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Report of: Laraine Manley
Report to: Cabinet Member for Environment, Streetscene and Climate Change
Date of Decision: 9th August 2019
Subject: Highway Maintenance Service Changes - Reducing Carbon Emissions from Street Lighting

Is this a Key Decision? If Yes, reason Key Decision:-	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
- Expenditure and/or savings over £500,000	<input type="checkbox"/>	
- Affects 2 or more Wards	<input checked="" type="checkbox"/>	
Which Cabinet Member Portfolio does this relate to? Environment, Streetscene and Climate Change		
Which Scrutiny and Policy Development Committee does this relate to? Economic and Environmental Wellbeing Scrutiny & Policy Development Committee.		
Has an Equality Impact Assessment (EIA) been undertaken?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
If YES, what EIA reference number has it been given? 423		
Does the report contain confidential or exempt information?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
If YES, give details as to whether the exemption applies to the full report / part of the report and/or appendices and complete below:-		
<i>"The (report/appendix) is not for publication because it contains exempt information under Paragraph (insert relevant paragraph number) of Schedule 12A of the Local Government Act 1972 (as amended)."</i>		

Purpose of Report:

The report seeks the approval of the Cabinet Member for Environment, Streetscene and Climate Change to pilot a dimming regime in three areas of the city. If successful a proposal will be put forward that the approach be rolled out city-wide in order to contribute to reducing carbon emissions in response to the declared climate emergency.

Recommendations:

It is recommended that the Cabinet Member for Environment, Streetscene and Climate Change:

- Agrees to the proposed pilot of the dimming regime as set out in this report
- Agrees to the proposed consultation and review of the pilot as set out in this report
- Notes and endorses the efforts to reduce carbon emissions by this proposal

Background Papers:

None

Lead Officer to complete:-	
1	I have consulted the relevant departments in respect of any relevant implications indicated on the Statutory and Council Policy Checklist, and comments have been incorporated / additional forms completed / EIA completed, where required.
	Finance: Alison Chambers
	Legal: Sarah Bennett
	Equalities: Annemarie Johnstone
<i>Legal, financial/commercial and equalities implications must be included within the report and the name of the officer consulted must be included above.</i>	
2	EMT member who approved submission: Laraine Manley
3	Cabinet Member consulted: Lewis Dagnall
4	I confirm that all necessary approval has been obtained in respect of the implications indicated on the Statutory and Council Policy Checklist and that the report has been approved for submission to the Decision Maker by the EMT member indicated at 2. In addition, any additional forms have been completed and signed off as required at 1.
	Lead Officer Name: Philip Beecroft
	Job Title: Head of Highway Maintenance
Date: 1 st August 2019	

1. PROPOSAL

- 1.1 As part of the recently launched Climate Emergency plans it is proposed to run a pilot in three areas of the city of a dimming regime on street lighting. This will reduce energy consumption with a commensurate reduction in carbon emissions.
- 1.2 Sheffield City Council, as the Highway Authority, exercises its discretionary power under S.97 of the Highways Act 1980 to provide street lighting on roads for which it is responsible. In exercising this power the Council generally provides lighting that exceeds British Standard Specification BS 5489-1 2013 which is the code of practice followed by Highway Authorities across England. There is therefore scope for the Council to bring the lighting levels back into line with the British Standard Specification by reducing street lighting levels under this discretionary power. This will provide adequate lighting to the highway for the traffic levels at the time of the reduction and achieve important carbon emission and energy savings.
- 1.3 As part of the Streets Ahead contract, the Council has upgraded street lighting by converting all the existing sodium lights to LED lights and installing the Telensa Control System. As a result the Council now has a greatly enhanced capacity to adjust the timing and intensity of lighting on individual lighting columns.
- 1.4 Reducing street lighting levels will result in improved sustainability through reduced energy use. This supports the first priority of the 2018 Green City Strategy which is;
“Leading by example, we will put in place a plan which enables the Council to reduce its carbon emissions”
- 1.5 In the financial year 2013 /14 street lighting resulted in 17,168 tonnes of CO2 emissions. By 2017/18 when all the lights had been converted to LED this had reduced to 6,848 tonnes of CO2 emissions. If the results of the pilot are successful and the scheme is rolled out across the whole of the city it is estimated that this figure will further reduce by an estimated 380 tonnes of CO2 emissions.
- 1.6 An additional benefit of reduced street lighting is reduced light pollution. Excessive light pollution has several negative effects including disturbance of residents’ sleep patterns, adverse effect on nocturnal fauna, adverse effect on certain plant species and adverse effect on people’s enjoyment of the night sky.
- 1.7 The pilot will take advantage of the opportunities arising from the Telensa Control system described above and from the latest update to the Code of Practice - British Standard Specification BS 5489-1 2013. The changes to BS 5489-1 2013 allow a greater number of classes of lighting locality compared with the previous version. This allows a more finely graded matching of lighting to the locality meaning that it is now possible to reduce lighting levels with the potential to reduce carbon emissions and light pollution.

- 1.8 Historically, street lighting intensity has been set to accommodate the maximum amount of traffic density on a road. This maximum density may only occur for short periods of the day such as morning and evening rush hour. As a result there is a high likelihood that for long periods, streetlights are over lighting the highway and as a consequence, adding to carbon emissions and light pollution as well as wasting money.
- 1.9 After reviewing data on current traffic flows and photometric testing of the new street lights it has been established that Sheffield highways can be lit to a lower lighting class within BS 5489-1 2013. In the pilot area, the timing and intensity of lighting is being determined by the road class and traffic flow and set at a lower level within the latitude allowed by British Standard Specification BS 5489-1 2013. We still retain the capability to increase lighting levels as necessary due to local conditions arising such as an accident or a planned event.
- 1.10 Three areas of the city have been chosen for the pilot. They are areas of Crosspool, Endcliffe and Meersbrook (see Appendix 1). These areas have been chosen as they contain a representative mix of residential streets, bus routes, shop frontages, main traffic routes and footpaths.
- 1.11 Currently the street lights operate at 84% of capacity to deliver the required light output with dimming on traffic routes to 54% from 8pm and on residential streets from midnight. This complies with the previous British Standard.
- 1.12 During the pilot, streetlights in the three areas will be dimmed by up to an additional 14% as shown by the figures in bold in the tables below. It is proposed that the pilot will run from Monday 19th August to Friday 13th September.

Traffic Routes

	Sunset to 8pm	8pm to 6am	6am to sunrise in winter
Traffic routes - current level	84%	54%	84%
Traffic routes – pilot level	80%	40%	80%

Residential Areas

	Sunset to midnight	Midnight to 6am	6am to sunrise in winter
Residential roads - current level	84%	54%	84%
Residential roads – pilot level	80%	40%	80%

2. HOW DOES THIS DECISION CONTRIBUTE?

- 2.1 No one area of the city or section of the community will be affected specifically by the changes proposed. There will be no impact to the health and wellbeing of residents or change to us being an in-touch organisation.
- 2.2 Identifying efficiency savings to reduce energy consumption will contribute to the work to address the climate emergency.

3. HAS THERE BEEN ANY CONSULTATION?

- 3.1 The Council is obliged to undertake a public consultation prior to the introduction of a city wide dimming of the street lighting.
- 3.2 The consultation strategy will include:
- Discussions with the Access Liaison Group
 - Discussions with the Community Safety Partnership
 - Information sessions will be held in libraries in the pilot areas during the pilot period
 - On line consultation will be carried out during and after the pilot via the Citizen Space facility.
- 3.3 Work will be undertaken with the Council's Policy and Improvement Team to identify groups and stakeholders to engage in addition to the general public. Local police are aware of the pilot and its timing. We plan to gather feedback from them about the pilot's impact and to record any reactions from local residents.
- 3.4 The consultation will allow the public to understand the benefits of variable lighting; any negative impacts produced by the pilot and allow the public and any particular stakeholders to express their views on the proposals. The consultation work will take place during and after the pilot.

4. RISK ANALYSIS AND IMPLICATIONS OF THE DECISION

4.1 Equality of Opportunity Implications

- 4.1.1 An Equalities Impact Assessment has been drafted and approved. This will be reviewed and updated once the outcome of the consultation is known.

4.2 Financial and Commercial Implications

- 4.2.1 There are no specific financial implications other than the cost of the pilot which will be covered from existing budgets.

4.3 Legal Implications

- 4.3.1 S.97 of the Highways Act 1980 provides the Council, as the Highway Authority, with the power to provide lighting for the purposes of any highway or proposed highway for which it is or will be the highway authority. The Council has discretion as to whether and how it exercises that power. However, case law does require Highway Authorities to take into account the risk of items it has placed or caused to be placed in or around the highway (for example signs, bus shelters, lighting columns) becoming a danger to the public. This has been taken into account within these proposals.
- 4.3.2 Where the Highway Authority chooses to exercise its power to light a highway, BS EN 13201:2003 can be used as guidance for lighting class, or hours of operation. Consideration should be given to the implications of Section 17 of the Crime and Disorder Act 1998 (as amended by the Police and Justice Act 2006) and the potential impact of lower light levels on crime and disorder. Consideration should also be given to the Council's equalities duties under the Equalities Act 2010. This report sets out the approach the council will take to mitigating this risk. Feedback from this pilot should inform final proposals.
- 4.3.3 There is no express statutory requirement for a consultation on varying street lighting. It is reasonable in the circumstances to ensure good communication and dialogue with citizens on this issue which will be of importance to them. This report sets out a proposal for a pilot study which will enable the impact of reducing lighting levels to be properly evaluated and for citizens to share their views. Those views will then shape any further proposals.

5. **ALTERNATIVE OPTIONS CONSIDERED**

- 5.1 The alternative would be to carry out no pilots and leave the lighting levels as they are. This is not recommended due to the potential benefits for the environment of reducing the lighting levels.
- 5.2 There may be alternative proposals identified from the pilot that will be considered when assessing the overall outcome to determine a final position which may include a tailored solution for specific areas.

6. **REASONS FOR RECOMMENDATIONS**

- 6.1 It is considered that the approach set out in the report will provide the data necessary for an informed decision to be made on lighting levels across the city, with the potential for the Council's carbon emissions to be reduced.