

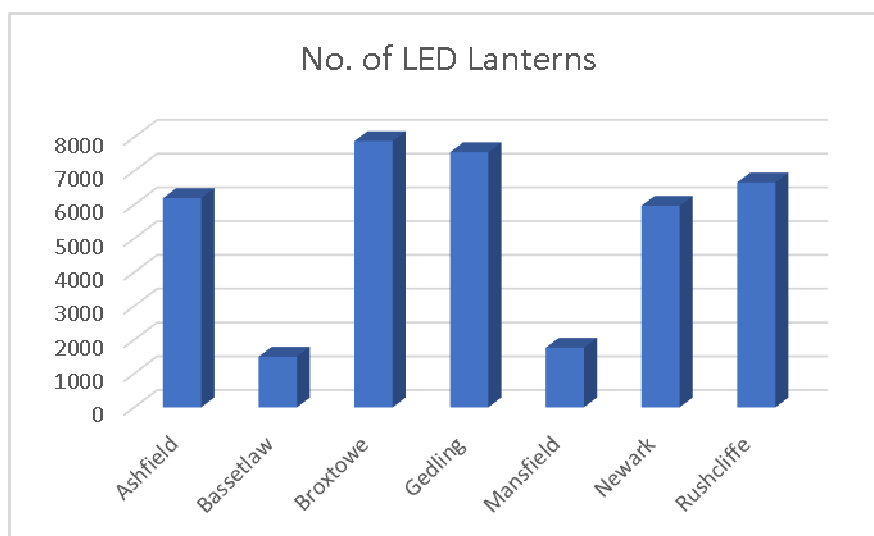
11 January 2018**Agenda Item: 7****REPORT OF CORPORATE DIRECTOR, PLACE****STREET LIGHTING ENERGY SAVING****Purpose of the Report**

1. To provide an update for committee relating to the Street Lighting Energy Saving programme and to consider extending further to incorporate improving the condition of lighting stock.
2. The proposals contained in this report will allow significant savings to be made, reduce the County Council's carbon footprint and are fully aligned with the Authority's key commitments to provide the best possible services for local people, improving the places residents live and providing good value for money:
 - **A great place to bring up your family** – The installation of LED lighting will improve the illumination of the highway making it a safer place for vulnerable road users such as children and young people.
 - **A great place to fulfil your ambition** – These proposals will make use of the highway network more appealing during the hours of darkness which - in turn - will encourage people to make greater use of the leisure opportunities available in Nottinghamshire.
 - **A great place to enjoy later life** – It is anticipated that the proposed lighting improvements will improve older resident's sense of security making them more likely to access the care and support opportunities they need.
 - **A great place to start and grow your business** – Street lighting is a vital component necessary to deliver the excellent highway network required to improve access to markets. The proposals will minimise potential delays arising from road traffic accidents and collapsed lamp columns allowing goods and people to travel in a safer and more predictable fashion.

Information and Advice

Background of Energy Saving Project

3. There are approx 94,000 street lights in Nottinghamshire. Previous to the energy saving project the stock consisted of a 50/50 split between low-pressure sodium (SOX) and high-pressure sodium lanterns (SON). The SOX lanterns are the oldest & least efficient assets so these were highlighted to be replaced with LED alternatives.
4. Salix offer interest free loans to local authorities for energy saving projects and this was utilised to secure a 4-year spend to save programme of LED lantern upgrades on the network.
5. To date we have now replaced 37,500 SOX with LED which has resulted in the assets being more efficient to run and maintain. As part of the programme we have also been updating the remaining SON lanterns with new lamps and gear to improve efficiency and extend their lifecycle.
6. The upgrade programme is going well with conversion works complete in Ashfield, Broxtowe, Rushcliffe, Gedling & Newark areas. Works are currently taking place in Bassetlaw.



7. The Mansfield area is programmed for LED upgrades in 18/19. A lamp clean and change was carried out in 2013 which has helped to minimise faults but the general age and condition of the equipment warrants a different approach.
8. The Salix loan already secured will cover the lantern cost for 8,000 conversions, these works are due to be complete by December 2018. It is intended to extend this and utilise current available energy reduction funding streams to treat the remaining 5,500 lanterns so that all stock in Mansfield will be addressed. These works will be combined in with column replacements to improve the stock condition and limit risk of column failure. This will extend the completion date to April 2019.
9. A bid has been discussed with the NCC Energy Team for the additional £1.6m required to extend the project. This will comprise of 50:50 contribution from the ACE (Additional

Capital for Energy Fund) and LAEF (Local Authority Energy Finance) recycling fund £800,000 repayable loan.

10. The extension to the project gives a 7-year payback. The initial energy savings were identified at £181,323pa. With the extension to the project annual energy savings will rise to £442,480pa. There will be an additional loan payment to cover of £114,286 pa which still leaves additional savings of £146,871pa. After 7 years the loan will be fully paid back with on-going total savings of £442,480 pa.
11. Since 2012 to date this programme has reduced annual consumption for street lighting by 12,000,000 kwh & 11,000 tonnes of carbon. Annual savings on the energy budget are approx £1.5m per annum and cumulative savings since the beginning of the project are over £5m.
12. These savings also incorporate inflation in energy costs and growth on the inventory for new developments and inheritance of new equipment on the highway such as Section 278/38, School flashing ambers signs and interactive signs.
13. The white light from the LED's give a much clearer perception of the road image which is proven to promote safety in night time hours on the highway. The Police and Accident Investigation Unit have been consulted in the roll out.
14. The LED's offer residents better illumination of the road, are much more efficient and have a longer lifespan so continuous light levels are maintained.
15. We have already noticed the reduction in outages in areas where the LED's have been installed. This reduction in visits will release money from the maintenance budget to concentrate on improving the stock condition around the remainder of the County.

Other Options Considered

16. The only other option is to leave the existing stock and deal with failures as and when they occur. This has in the past proven to be more expensive due to numerous visits to similar locations. There is also the risk of collapsed columns on the highway. Dealing with upgrade works by areas is more cost effective and will help to build a cyclic future maintenance programme.

Reason/s for Recommendation/s

17. This is a high demand service that provides an important public realm function by supporting community and road safety, and promoting the night time economy. A routine maintenance programme is now established in-order to deal with the day to day service delivery. The conversion of LED units in Mansfield by utilising available loans will improve apparatus on the highway and produce additional savings.
18. We are heading into year 4 of a successful project. There have been very few complaints with good support from the community. The extension of the project will create additional savings for the revenue budgets, improve lighting assets in Mansfield and reduce risk on the highway.

Statutory and Policy Implications

19. This report has been compiled after consideration of implications in respect of crime and disorder, finance, human resources, human rights, the NHS Constitution (public health services), the public sector equality duty, safeguarding of children and adults at risk, service users, sustainability and the environment and ways of working and appropriate consultation has been undertaken and advice sought on these issues as required.

Crime & Disorder

20. Crime and disorder issues are covered in paragraph 13 & 14.

Sustainability and the Environment

21. Refer to paragraph 11.

Financial Implications

22. The cost of extending the project as detailed in the report is estimated at £1.6M. This cost can be met from within an existing allocation in the Capital Programme with £800K being funded by the County Council and £800K being met from the LAEF revolving fund with repayments being made over a 7 year period.
23. The proposed project will result in estimated annual savings of £328,194 during the first 7 financial years whilst the LAEF funding is being repaid, and estimated annual savings of £442,480 thereafter. These savings will be included in the MTFS.

RECOMMENDATION/S

It is **recommended** that Committee:

- 1) agrees to extending the LED 'Spend to Save' programme as identified in the report.

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Corporate Director, Place

Name and title of report author
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Constitutional Comments – (SJE – 02/11/2017)

1. This decision falls within the Terms of Reference of the Communities & Place Committee to whom responsibility for the exercise of the Authority's functions relating to the management and maintenance of highways has been delegated.

Financial Comments (RWK - 20/12/2017)

The financial implications are set out in paragraphs 22 and 23 of the report.

Electoral Division(s) and Member(s) Affected

All