



CABINET – 19 DECEMBER 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 note the outcome of the recently undertaken consultation regarding dimming streetlights in the County. The Cabinet is asked to approve the implementation of an 18-month trial to dim County streetlights to 30% intensity from 20:00 hours and to note the exemptions based on the risk assessment.

Recommendations

2. It is recommended that the Cabinet:
 - a) Notes the outcome of the public consultation regarding dimming street lights undertaken between 6 July and 3 August 2023;
 - b) Approves the proposal to trial dimming streetlights to 30% intensity from 20:00 hours for an 18-month period;
 - c) Approves delegated authority to the Director of Environment and Transport to make alterations to the dimming of streetlights during the 18-month trial period following feedback from the Leicestershire Police and other key stakeholders in accordance with the approved risk assessment.

Reasons for Recommendations

3. The Medium Term Financial Strategy (MTFS) 2023/24 – 2026/27 identified potential savings by reducing the street lighting service. The following savings would be achieved:
 - a) Reduced carbon emissions and light pollution;
 - b) Reduced energy consumption;
 - c) Reduced energy costs.

Timetable for Decisions (Including Scrutiny)

4. The Highways and Transport Overview and Scrutiny Committee considered a report on 9 November 2023 and its comments are detailed in paragraphs 36 to 38 of this report.
5. It is intended that the Highways and Transport Overview and Scrutiny Committee will receive an update before the end of the 18-month trial. A further report will also be presented to the Cabinet at the end of the 18-month trial period to consider comments and feedback received and to agree the permanent lighting provision in view of the outcome of the trial.
6. There are no partner organisations as part of this project, however, key stakeholders have been consulted as part of the proposals and will continue to be included throughout the trial period.
7. Subject to approval by the Cabinet, the implementation will commence in January 2024. Delays to the decision will impact on the savings to be achieved within 2023/24.

Policy Framework and Previous Decisions

8. The MTFs 2023/24 – 2026/27, which was agreed by the County Council in February 2023, identified savings of £500,000 to be achieved from the Street Lighting service by 2026/27.
9. A reduction in street lighting will also support a reduction in carbon emissions (CO₂e), contributing to the Council's Strategic Plan 2022/26, specifically the Clean and Green strategic outcome and its commitment to Net Zero Carbon by 2030 for the Council's own operations. This would be achieved by reducing the demand for energy as part of the proposal to lower the lighting intensity to 30% from 50% from 20:00 hours across the lighting stock and will support the reduction of 315 tonnes in CO₂e as previously reported.
10. The Cabinet agreed on 23 June 2023 that an engagement/consultation exercise on proposed changes to all streetlights should be conducted. The Cabinet agreed to pursue consultation on dimming all streetlights, including on traffic routes, to 30% from 20:00 hours across the County (currently dimming to 30% takes place at 22:00 hours for most residential street lights).

Resource Implications

11. The street lighting service is required to deliver £500,000 savings by 2024/25. Due to exemptions detailed in paragraph 40 (exemptions include retaining current lighting levels at zebra crossings, vertical traffic calming features etc.), which were identified following further detailed works and completion of the risk assessments, it is estimated that the anticipated annual savings by 2024/25 will be £380,000 and other service reductions may need to be revisited to manage the savings gap. Year one savings of £150,000 need to be delivered by March 2024; however, due to retaining current lighting levels at the exempted location,

the year one savings are anticipated to reduce to approximately £120,000. Delays to delivery of the overall programme will cost approximately £32,000 per month. There will also be a reduction in the carbon savings that would be achieved.

12. Once a decision is made on the future lighting regime, programming of the system takes approximately one calendar month.
13. The Director of Law and Governance and the Director of Corporate Resources have been consulted on the content of this report.

Circulation under the Local Issues Alert Procedure

14. This report will be circulated to all members.

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PART B

Background

Design Standards

15. The duty to maintain the highway under Section 41 of the Highways Act 1980 does not imply a duty to provide street lighting. Rather, local authorities have discretion as to whether to provide streetlights (Section 97 of the Highways Act 1980).
16. 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.
17. 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’.
18. The option to dim to 30% intensity from 20:00 hours (currently 22:00 hours) moves away from compliance with current British Standards and is deemed a ‘Departure from Standards’ and will, therefore, require the Cabinet’s approval. There is not a specific legal duty for the local authority to provide lighting.
19. While there is no duty to provide lighting, once street lighting is provided, the local authority has a duty to maintain the system in a safe condition. This is because local authorities can be held liable if they introduce a danger to the highway and fail to neutralise it (McCabe v Cheshire West and Chester Council 2014).
20. The standards for street lighting are laid down in British Standard: BS.5489 and European Standard BS EN 13201.
21. Street lighting touches not only on the issue of preventing road accidents. Section 17 of the Crime and Disorder Act 1998 provides that it shall be the duty of each authority to exercise its responsibilities to do all that it reasonably can to prevent crime and disorder in its area.

Street lighting in Leicestershire

22. The highway infrastructure asset in Leicestershire is the County Council’s greatest asset, valued at just under £10.57 billion, and forms a critical part of the social and economic infrastructure that supports the wellbeing of the County’s residents and businesses, as well as those in the wider regions. The asset is large and diverse, and includes carriageways and footways, bridges, street lighting, traffic signals and drainage. Maintaining such an asset requires

significant funding and well-managed, co-ordinated operations to ensure the greatest value for the funding invested.

23. The Council currently maintains approximately 69,600 street lighting assets. 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 hours, 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 hours.
- iii. Dimming – all streetlights are gradually dimmed according to traffic flows, with differing regimes according to the road category, all in accordance with current design standards.

24. Since 2010, the 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 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.

25. 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. Measured against a baseline energy usage of 9,217,000 kWh in 2019/20, the service has saved a further 512,000 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. This can be equated to the amount of light emitted by five candles 1 metre distance away from a squared metered area, where a light reading can be taken.

Public Consultation

26. Public consultation on the proposal to dim to 30% intensity from 20:00 hours commenced on 6 July 2023 and ran for four weeks until 3 August 2023. A proportionate approach was adopted to consultation in line with proposals being considered and included:
- a) A “Have Your Say” online survey was published for members of the public to complete. Paper copies were available, but none were requested.
 - b) Social PinPoint – a mapping tool allowing members of the public to identify particular geographic areas of concern.
 - c) Engagement with interested stakeholders including the Leicestershire Equalities Challenge Group, Police and emergency services.
 - d) An article in the July edition of the Council’s Parish Council Newsletter which is distributed to all town and parish councils.
 - e) Feedback from people who live or work in the County was encouraged through the Council’s “Have Your Say” webpage.
 - f) Engagement with local universities, responding to previous requests to engage for any such future proposals.
27. The purpose of the public consultation was to enable refinement of proposed service changes, based on a risk-based approach, as well as seeking feedback on sites for which the proposal may not be suitable and, therefore, exemptions would need to be applied.

Public Consultation Findings

28. Detailed public consultation findings are available in Appendix A of this report. A total of 706 unique responses were received to the online survey providing 861 reasons for their views. Overall, 53% of respondents were against the proposals, with the main reasons including fear of crime and personal safety. 43% of respondents were in favour of the proposals citing the need to support the environment, preventing light pollution and to help the Council to save money.
29. Of those who responded, 59% of the respondents identified as female and 39% of respondents identified as male. 48% of men were in favour of the proposals compared to 39% of women. People of non-white heritage were more likely to be against the proposals (although the number of non-white heritage respondents was low). People with a long-standing illness or disability were more likely to disagree with the proposals (64%) compared to those not reporting a long-standing illness (50%). Parents or carers of people aged over 18 were more likely to disagree with the proposals (69%).
30. Women aged between 45 and 54 made up the highest percentage of respondents, followed by women aged 55-64. The greatest number of responses (28%) were from Charnwood, followed by 17% from Harborough. The least number of responses were from Oadby and Wigston (5%). 92% of respondents were from a white background.

31. When asked if people would be affected by the proposals, the responses were as following:
- a) 29% said not at all or not very much.
 - b) 33% felt they would be impacted a great deal.
 - c) 37% to some extent.
 - d) The main reasons respondents felt that they would be affected by the proposals was concern about lighting levels (20%) and concern about personal safety (19%).
 - e) 20% of respondents that strongly disagreed with the proposals cited concerns about personal safety as the primary impact on them of the proposals.
 - f) 34% of respondents that strongly agreed with the proposals but also felt reduced lighting levels would be the primary impact for them of the proposals.
 - g) 11% of respondents that disagreed with the proposals indicated they would change their behaviour in some way if the proposals were implemented, but only 1% who agreed felt this way.
 - h) Younger respondents were more likely to say they would be impacted by the proposals.
 - i) It is worth noting that some respondents supported the proposals due to the impression that this would replace the existing policy of turning off lights in certain areas.
32. Respondents were invited to use the Social PinPoint to highlight areas of concern on a map which resulted in 61 points being identified through this method from 46 unique respondents. A further 99 physical locations were identified by respondents as areas of concern. Respondents identified specific roads, junctions or, in some instances, highlighted concerns for a specific town or village.

Feedback from Key Stakeholders

33. No objections to the proposal have been raised by the Leicestershire Police, East Midlands Ambulance Service or Leicestershire Fire and Rescue Service.
34. Loughborough University has been contacted for its views but to date has not responded.
35. A presentation was delivered to the Leicestershire Equalities Challenge Group on 21 July 2023 with the following feedback being received:
- a) More consideration needs to be given for people with sight loss, potential hazards differ for different vision impairments.
 - b) Issues in rural areas particularly for people with dementia and mental health issues.
 - c) Safety issues for women, elderly and vulnerable people.
 - d) More reassurance to reduce negative perceptions/impacts of increased thefts, hate crime and anti-social behaviours.

Comments of the Highways and Transport Overview and Scrutiny Committee

36. The Committee considered a report of the Director of Environment and Transport at its meeting on 9 November 2023. The report provided members with an overview of the public consultation and its outcomes and sought the views of the Committee in shaping the future Street Lighting offer.
37. During the discussion, the following points arose:
- i. The Committee questioned whether other options had been explored, such as switching off alternate lights rather than dimming all lights. A Member suggested that this might be considered more acceptable to residents, but also save more in energy costs. The Director advised that this suggestion had not been specifically considered, but the Council had explored a number of options which were in line with the Code of Practice and the need for a minimum level of light intensity in each area. The Director undertook to consider the suggested alternative approach as part of the consultation process.
 - ii. A Member commented that the public's perception that switching off street lights would result in an increase in crime was an interesting and delicate issue, as research suggested that, in fact, crime went down when street lights were turned off. Members noted that the proposals were for street lights to be dimmed, not turned off, and that the pilot would help determine if residents still had such concerns in those circumstances.
 - iii. A Member highlighted the Police and Crime Commissioners (PCC) mapping system which allowed the public to identify areas in Leicestershire where they felt most vulnerable. It was questioned to what extent the Council would take account of this information as part of its consultation. The Director confirmed that the pilot would help identify if and where residents felt more vulnerable or unsafe as a result of the dimmed lighting, and suggested that a heat map could be developed to compare against the records held by the office of the PCC.
 - iv. Members commented that the Council had a degree of social responsibility, especially in areas where elderly people lived and could feel isolated, or where there were particularly vulnerable communities. There might therefore be pockets where it would be appropriate to turn the lights back up to full brightness. It was noted that the pilot would help determine if this might be necessary.
 - v. A Member raised concerns about the impact the proposals could have on two specific groups that had responded to the consultation raising concerns that the proposals would make them feel more vulnerable, namely women and those with a disability. It was noted that an Equalities Impact Assessment had been carried out but not attached to the report.

Members requested and the Director undertook to provide a copy of this to all Members of the Committee. It was noted that this would also be attached to the future planned report to the Cabinet.

- vi. It was suggested that 8pm was not that late and some young people might be walking home from after school activities around that time. It was suggested that their views should be sought to understand what impact the proposed changes would have on them, noting that they would be unlikely to respond directly to the consultation.
 - vii. Members questioned what could be done to make sure dimmed street lighting was not further reduced by tree coverage. The Director undertook to consider the matter further within the Department (which was also responsible for tree maintenance) should any such issues or concerns be raised as part of the pilot.
 - viii. A Member queried if alternatives such as motion censored lights might be an option in the future. The Director advised that the current technology could not cope without significant investment.
 - ix. It was noted that the dimming of streetlights to 30% was the current national British standard (from 22:00 hours in residential streets) and that the Council was therefore just seeking to bring this forward to 20:00 hours. Members further noted that the pilot would begin in February 2024 and would span over two winters to provide an accurate assessment of the scheme across the seasons.
 - x. A Member commented that street lights were largely for the benefit of pedestrians and cyclists. The Director reassured members that busier roads would continue to have lights on, including busy road junctions, but just at a dimmed level from 20:00 hours. It was noted that additional work was also being done to understand foot fall levels in town centres and this data would be considered as part of the pilot process.
 - xi. In response to Members query, it was noted that the pedestrianised footpath and cycle ways was an emerging area in the Local Cycling and Walking Infrastructure Plans where data was being collected and monitoring equipment was also being introduced currently in the more urbanised areas, with an ambition for further developments.
38. Following the meeting, the Director of Environment and Transport had sent a response to the Committee explaining that turning every alternate street light off was not a viable option due to the impact on forward visibility and the requirements of the Distribution Network Operator. The Director also explained that the feedback received from vulnerable groups would be monitored as would the number of enquiries received.

Summary findings

39. The results to the survey were analysed and the key conclusions were:
- a) There are mixed views on the proposed changes to the street lighting regime. Just over half were not supportive of the proposed changes.
 - b) Those not supportive cited a fear of crime and overall personal safety.
 - c) Those in agreement were due to the need to think about the environment and impact on the carbon agenda.
 - d) Risk of personal safety and a fear of general crime were key themes reported across all cohorts.
 - e) The next highest categories for disagreement were that some areas already have poor lighting, where a further reduction would cause more issues (fear of crime, anti-social behaviour, personal safety concern) and that people were still out and about walking to and from events at 20:00 hours.
 - f) A number of respondents suggested alternative regimes for street lighting (or wider changes to policy and approach).

Proposed Pilot Scheme

40. From the work undertaken to date on the risk assessment (attached at Appendix B) and consultation, a number of exemptions are proposed and current lighting levels will be retained for:
- a) Zebra crossings;
 - b) Vertical traffic calming features;
 - c) Currently illuminated steps; and
 - d) Town centres (the extent of the town centre area will be determined in due course).
41. In addition, there may be further exemptions once comments have been received from the police regarding specific areas of concern raised as part of the consultation. It is worth noting that the police did not object to the proposals in principle and this relates to implementing the risk-based approach to the assessment. These exemptions would be in the form of reinstating the original lighting levels for a period of three months to aid police investigation. These would then be reviewed, and if no longer required, dimmed back to 30% intensity. Additionally, should other issues be identified, or identified key metrics increase throughout the trial, the Council has the means to re-instate the lighting levels to previous levels utilising the Central Management System, while ongoing monitoring and assessment is undertaken.
42. Initial work on the risk assessment has found that full year savings will be reduced by £120,000 due to initial exemptions to the proposal for town centres, zebra crossings and vertical traffic calming features. Additionally, this reduction will also reduce anticipated energy savings by approximately 238,160 kWh per year and 53.2 tonnes of carbon dioxide (CO₂).

43. Therefore, the revised anticipated annual savings will be in the region of £380,000 and 261.8Tonnes of CO₂.
44. It is worth noting that actual in-year savings could fluctuate year on year as a result of the risk assessment process and in cases, whereby lighting levels may need to be increased temporarily while the police and emergency services undertake investigations. Similarly, if high severity road traffic accidents are identified as increasing, lighting levels may need to be increased to aid road safety.
45. The results from the consultation indicate a perceived increase in crime. Perception of crime is very hard to measure and, therefore, the service is proposing to trial any changes for an 18-month period, working with the police and emergency services to understand the impact of changes on actual crime statistics. The pilot will also allow the testing of mitigation identified through the risk assessment process.
46. The risk assessment will be implemented initially as a desktop exercise using known asset data. It is not intended for risk assessments to be completed on each individual lighting assets. The base assumption is to proceed with the reduced dimming levels and risk assessments used to identify exemptions which would mean lighting levels remain the same as current levels. This will be reviewed periodically as part of the trial using data collected over the trial period and adjustments made accordingly.
47. The County Council will work with the police and emergency services to define the parameters of the pilot and develop clear reporting parameters for the progress of the pilot. Key metrics to be monitored are night time crime/anti-social behaviour, night time accidents, insurance claims and public feedback. Gateways or review meetings will be held every three months to assess impact, and should it be identified that the pilot requires changes as a result of evidence arising from any particular review, it will be done within a four-week period of that meeting (this is the time taken to re-programme the lighting system).

Conclusion

48. An exercise to consider dimming street lighting to 30% from 50% from 20:00 hours has been considered and consulted on. The majority of responses convey concern about crime, anti-social behaviour and personal safety. A smaller number of responses recognised the positive environmental benefit dimming would have. On reviewing the consultation feedback, and working with key stakeholders to consider exemptions on a risk-based approach, an 18-month trial of dimming is proposed with a number of areas being exempt as set out in this report. Monitoring of key metrics will be carried out as will three-month reviews. A report will be brought back to the Cabinet to consider permanent arrangements based on the findings of the trial before the end of the 18-month period.

Equality Implications

49. An Equality Impact Assessment (EIA) was undertaken and found that the proposal may impact several protected characteristics in terms of their ability to navigate the network, their perceived increases in crime and vulnerability and may change their current behaviour.
50. The EIA is attached as Appendix C.

Human Rights Implications

51. There are no human rights implications arising from the recommendations in this report.

Crime and Disorder Implications

52. The Leicestershire Police has been contacted as part of the consultation and raised no objections to the proposal.
53. Feedback has been received regarding perceived increase of fear of crime.
54. The trial period will allow the Council to work with the police to monitor and review crime and antisocial behaviour levels and temporarily increase lighting levels if required to aid the police in their investigations.

Environment Implications

55. The proposal will reduce carbon dioxide production due to consuming less energy and, therefore, help to contribute towards Leicestershire County Council's net zero target for its own operations by 2030.

Risk Assessment

56. The comments from both the consultation and the Social PinPoint returns directly fed into a risk assessment (detailed in Appendix B of this report) which determines where, if needed, mitigating measures could be applied. The risk assessment considers whether the proposals could worsen the following hazards for each location. The Council will work with the police regarding these locations and identify if lighting levels need to be amended.
57. The below list shows hazards where the proposal would not be suitable:
 - a) Vertical traffic calming features, such as speed tables or bumps. The change in level is the important part;
 - b) Zebra crossings;
 - c) Town centres – extent to be determined by the Council;
 - d) Evidenced increases in night time vehicular accidents between 20:00 and 22:00 hours, specifically increases in accidents of greater severity at conflict areas, such as roundabouts or key junctions;

- e) Evidenced increases in night time crime/anti-social behaviour between 20:00 and 22:00 hours;
- f) Currently illuminated steps.

58. The following hazards will require ongoing monitoring and review:

- a) Increased interaction between pedestrians and street furniture;
- b) Increased conflict between vehicles outside of conflict areas;
- c) Increased conflict between vehicles, pedestrians and cyclists outside of conflict areas.

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>

Street Lighting proposed service changes – Report to the Cabinet 23 June 2023 - <https://politics.leics.gov.uk/ieListDocuments.aspx?CIId=135&MID=7077#A175374>

Appendices

Appendix A: Consultation Findings

Appendix B: Dimming LED street lights to 30% intensity between 20:00 and 22:00 hours risk assessment

Appendix C: Equalities Impact Assessment

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