

DECISION TITLE: Street Lighting Dimming - post pandemic
Cllr Peter Hiller - Cabinet Member for Strategic Planning and Commercial Strategy and Investments
August 2021
Deadline date: August 2021

Cabinet portfolio holder: Responsible Director:	Cllr Peter Hiller, Cabinet Member for Strategic Planning and Commercial Strategy and Investments Steve Cox, Executive Director; Place & Economy, Cambridgeshire and Peterborough
Is this a Key Decision?	Yes - KEY/16AUG21/01
Is this decision eligible for call-in?	Yes
Does this Public report have any annex that contains exempt information?	No
Is this a project and if so has it been registered on Verto?	No

R E C O M M E N D A T I O N S

The Cabinet Member is recommended to:

1. Approve a change to the dimming regime for residential lights to introduce a 40% dim between 00:00 and 05:00.
2. Approve a change to the times at which dimming is introduced following a study of traffic flow data on traffic routes.
3. Approve a change to the times at which dimming is introduced following a study of traffic flow data in residential areas.

1. PURPOSE OF THIS REPORT

- 1.1 This report is for Councillor Hiller to consider exercising delegated authority under paragraph 3.4.3 of Part 3 of the constitution in accordance with the terms of their portfolio at paragraph (b)

2. TIMESCALES

Is this a Major Policy Item/Statutory Plan?	NO	If yes, date for Cabinet meeting	N/A
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3. BACKGROUND AND KEY ISSUES

- 3.1 Following the completion of a major street lighting upgrade in 2019 Peterborough City Council have been exploring ways to minimise carbon emissions and maximise financial savings by implementing a series of dimming regimes across the city's street lighting inventory.
- 3.2 Following an initial trial in January 2020 and formal adoption in April 2020, Peterborough City Council introduced the following dimming regime:
- Traffic routes (broadly identified by columns greater the 6m in height): full power at switch on, 20% dim between 21:00 and 00:00, 40% dim between 00:00 and 05:00, full power from 05:00 to switch off.
 - Residential routes: Full power from switch on, 20% dim between 21:00 and 05:00, full power to switch off.
- 3.3 The regimes were implemented successfully and allowed the authority to attain the financial and carbon savings predicted whilst maintaining lighting in line with British Standards on traffic routes and balancing risk across residential areas.
- 3.4 Subsequently, the impacts and restrictions implemented in relation to the COVID pandemic significantly affected the volume of traffic using the city's roads, with the volume of traffic reducing by as much as 80% across the network. This afforded the Council a unique opportunity to introduce a temporary 40% dim on all lights from switch on to switch off between the months of June 2020 and August 2021. The reason that this has been possible is because the lighting for traffic routes is designed and installed according to the road type and the maximum traffic flow (typically experienced during peak hours). Traffic flows are defined in three bands, >45,000, 7000 – 45000, <7000. For example, a parkway junction at peak flow requires more light at peak times than it does when traffic volumes fall below 7000 movements. Therefore as traffic volumes decrease within the specified bands there is scope to decrease the lighting levels and still align to the correct standard.
- 3.5 As we emerge from the pandemic and traffic flows are now returning to pre pandemic levels there is a need to review the dimming levels and explore any opportunities to amend the pre pandemic regimes slightly to decrease carbon usage and increase financial savings beyond those set within the January 2020 regime. The recommendations made in this document will facilitate additional savings to achieve the £100,000 that was committed at the start of the 2021/2022 financial year (the £100,000 was removed from the street lighting energy budget at the start of the financial year).
- 3.6 **Initial recommendation:** The lighting for residential routes is already installed at the lowest recommended British Standard as traffic flow is already low. Unlike traffic routes, where dimming can be implemented and lighting levels remain within standard, any level of dimming will drop lighting below recommendations (including that already agreed in January 2020). Residential lighting is installed on lower speed roads where areas of conflict are less frequent and likely to be of lower significance. In the past it has been accepted that dimming by 20% is an acceptable risk due to the inability for most people to notice the change with the naked eye.
- 3.7 Residential lighting has scope to offer immediate savings, albeit small, with the introduction of a further level of dimming. With extremely low traffic movements in residential areas between 00:00 and 05:00 the Council's Insurance team have advised it would be reasonable to change the residential lighting regime slightly to include a 40% dim between these two times. This change will save in the region of £11,000 (based on £0.099 over a full financial year equating 114500 kw and 60 tonnes of carbon. Savings are relatively small due to a combination of a much reduced night time energy unit rate of £0.099, small lantern sizes and the saving is calculated from an already dimmed lighting level.

It should be noted that no formal representations were made to the Council in relation to the pandemic dimming regime of 40%.

- 3.8 **Next steps:** Traffic routes are generally higher speed roads with greater opportunities for conflict. Illuminating such routes below standard is not an advisable risk. It is therefore not recommended to change the levels of lighting on traffic routes. There is, however, an opportunity to review the times at which traffic volumes fall which may offer potential to change the times at which the dimming is implemented. For instance, if traffic volumes are between 7000 and 45000 movements by 20:00, the 20% dim could be bought forwards from 21:00 to offer an additional hour of carbon and financial savings.
- 3.9 This assessment is taking place and will require careful consideration of up-to-date traffic flow data and the differing characteristics of different roads to ascertain if the timings of the dimming increments can be changed.
- 3.10 There is an opportunity to review recent traffic flow data to ascertain if the residential lighting levels can be reduced earlier in order to maximise savings further and this will follow the work on the Traffic routes.
- 3.11 On completion of the above exercises the Council will explore and consult on further initiatives that may offer additional carbon and energy savings. Any subsequent changes to lighting regimes will be determined through the councils normal decision making process.

4. CONSULTATION

- 4.1 The highest levels of dimming referred to in this decision notice have been experienced in the last two years with no formal complaint to the Council.
- 4.2 Any changes to the lighting levels will be publicised on the Peterborough City Council website with contact details should stakeholders or members of the public wish to comment. Any changes in addition to those detailed in this paper will be consulted on.

5. ANTICIPATED OUTCOMES OR IMPACT

- 5.1 It is anticipated that the Cabinet Member for Commercial Strategy, Planning and investments will approve the recommendation to:
- Introduce a 40% dim to residential lighting between the hours of 00:00 and 05:00
 - Implement changes to the times at which the dimming levels are implemented on traffic routes whilst maintaining alignment to British Standards following a review of recent traffic data.
 - Implement changes to the times at which the dimming levels are implemented on residential routes following a review of recent traffic data.

6. REASON FOR THE RECOMMENDATION

- 6.1 There is no positive requirement to provide street lighting, however, where an authority chooses to do so it should be in line with recommended British Standards. Any decision to move away from the British Standards needs to be carefully assessed and considered "reasonable" should a claim be made in court.
- 6.2 Research has shown other authorities are illuminating in line with the above, we are not aware of any authority lighting below standards, particularly on traffic routes where potential for conflict is greater.

6.3 Following discussions with colleagues in the Council's Insurance Team it is not advised to stray from the standards on traffic routes but agreed that should data show traffic volumes change outside of the current dimming times the regimes could be revised accordingly.

6.4 Given the level of risk is significantly less on residential routes due to reduced traffic volumes and lower speeds it was advised that illuminating below standard during times where traffic levels are extremely low would be considered reasonable.

7. ALTERNATIVE OPTIONS CONSIDERED

7.1 It was reviewed in some detail if we could leave the pandemic regime in place due to the lack of objections received. However, the potential risk of providing lighting that is not in line with the relevant British Standard, particularly on traffic routes, was considered too high.

7.2 Return to pre pandemic levels without any changes to the timings or dimming levels, this will not offer any further savings for both carbon usage and budget and therefore whilst the initial recommendation only offers small additional savings they are felt to be justified.

7.3 Introduce switching off at nonpeak hours in low-risk areas, this can be introduced following a full detailed appraisal and consultation. If this is something that the authority wishes to explore these exercises will need to take place prior to any switch off regimes being introduced.

8. IMPLICATIONS

Financial Implications

8.1 Introducing an additional dimming increment to residential lights between 00:00 and 05:00 will offer a financial saving in the region of £11,000. Please note this contributes to the in year budget target and is not an additional saving.

8.2 It is not possible to advise the savings that may be attainable on traffic routes due to the assessment of traffic flow data that needs to take place first. There is a small risk that traffic flows may be greater than anticipated that may require higher levels of light for longer periods which would have the effect of increasing the cost of energy and carbon usage.

8.3 In order to achieve the in year budget target and maintain the current carbon and financial savings opportunities officers will continue to explore further opportunities as detailed in section 3.11 above.

Legal Implications

8.4 There is no positive requirement to provide street lighting. It is not anticipated that there are any legal implications of changing lighting levels in accordance with the recommendations.

Equalities Implications

8.5 It is not anticipated that any groups or communities will be affected disproportionately by the changes proposed.

Carbon Impact Assessment

8.6 If approved the changes to the lighting will decrease the authority's energy use and contribute to the carbon neutral aspiration by 2030.

The CIA has been approved by Charlotte Palmer.

9. DECLARATIONS / CONFLICTS OF INTEREST & DISPENSATIONS GRANTED

9.1 There are none.

10. BACKGROUND DOCUMENTS

Used to prepare this report, in accordance with the Local Government (Access to Information) Act 1985 and The Local Authorities (Executive Arrangements) (Meetings and Access to Information) (England) Regulations 2012.

10.1 N/A

11. APPENDICES

11.1 N/A