

## **Part-time Night Street Lighting in Exeter**

Report of the Head of Highways, Capital Development and Waste

***Please note that the following recommendation is subject to consideration and determination by the Committee before taking effect.***

**Recommendation:** It is recommended that the Committee notes the progress on implementing Exeter part-night lighting.

### **1. Summary**

This report updates members on progress with part-night lighting implementation within Exeter.

### **2. Background**

In Devon, there are over 76,000 street lighting units 12,000 illuminated traffic signs, beacons and illuminated bollards. The revenue budget in 2014/15 for maintaining and operating the street lighting stock is 5.14M, of which 3.6M is for energy costs.

Street lighting accounts for 23.8% of the County Council's carbon footprint.

A new street lighting policy was approved in July 2007 (ref: EEC/07/216/HQ) and the decision to implement part night lighting in residential areas was approved in January 2009 (ref: EEC/09/8/HQ). This street lighting policy included a number of measures to reduce the energy consumption of the street lighting stock and, as a consequence, the carbon output from street lighting.

The adopted policy for the introduction of part-night lighting in residential areas means some streetlights that were previously on all-night long will now be lit between dusk and about 12:30am and will then be switched off until about 5:30am, they will then be lit from about 5:30am until dawn. The policy allows for some lights in residential areas to remain lit all night, for example on main routes through communities, at busy junctions, in areas of high night time activity, in areas of CCTV surveillance and where there is evidence of a need, which is supported by objective data.

A proposal to implement a remote monitoring system was approved in April 2012 (ref: CDW/12/11). Remote monitoring for street lighting offers an alternative to the conventional arrangements for management of the lighting stock and implementation of part-night lighting and night dimming. The systems provide a more flexible solution, via a web based interface, to reduce lighting intensities incrementally and implement and adjust part night lighting and night dimming schemes. This can all be done from a central location, thus removing the need for site visits to adjust and change the lighting regime at individual columns.

The solution also gives warning of faults and gives notification of lighting failures. It removes the need for night scouting, as the system detects and alerts the street lighting team to lamp failures.

It has been agreed to introduce the remote monitoring system in Exeter with a view to widening its use to other locations in the future. The system is being implemented in conjunction with the implementation of part-night lighting in the city.

### **3. Progress update**

The implementation of part-night operation of street lights in Exeter began in September 2013 in Alphington and Cowick wards and involved the fitting of remote monitoring components into existing lanterns and replacement of existing lanterns that were not suitable. Similar work in Exwick and St Thomas wards began in October 2013.

Street lights in Alphington and Cowick started operating part-night in April 2014 and in Exwick and St Thomas in May 2014.

Conversion work began in Duryard and Pennsylvania wards in June 2014 and lights started operating part-night in November 2014.

Conversion work began in St James ward in October 2014 and in St Davids ward in November, lights in both wards will remain operational all night.

Each individual street light has a communication node fitted to it and up to 250 lighting units in an area are controlled by a Branch node located within the ward.

Communication between the nodes and branch and between the branch and central control is via air-borne radio communication and can be accessed via the internet. So it is possible to allocate switching profiles to individual and groups of lights so that they can operate all-night or part-night.

In a project of this complexity it is inevitable that there have been some issues in commissioning the work. The efficient operation of this remote monitoring system relies on good radio communications and an effective geographic location of branch controllers, so that command instructions can be issued as necessary. In addition as part of the installation, when lights are first commissioned, the lights themselves will operate during the day light hours for a day or two prior to operating dusk to dawn, or part-night as required.

However, in some instances, lights have been on during the day for longer than envisaged, either as a result of poor communications, or faulty components. These issues have affected only a small percentage of lights so far converted. In the main, a re-mapping of nodes and their branch controllers have been sufficient to improve communications, but in some areas it has been necessary to install additional branch controllers.

The County Council is communicating regularly with the system supplier and the term contractor in order to learn from and minimise commissioning faults during the remainder of the project.

The table below gives details of units converted to-date in each ward with the remaining provisional implementation programme shown in descending order.

WARD	PROGRESS	PART-NIGHT OPERATION	TOTAL NUMBER OF LIGHTS CONVERTED	TOTAL NUMBER OF LIGHTS OPERATING PART-NIGHT
Alphington	99% Complete *	Yes	1,214	792
Cowick	99% Complete *	Yes	441	331
St Thomas	99% Complete *	Yes	398	305
Exwick	99% Complete *	Yes	889	190
Duryard	99% Complete *	Yes	193	143
Pennsylvania	99% Complete *	Yes	634	462
St James	99% Complete *	<b>No</b>	330	0
St Davids	99% Complete *	<b>No</b>	218	0
Priory	Branch & new units	Not Yet	18	0
St Leonards	Branch & new units	Not Yet	6	0
Newtown	Branch node only	<b>No</b>	1	0
Polsloe	Branch & new units	Not Yet	4	0
Pinhoe	Branch & new units	Not Yet	20	0
Mincinglake	Branch node only	Not Yet	1	0
Heavitree	Branch & new units	Not Yet	21	0
Whipton Barton	Branch & new units	Not Yet	8	0
St Loyes	Branch & new units	Not Yet	3	0
Topsham	Branch & new units	Not Yet	31	0

\* Although conversion works are substantially complete, there are a small number of lanterns that are of modern architectural design, or classic heritage type, that are not suitable for immediate conversion with the remote monitoring system. These lanterns may also be expensive to replace, or still have quite a long working life remaining. As technology develops and when the bulk of the works are complete in Exeter as a whole, the wards will be revisited to see if there are affordable solutions to address these remaining lanterns.

#### 4. Consultation

Consultation events were held between September and November 2013, which included information displays and a number of ward meetings with presentations and question and answer sessions. There was a very low response rate and analysis indicated that 56 of the responses showed support for the proposal to introduce part-night operation whilst 23 responses indicated objection to the proposals.

Consultation on part-night lighting in Exeter continues on the street lighting section of the County Council web pages where feedback is being collected. This will continue until six months after the final area of Exeter is converted to part-night lighting.

In addition to a six month review of each ward after switching to part-night operation and following a 12 month cycle of part-night lighting after all works are substantially complete, together with the availability of police comments, it is intended to review common themes and propose actions to address these. There will also be the opportunity to review and take action at any time if evidence arises of issues in any areas following discussions with councillors and the police.

## 5. Legal Considerations

There are no specific legal considerations associated with this progress report.

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### **Electoral Divisions: All Exeter Divisions**

#### Local Government Act 1972: List of Background Papers

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Background Paper	Date	File Ref.
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Nil

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