

ECONOMY AND ENVIRONMENT OVERVIEW AND SCRUTINY PANEL

1 MARCH 2022

STREET LIGHTING UPDATE

Summary

1. The Panel will receive an update on Street Lighting as part of its work programme, following an update in August 2020. The update will include progress with light-emitting diode (LED) roll-out, outcomes so far from the concrete column survey and other related areas raised during the previous discussions. The update will also contain the proposals for the remaining LED replacement programme for 2022 onwards.
2. The Cabinet Member with Responsibility for Highways and Transport and Senior Officers from the Council's Directorate of Economy and Infrastructure have been invited to attend the meeting.

Background

3. The Panel received an overview of Street Lighting in August 2020. The Reports and Minutes of those discussions are available under Background Papers.
4. The Panel will recall that the Street Lighting service is led by Worcestershire County Council (the Council) and delivered by the Council's Lighting Maintenance contractor, Prysmian, which is responsible for maintaining all of the Council's street lights.
5. The 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.
6. The street lighting service in Worcestershire provides benefits to the communities of the County in many ways including 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 and ongoing 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.
7. The Council's Street lighting service consists of a small team of specialist Council staff with expertise to enable effective operation of the service. This is supplemented, where required, by the current term street lighting Contractor, Prysmian Cables and Systems Limited, and Jacobs. The support given by the two external suppliers

includes assistance with specific project management, undertaking new designs and additional lighting engineer capacity.

8. The street lighting service works with other highway teams within the Economy and Infrastructure Directorate when working on major projects, highway safety schemes and new developments, together with regular engagement with the Liaison Officers regarding street lighting matters raised by Local Members. They also work closely with both District and Parish Councils.

9. The pandemic had a significant impact on the ability to deliver repairs and conversions. Whilst the crews were given exemptions to allow works to continue, breakdown of supply chain partners for deliveries and the required components used in column manufacture had a considerable effect (resulting in delays of up to 16 weeks from order to delivery) on the anticipated programme.

Service Aims and Objectives

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

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

- Ensure the safety of the public.
- Provide a high-quality, cost-effective service
- Utilise the latest energy saving and effective LED lanterns
- Reduce the carbon footprint
- Minimise environmental impact.
- Implement best practice in systems and operations.
- Reduce crime and fear of crime

Progress since August 2020:

12. The table below shows the number of conversions to LED and concrete replacements to date, combined with the anticipated conversions/completions to the end of March 2022. It should be noted that the numbers indicated between August 2020 and March 2021 are a summary, whilst those in this financial year have been expanded to reference specific areas, primarily to highlight the replacements undertaken on the divorced footways which have been so problematic and subject to regular complaints.

Area/Town	LED conversions	Average energy saving (per LED) 51.44 kwh. = £17.40 per unit	Concrete replacements
August 2020-March 2021	4,547	£79,117.80	324
Kidderminster F/Ways	72	£1,252.80	6
Other Wyre Forest F/Ways	62	£1,078.80	31
Wyre Forest	76	£1,322.40	99
Droitwich	501	£8,717.40	22
Other Wychavon	17	£295.80	23
Malvern	564	£9,813.60	26
Malvern Footways	405	£7,047.00	49
Rubery Area	481	£8,369.40	3
Worcester	674	£11,727.60	41
Worcester Footways	313	£5,446.20	23
Worcester Corridor	88	£1,531.20	0
Redditch	699	£12,162.60	62
Redditch Footways	1312	£22,828.80	65
Bromsgrove	512	£8,908.80	51
Totals:	10,323	£179,620.20	825

Highways Infrastructure Investment Fund (HIIF) allocation

13. In 2019, £2m was approved from the Highways Infrastructure Investment for the roll out of two significant initiatives:

- To begin to address replacing the ageing concrete columns and fit LED's as they were replaced
- To replace existing (relatively) low efficiency lanterns with new LED stock on existing steel columns

14. The intention was to spend this allocation on the above improvements within 2 years, however with the pandemic and the resultant delays, in both supplies and Contractor resources it will have been successfully completed by end of March 2022.

Department for Transport (DFT) and Strategic Initiative allocation

15. In 2021, a further £3.5m from the DFT and Strategic Initiative was approved. This was primarily to allow continuity for the objectives set out in the HIIF allocation previously. Work on utilising these funding streams has continued through 2021 and the remaining budget (£1.9m) will be used to continue replacing concrete columns and upgrade of other lighting assets.

Testing

16. Recognising the service life, a detailed survey of the concrete columns commenced in 2021. The 2021 survey focussed initially on those columns along isolated and divorced footpaths and then transitioned to the wider stock across the county in a phased manner. The testing is due to complete in May 2022. The condition of the stock has been ranked from 1 (good condition) to 5 (requires immediate attention). The table below summarises the results thus far. Phases 1-4 have been completed, phases 5-9 are ongoing and will conclude in May 2022.

	Phase 1-4 results:	
Category	Recommendation	Number
1	N/A due to column age	0
2	Re-inspect after 2 years	2336
3	Replace within 2 years	179
4	Replace as soon as practicable	29
5	Remove/make safe immediately	2
Total:		2546
	Phases 5-9 programmed to complete end May 2022	
	Total No of concrete columns Countywide: 8697	

Safer Streets Initiative.

17. Working closely with West Mercia Police and the District/City Councils to improve the lighting at key locations across the County, the lighting team has begun to implement their requirements as part of our overall programme. These will conclude in spring/summer 2022

Cyclic Maintenance.

18. In April 2021, the cyclic maintenance was reintroduced, and Prysmian will, by the end of March 2022, have undertaken 50% of the cyclic maintenance. This year's programme has targeted Droitwich, Rubery, Kidderminster and Stourport. The rationale being that these areas were due next, had the cyclic maintenance continued uninterrupted. Revenue funded, cyclic maintenance deals primarily with cleaning, visual inspections and electrical testing. The remaining 50% will be undertaken during 2022.

Partnership working

19. The lighting team have continued to provide assistance and guidance to the District Councils in relation to the installation of CCTV cameras on lighting assets, in areas where anti-social behaviour occurs,

Parish Initiative

20. A maintenance service continues to be provided, to include column testing, to the 14 parishes that are party to the parish initiative. Where parishes have lighting, but are not part of the initiative, they are responsible for their own maintenance and upgrades.

Additional Schemes.

21. In addition to being heavily involved in the various major project initiatives across the County, the lighting team are also carrying out works at specific areas. These include:

- Worcester City Bridge: Refurbishment and restoration of the historic luminaires and columns
- Future High Street Fund: Upgrade and alteration of the lighting as required across all phases of the works
- Safer Streets initiative: Replacement and upgrade of lighting at identified locations in conjunction with West Mercia Police and the District/City Councils
- Kleve Walk: Redesign and installation of new lighting along the River Severn.

Fault Reporting

22. The fault reporting of streetlighting issues has been rationalised and are now received and cascaded via the Control Centre. All faults are logged via the public enquiry management (PEM) system and/or Mayrise. This system provides a much-improved audit trail and allows the lighting team to deal with complaints in a more dynamic fashion. Regular updates on works complete and upcoming works programmes are passed to the Liaison Officers for discussion with their respective Councillors. Representatives from the lighting team also attend the Highways Surgeries to provide additional support and assistance on any specific issues. Councillors are now also able to log streetlighting issues directly via the members portal.

23. A system has also been implemented to deal with overgrowth for columns that need maintenance, or the where the light levels are impacted. All overgrowth requests can now be logged through the “report it” system on the WCC website and are dealt with via the green team within Highways. Once the overgrowth has been dealt with, this is fed back to Prysmian, allowing the required repair to be undertaken.

Innovations

24. Street lighting can have dramatic effects on local light sensitive creatures. Where there are sensitive lesser horseshoe bat populations Red and amber LEDs lighting is being specified, so lighting has less of an impact on the bat’s behaviour. An example of this in the recently installed development on the A38 at Fernhill Heath, where, as part of a section 278 agreement the developer has installed a section of bat friendly lighting.

25. A Central Management System (CMS) trial was undertaken in Kidderminster. A CMS system allows remote monitoring and adjustment of the lighting assets from a

desktop location. Faults are reported automatically and has the potential to allow better control of lighting levels remotely. The findings and subsequent report are now with the relevant Assistant Directors for assessment, prior to a specification being produced to allow a full procurement exercise to be undertaken. In addition, a CMS system is being installed on a new development site in Lea Castle, Kidderminster. This is due to acute ecological issues in the area which a CMS may well be able to assist in mitigating. Initial costs to be borne by the Developer.

26. Solar lighting is to be trialled in Worcester City. Prysmian have 3 units and a suitable location to allow effective monitoring is being discussed.

27. Near Field Communication (NFC) is another system the lighting team is looking into. NFC will allow lighting levels to be altered without physically touching the column. It works by wireless contact through a hand-held device and allows lighting levels, timings etc to be amended remotely on site. This potentially has cost savings both in the ability to “dial down” consumption, but also to negate the need for costly and disruptive traffic management which would be required to physically make the changes.

Problems encountered

28. There are still 8,697 (16%) concrete columns across the County. LED lanterns have been fitted on these assets providing they are in satisfactory condition. When these concrete columns and older steel columns are replaced then the LED lanterns can be re-installed on the new galvanised steel columns.

29. Some of the concrete columns are proving very difficult to access and replace. Changes in health and safety regulations have resulted in the columns being virtually inaccessible to the equipment needed to remove them. The lighting team is looking at further options to enable these columns to be upgraded in a safe manner.

30. Failures of the low-pressure sodium lamps (SOX) lanterns is an ongoing issue. Where encountered, these are replaced as part of the planned LED rollout, or on an emergency basis as part of the Contract requirement.

31. There are a number of private (unadopted) streets, where the lighting is very poor. The perception is that Worcestershire County Council (the Council) is responsible for these lights, however the reality is that they are not the Council’s assets.

32. There are ecological issues with LED lights. As such, prescribed identified areas have to be looked at on a case-by-case basis and fitted with more sympathetic lighting alternatives (eg red lights/warmer colour temperature lighting) to ensure the ecological requirements are met.

33. Some failures have been encountered in the LED controllers, which cause the lights to flicker. These are being addressed with the supplier, prior to the Directorate confirming their use for the continual LED rollout

The future

34. The current energy rate of 13.455p per Kwh is due to expire in April 2022. The new rate has been confirmed at 25.38p per Kwh. This is an increase of 88.6% and has huge implications on our energy revenue budget.

35. At the end of March 2022, it is anticipated there will be 20,573 (37%) non-LED streetlights left to convert. Prior to the new rate being announced, the intention was to undertake the conversion of the remaining non-LED streetlighting over the next 3 years, using the £6m allocation, however with the implications outlined above, the proposal is to accelerate this programme and deliver the replacements within 12-18 months.

36. The estimated cost to convert the remaining streetlighting assets to LED is £5,547,710. This, however, is based on current material costs and is likely to increase in April 2022. As the scheme initiation is progressed, Officers will have a more detailed understanding of survey work required and additional resources needed and with support from the DFT and Strategic Initiative Fund, it is planned to commence this project on in early April 2022

37. The remaining non-LED assets are spread across the County. To ensure we are in a position to commence the accelerated rollout, meetings have already been held to confirm:

- Availability of LED lighting units
- Contractors staff to install
- Project managers to implement
- Designers to review lighting levels
- Ecology teams to identify areas requiring alternates to standard LED lighting
- Permitting team to assist in programming.

38. Regular discussions will be held with all key stakeholders once the programme is confirmed and will include more detailed discussion for the Malvern requirements, as it is recognised that there are many ornate columns/ lanterns to be considered along with conservation areas. Officers anticipate approximately 2,016 assets, of which 100 are considered “Heritage” to be converted. This area adds the additional challenges of being an AONB and ecologically sensitive.

39. In addition to the above, the requirements of the Contract core service and concrete column replacement will continue to be delivered.

Purpose of the Meeting

40. The Panel is asked to:

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

Contact Points

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Background Papers

In the opinion of the proper officer (in this case the Assistant Director of Legal and Governance) the following are the background papers relating to the subject matter of this report:

- Economy and Environment Overview and Scrutiny Panel on 7 March 2018 and 5 March 2019. 4 August 2020 - [Agendas and Minutes](#)
- Council on 8 November 2018 - [Agenda and Minutes](#)