gradually dimmed according to traffic flows, with differing regimes according to the road category, all in accordance with current design standards.
41. Any reduction in the current hours of operation or to the intensity of the lighting will result in the provision of a lighting regime that is non-compliant with existing design standards, but may be supported by a risk-based assessment. Sites that are not supported by the risk-based assessment would be referred to in the report submitted to the Cabinet in December.

Energy Tariff

42. The County Council's energy tariff is negotiated by the Eastern Shires Procurement Organisation (ESPO) and is reviewed and fixed annually every October.
43. Historically, the tariff had been relatively stable, with annual percentage increases usually in single-digit range. However, since the start of the war in Ukraine in February 2022, the energy market has become highly unpredictable, with costs escalating rapidly. The new tariff in October 2022 more than doubled, from 17.04p/kWh to 35.39p/kWh.
44. The Government provided support to local authorities and businesses via an Energy Bill Relief Scheme (EBRS) which ran between October 2022 and March 2023 – the support was modest, peaking at 6.2p/kWh in November 2022 with support tapering away to just 1.25p/kWh in March 2023. The average tariff over the period, taking account of the EBRS, was 31.7p/kWh.

45. Although the EBRS support will continue, it is understood that the County Council will not meet the energy price threshold to qualify for support.
46. At the time of writing, it is thought that the uncertainty about the market price for energy is likely to remain for the foreseeable future.

Proposals/Options

47. For the purposes of this report, the savings Options presented below are based on the current ESPO tariff of 35.39p/kWh.
48. No account is taken for inflation nor any future Government support via the EBRS.
49. For every 1p change in tariff, the energy costs increase/decrease by circa £87,000.
50. When monitoring the benefits realised for any of these Options, they must be measured against the forecast annual energy consumption (kWh), not the cash savings, thus eliminating the influence of tariff changes.
51. Each Option would be straight-forward to implement via re-programming of the Central Management System (CMS) and by pulling fuses on non-CMS units.
52. Residential streets are currently dimmed to 30% light intensity from 22:00. At that level of lighting, most pedestrians and motorists can see all highway features and are able to move around the highway in relative safety.
53. It is believed that no other authorities have implemented any of these potential changes.
54. An options appraisal has been carried out for each of the four potential Options as described in the following tables:

Option 1	
Description	Continue incremental changes to the lighting regimes in line with current design standards
Benefits	Estimated full-year savings: TBC
Key risks	It is very unlikely that the proposed MTFS savings could be achieved by incremental changes only.
Key implementation date	As soon as resources allow.
Proposed mitigation	Additional resources (amount to be confirmed) required to undertake this review and re-design project.

Option 2

Description	Dim all street lights, including traffic routes, to 30% from 20:00, instead of the current 22:00 (Departure from lighting design standards from 20:00 to 22:00)
Benefits	Estimated full-year savings: £534,000 1.508 million kWh 315 tonnes CO ₂ e.
Key risks	<ul style="list-style-type: none"> Proposed lighting regime is a departure from design standards. Increased insurance risk – road traffic collisions, slips/trips/falls. May not be supported by Residents/Police.
Key implementation date	<ul style="list-style-type: none"> 31/12/23 to achieve part-year savings in 2023/24 of £150,000. <p>[Note: Any refinement of the proposal will require an additional resource which will affect the amount of savings possible in 2023/24]</p>
Proposed mitigation	<ul style="list-style-type: none"> Engagement/consultation with Members, Legal and Insurance Teams, emergency services and other key stakeholders through normal processes. Undertake Equality Impact Assessment (EIA) if required. Roundabouts and major junctions are conflict areas and some of these could remain under current lighting regimes to bring savings nearer to £500,000 – this work would require resourcing (circa £8,000).

Option 3	
Description	Extend Part-Night Lighting (switch-off between 00:00-05:30) to all street lights, including on traffic routes and at conflict zones. (Departure from lighting standards from midnight. Retain existing regimes when lit.)
Benefits	Estimated full-year savings: £625,000 1.767 million kWh 369 tonnes CO ₂ e.
Key risks	<ul style="list-style-type: none"> Proposed lighting regime is a departure from design standards. Increased insurance risk – road traffic collisions, slips/trips/falls. May not be supported by Members/Residents/Police. Trimming hours of operation may negatively impact the night-time economy, especially in town centres.

	<ul style="list-style-type: none"> Trimming hours of operation may have a detrimental effect on road safety at major junctions (for example, around Fosse Park).
Key implementation date	<ul style="list-style-type: none"> 31/12/23 to achieve part-year savings in 2023/24 of £150,000. <p>[Note: Any refinement of the proposal will require an additional resource which will affect the amount of savings possible in 2023/24.]</p>
Proposed mitigation	<ul style="list-style-type: none"> Engagement/consultation with Members, Legal and Insurance Teams, emergency services and other key stakeholders through normal processes. Undertake EIA if required. Roundabouts, major junctions and town centres are conflict areas and many of these could remain under current lighting regimes to bring savings nearer to £500,000 – this work would require resourcing (circa £22,000).

Option 4	
Description	<p>Only provide lighting between September – March inclusive (Departure from lighting standards between April and August. Retain existing regimes when lit.)</p>
Benefits	<p>Estimated full-year savings: £544,000 1.537 million kWh 321 tonnes CO_{2e}.</p>
Key risks	<ul style="list-style-type: none"> Proposed lighting regime is a departure from design standards. Higher insurance risk – road traffic collisions, slips/trips/falls. Unlikely to be supported by Members/Residents/Police. Trimming hours of operation may negatively impact the night-time economy, especially in town centres. Trimming hours of operation may have a detrimental effect on road safety at major junctions (for example, around Fosse Park).
Key implementation date	<p>This Option cannot be approved in time to make to intended savings in 2023/24.</p>
Proposed mitigation	<ul style="list-style-type: none"> Engagement/consultation with Members, Legal and Insurance Teams, emergency services and other key stakeholders through normal processes. Undertake EIA if required.

Assessment

55. It is not possible to achieve the required savings whilst adhering to current national design standards. Any Option chosen that is a departure from the standards would require approval from the Cabinet, having considered the risks identified during the risk assessment process.
56. All Options will further reduce carbon emissions and so contribute to the Council's commitment to achieve net zero on its own operations by 2030.
57. Option 1 is a low-risk, design-compliant approach, but it is not certain to deliver any of the required savings.
58. The Council's Insurance and Legal Services Teams do not support Options 3 and 4 as they consider the potential risk of increased insurance claims to outweigh the proposed financial and carbon savings.
59. Although it still poses an increased risk, Option 2 is considered to deliver the required savings with lesser risk than the others.

Engagement/consultation

60. It is considered that there is a duty to engage/consult with affected stakeholders as it may be regarded as conspicuously unfair not to do so. The approach to engagement/consultation should be proportionate to the proposed change.
61. The engagement/consultation needs to be "proportionate" to the proposals. On that basis, the engagement/consultation will run for a period of four weeks starting at the end of June 2023/ early July 2023.
62. It will seek to explain the rationale for the proposed service changes, based on a risk-based approach, and will seek feedback on sites for which the proposal may not be suitable and therefore exemptions would be applied.
63. Feedback from people who live or work in the County will be encouraged through the Council's "Have Your Say" webpage and Social Pinpoint, or through a paper copy of the proposal sent to them on request. The feedback sought will focus on sites that may not be suitable for the proposals.
64. The police and emergency services will be heavily engaged throughout the risk assessment process.
65. Other key activities that will be carried out are as follows:
 - a) Article in the July edition of Council's Parish Council Newsletter which is distributed to all town and parish councils.
 - b) Press releases in local media publications.
 - c) Agenda item on the July meeting of the Leicestershire Equalities Challenge Group.

Conclusion

66. To deliver the required MTFS saving and further contribute to the Council's carbon reduction commitment on its own operations, it is proposed that an engagement/consultation exercise be carried out on Option 2 to dim street lighting to 30% intensity at 20:00. The results of this exercise will feed into a risk assessment process which would shape a final proposed scheme including any exemptions to that scheme. A report detailing the final proposed scheme will be brought to the Cabinet in December 2023.

Equality Implications

67. The Equality Act 2010 requires the County Council to consider the need to eliminate discrimination and to promote equality of opportunity between different protected groups.
68. An Equality Impact Assessment (EIA) report was completed on 28 April 2023 and a copy is appended to this report.
69. A summary of the EIA findings and recommendations is as follows:
- a) There are only indirect benefits to people with protected characteristics, and these are no different from those without. These benefits are a reduction in CO₂e and financial sustainability of the Council.
 - b) Two categories of risk have been identified for people in several protected groups:
 - o Increased risk of slips, trips and falls during the hours of darkness for people with certain disabilities, vulnerabilities or pregnancy.
 - o Some people with certain protected characteristics may have a perception of being at increased risk of crime and anti-social behaviour during the hours of darkness.
 - c) The engagement/consultation and risk assessment process for the proposal will aim to identify any further impacts and inform whether impacts can be mitigated should the proposal be implemented.

Human Rights Implications

70. No human rights implications are anticipated but this will be considered further during the engagement/consultation.

Crime and Disorder Implications

71. Paragraphs 32-35 of this report refer to the legislative context of crime and disorder implications. The EIA has identified that there could be a perception that crime and disorder may increase during the hours of darkness once the proposed service changes are implemented. The Council will be engaging with police and emergency services on this issue and will continue to support the police with their operational activities by making necessary short-term changes to local lighting regimes when requested.

72. A report published in January 2022, based on crime data from Thames Valley Police, looked at the effect of changes in street lighting at night on levels of night-time crime and concluded that 'Theft from vehicle offences reduced in streets where street lighting was switched off at midnight but may have been displaced to better-lit adjacent streets. Relative to daytime, night-time theft from vehicle offences reduced in streets with dimming while theft from vehicles at all times of the day increased, thus suggesting temporal displacement. These findings suggest that the absence of street lighting may prevent theft from vehicles, but there is a danger of offences being temporally or spatially displaced'.
73. Police views on the proposed Option will be sought through engagement/consultation with them throughout the risk assessment process.

Environmental Implications

74. Whilst the purpose of the proposed street lighting changes is to achieve the savings targets set out in the MTFs 2023-27, the reduction in energy use will bring reductions in carbon emissions (CO₂e). Each of the proposed Options has had the anticipated reduction in carbon emissions stated as a benefit.

Risk Assessment

75. Financial risks have been highlighted in Part A of this report.
76. Night-time highway risks will be covered by a risk assessment developed following engagement/consultation with the police and emergency services, as well as with other stakeholders.
77. Some street lights may need to remain lit or provide higher levels of light output in order to mitigate any risks identified through the engagement/consultation process.

Background Papers

Energy Reduction For Street Lighting Project – Report to the Cabinet – 15 December 2009 - <https://bit.ly/3VSnRDk>

Future Provision of Street Lighting – Report to the Cabinet - 9 July 2015 - <https://bit.ly/42pAdoR>

Environment Strategy – Report to the Cabinet - 6 July 2018 - <https://bit.ly/3o4cQSU>

Strategic Plan (May 2022) - <https://bit.ly/3Wggd64>

Provisional Medium Term Financial Strategy 2023/24 - 2026/27 – Report to the Cabinet - 10 February 2023 - <https://bit.ly/3pCHzXA>

Absence of Street Lighting May Prevent Vehicle Crime, but Spatial and Temporal Displacement Remains a Concern (January 2022) - <https://bit.ly/3lgwx0W>

Appendix

Equality Impact Assessment

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