

## **ECONOMY AND ENVIRONMENT OVERVIEW AND SCRUTINY PANEL 7 MARCH 2018**

### **STREET LIGHTING**

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#### **Summary**

1. The Panel will receive an overview on Street Lighting as part of its work programme.
2. Officers from the Economy and Infrastructure Directorate have been invited to attend.

#### **Background**

3. The Street Lighting service is led by Worcestershire County Council and delivered by the Council's Lighting Maintenance Contractor who is responsible for maintaining all of the County's street lights.
4. Worcestershire County Council has a duty of care under the Highways Act 1980 to maintain a safe highways network, including street lighting and illuminated signs and bollards. This is not a duty to provide lighting, but it does mean that all lighting and sign installations must be maintained in a safe condition.
5. The street lighting service in Worcestershire provides benefits to the communities of the County in many ways. Reduction in night-time accidents and reducing both crime and in the minds of many people, fear of crime. The economic development contribution to towns in the County cannot be under-estimated, good street lighting engenders a feeling of well-being by enabling people to continue their business and leisure activities during the hours of natural darkness. Recent Public Realm initiatives in many of our towns have included elements to upgrade the street lighting and this helps to improve the night-time environment.
6. The Worcestershire County Council street lighting service consists of a small team of specialist staff with expertise to enable effective operation of the service and our current term street lighting contractor, Prysmian Cables and Systems Limited, based in Stourport.
7. The street lighting service work with other highway teams within the Economy and Infrastructure Directorate when working on projects, highway safety schemes and new developments together with regular engagement with the Liaison Engineers regarding street lighting matters raised by Local Members.

#### **Aims and Objectives**

8. The aim of Worcestershire County Council's Street Lighting service is to create a safer and more secure night-time environment by providing an energy efficient and cost effective system of street lighting and illuminated signs.

9. The objectives of the street lighting service are primarily to:

- Ensure the safety of the public, contractors and staff
- Provide a high quality, cost effective service. All new lighting installations are specified to use the latest energy saving and effective LED lanterns resulting in energy saving and reduction of the carbon footprint
- Reduce crime and fear of crime
- Minimise environmental impact. The new LED lanterns provide very controlled distributions of light with almost zero light loss above the horizontal plane
- Implement best practice in systems and operations.

### **Street Light Part Night Switch Off**

10. The Street Lighting Initiative, or 'part night switch off' as it became known, was approved by Cabinet in February 2014 and was rolled out across Worcestershire in residential areas with the project being completed at the end of 2016.

11. On average two out of three of the less efficient sodium lamps have been switched off between midnight and 6am (GMT). In total approximately 16,000no lights have been subject to this initiative resulting in a reduction in the use of energy (and therefore savings) and savings in carbon emission charges.

12. It is important to note that major traffic routes were exempt from the project. On average one in three lamps in the areas subject to switch off remain lit all night and these tend to be at more strategic locations such as on bends, junctions, near steps and other key sites. The objective was to achieve savings whilst still retaining a reasonably consistent and spaced distribution from the lights left on.

### **Low Pressure Sodium Lanterns**

13. Low pressure sodium (SOX) lighting was introduced in the 1970's and quickly replaced the previous lamp type based on mercury. SOX lamps provided a 50% decrease in energy compared to other lighting around at the time. Quickly it became the standard light source in the UK and Europe.

14. Since this time alternative light sources have been developed including High Pressure Sodium, ceramic metal halide and most recently LED. Both High Pressure Sodium and ceramic metal halide have very limited application compared to LED.

15. Over 20,000 of the County's lanterns are Low Pressure Sodium (SOX). As part of the existing Term Lighting Contract these lanterns are bulk changed after a set number of hours to prevent (as far as possible) 'bulb failures'. This has proven to be the most cost effective way of dealing with maintenance of this type of lantern.

16. With the advent of LED lanterns, the call for these SOX Lanterns has diminished and the, already limited number of, manufacturers have significantly reduced the number they produce to the point where there are implications on supply, even with significant advanced orders being placed by our Contractor. Working with the

Contractor we have agreed a new interim maintenance strategy to cope with any 'outages' which replaces these SOX lanterns with an LED equivalent.

17. There are a significant number of SOX lanterns atop of steel columns that are in good or reasonable condition. It is therefore feasible and cost effective to simply change the lantern to an LED type and retain the existing column.

18. The recent approval of the Highways Infrastructure Investment Fund makes provision for the roll out of two significant LED energy saving initiatives over the next three years. The first helps deal with the ageing concrete column issue (see below) in addition to facilitating new lanterns, with the other replacing existing (relatively) low efficiency lanterns with new LED stock on existing steel columns.

### **Concrete Column Replacement Programme**

19. As of August 2017 Worcestershire County Council maintains 49,819 lighting columns. Of this, 10,884 (23.7%) are shown on the inventory as constructed of concrete around steel reinforcing. These were predominantly installed in the 1960's and 70's.

20. Recognising the service life, a detailed survey of the concrete columns on the Worcestershire County Council network is nearing completion. The condition of the stock is being ranked from 1 (good condition) to 5 (requires immediate attention).

21. The detailed programme of replacing the concrete columns with both a new steel column and an LED lantern will be largely driven by the requirement to deal with Grade 4 and 5 stock.

22. This programme is being developed (with grade 5 columns being dealt with immediately) and will be finalised following the completion of the survey.

### **Programme**

23. The programme for this work will revolve around three main areas:

- Higher powered (55 watt) lanterns
- Those columns that are in difficult areas to access (reduce future maintenance costs)
- Those groups of columns that are showing signs of deterioration (based on the rolling programme of routine condition inspections carried out).

24. Overall a balance will need to be achieved between maximum power savings and replacement of lower wattage concrete columns.

### **Purpose of the Meeting**

25. The Panel is asked to:

- consider and comment on the information provided
- determine whether any further information or scrutiny is required at this stage
- agree any comments to highlight to the Cabinet Member.

## Contact Points

### County Council Contact Points

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### Specific Contact Points for this report

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## Background Papers

In the opinion of the proper officer (in this case the Head of Legal and Democratic Services) the following are the background papers relating to the subject matter of this report:

- Agenda and Minutes of: Cabinet on 6 February 2014, available [here](#)

Minutes and Agendas are available on the Council's website at

<http://worcestershire.moderngov.co.uk/ieListMeetings.aspx?Committeeld=388>