

## Committee: Sustainable Communities Overview and Scrutiny Panel 18 March 2015

Agenda item: 5

Wards: All

Subject: **Street Lighting – Report for information**

Lead officers: James McGinlay (Head of Sustainable Communities)  
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Lead member: Councillor Andrew Judge - Cabinet Member for Environmental Sustainability and Regeneration

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**Recommendation:** That Members note the content of this Report and provide their views on any issues they believe should be considered in the procurement.

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### 1 PURPOSE OF REPORT AND EXECUTIVE SUMMARY

- 1.1 This report provides detail on the council's street lighting stock, the available funding for planned & reactive maintenance and our approach to the future provision of new and existing street lights and illuminated street furniture. This includes information on new technology that will be used to significantly reduce energy, maintenance and CO<sub>2</sub> emissions in the borough.
- 1.2 It also includes information on contractor performance and options for re-procuring the contract when it expires in September 2016.

### 2 DETAILS

#### Inventory

- 2.1 The borough has some 16,300 items of illuminated street furniture, which include 12,831 lamp columns, 'keep left' bollards, centre island columns, belisha beacons and externally & internally lit traffic signs.
- 2.2 The light source and lamps on the boroughs columns vary as they were installed over a number of years to comply with the Code of Practice and British Standards at the time. The table below shows the disparity of the light source and lamps currently installed on the borough's columns:

LED	COSMO	SON	CDO-TT	SOX	GLS	MBFU	Total
441	1625	6396	929	3427	10	3	12831

2.3 The newest and most energy efficient lighting is LED followed by Cosmo, SON & CDO-TT, which are all ‘white light’ high pressure sodium sources that have good colour rendition and will minimise glare and light pollution.

The other light sources are now generally obsolete for lighting in an urban environment although the lamps are still available for bulk changing and maintenance.

2.4 All new lighting in the borough, whether through the capital relighting programme or through lantern conversions, will be LED.

The benefits of using LED lighting are outlined in 2.8, 2.9 & 2.10 below.

Available Funding

2.5 The table below shows the projected annual Capital and Revenue spend for each financial year from 2014/15 to 2018/19:

Funding	2014/15	2015/16	2016/17	2017/18	2018/19
Capital	£410,000	£200,000	£462,000	£290,000	£509,000
Revenue	£335,380	£340,410	£320,140	£299,570	£304,064
<b>Total</b>	<b>£745,380</b>	<b>£540,410</b>	<b>£782,140</b>	<b>£589,570</b>	<b>£813,064</b>

**Note:** The Capital funding figures come from the rolling relighting programme and, at the time of this report, are set. However, the Revenue figures are indicative only and based on the current 2014/15 budget plus inflation of 1.5% per annum less any savings that have been agreed for future years.

2.6 In addition to the above, there is also an energy budget of £583,000 to cover the 5,700,000 kWh of electricity to light the illuminated street furniture assets.

Statutory Responsibility

2.7 There is no statutory requirement for highway authorities to provide lighting but there is a duty to maintain it where it has been provided. This is in-line with the Council’s policy to improve road safety, crime & the fear of crime and to increase the feeling of security during the night-time environment.

New Technology and Future-proofing

2.8 Our capital relighting programme is now solely focussed on replacing existing lighting with LED, which will significantly reduce future energy, carbon tax and maintenance costs. This will help meet the Council’s MTFS targets, Merton’s Community Plan objectives and the Council’s Carbon Reduction Commitment & Climate Local Commitment targets to reduce CO<sub>2</sub> emissions.

2.9 LED lighting is relatively new to the outdoor lighting market and has only recently become practical for use on street lighting. It is more energy efficient than the current type of lighting used and is virtually maintenance-free, which will enable the significant reduction in energy & maintenance costs and the reduction in CO<sub>2</sub> emissions to be realised.

2.10 LED lighting has very good colour rendition, which will allow drivers and pedestrians to see objects and hazards in their true form and colour, thereby

minimising accidents and potential danger. They also have reduced glare as the light is directed downwards onto the road and pavement minimising the light that is directed into the driver's eyes.

- 2.11 Street Lighting is a 'universal' service and therefore a new and up-to-date lighting infrastructure will benefit all residents, businesses, other stakeholders and users of the public highway network.
- 2.12 New, improved lighting will assist in achieving our statutory responsibility to maintain lighting in a safe condition as required under the Highways Act 1980, the Code of Practice for Electrical Safety and the Code of Practice for Highway Lighting Management.
- 2.13 Over the last couple of years we have:
- Replaced 400 life-expired concrete columns with new steel columns utilising LED lanterns and this will continue into 2016/17 when the last of the life-expired concrete columns will have been replaced. We will then continue to introduce LED lighting into the borough by replacing the older steel columns;
  - Replaced the borough's internally lit illuminated bollards with solar and reflective units to drive down energy consumption;
  - Introduced LED sign lights and photocells to prevent 'day burning' and to further reduce energy;
  - Changed Centre Island Columns (CICs) to a more energy efficient light source;
  - Upgraded zebra crossings from obsolete tungsten technology to new LED belisha beacons to reduce maintenance and energy costs; and
  - Trialled a pilot CMS (Central Management System) to monitor individual units, measure energy usage and enable dimming and flexible lighting levels to be applied.

As a result of the above, energy consumption has reduced by 800,000 kWh with a projected energy saving of £80k per annum.

We have also:

- Introduced a Bi-Party Agreement with the Distribution Network Operator to enable our term contractor to operate as an Independent Connections Provider (ICP) to improve service delivery and reduce costs; and
  - Introduced a 'Share Point' IT system between Contractor and Client to streamline communication, act as a central document depository, and drive back office efficiencies.
- 2.14 Early next financial year we will be rolling out LED lighting on approximately 3,000 existing and structurally sound steel columns by fitting an LED retro-fit kit into an existing and robust lantern housing. This is a cost-efficient and relatively quick way to introduce additional LED lighting that will reduce future energy and maintenance costs, with a projected payback period of less than three years.

### **3 ALTERNATIVE OPTIONS**

- 3.1 We are also developing an ‘Invest to Save’ bid to roll out LED lighting on a further 4,000 existing and structurally sound steel columns by replacing old lanterns with new LEDs. This is more expensive to do, with a commensurate longer payback period projected to be about 15 years.
- 3.2 We have considered the use of a Central Management System (CMS) and Controllable Drivers that will be able to remotely monitor and provide dynamic control for street lights – this will enable lighting times to be trimmed and lighting levels dimmed. Additionally, lamp faults can be predicted and detected but this is likely to be obsolete with LED lighting. It would also enable us to provide precise energy consumption data for billing purposes.
- 3.3 Introducing a CMS across the borough would cost approximately £1m and thereafter would require an annual maintenance charge of between £30k and £40k. Although this could lead to further savings and operational efficiencies, these would be minimal due to the savings already achieved through LEDs. Also, the additional revenue savings achievable would not justify the capital cost due to the number of years it would take to payback.

**4 MAINTENANCE**

- 4.1 Works carried out under the Street Lighting Maintenance and Improvements Contract include routine fault repairs, emergency standby & callout arrangements, lantern cleaning, bulk lamp changes & cleaning, night patrols, structural testing, electrical inspection, painting and renewal.
- 4.2 The Contract also covers Capital works such as energy reduction schemes, lighting upgrades, new lighting projects, traffic schemes, street scene improvement works and the street lighting aspects of town centre regeneration projects.
- 4.3 In addition to Capital and Revenue works, the term contractor also provides professional advice and guidance on all aspects of lighting design and installation and deals directly with the Distribution Network Operator (DNO) on all faults relating to the distribution cable network that affects the street lighting service.
- 4.4 The Term Contractor – Kier MG – also provides operational support and maintenance of other electrical equipment from multiple departments including Greenspaces, Parking Services, Trading Standards, CCTV, Future Merton and Safer Merton.

**5 CONTRACT PERFORMANCE**

- 5.1. There are four core KPIs (Key Performance Indicators) within the contract that are monitored at the Monthly Contract Meetings. The rolling 12-month average performance figures are given in the table below:

Key Performance Indicator	KPI 2 Monthly defects found during Night Scouts	KPI 3 Monthly defects from Customer Enquiries	KPI 4a Average No. of days taken to repair a fault	KPI 4b %age of faults repaired within 3 working days
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Target	<170	<100	<3 days	90%
Performance	117	90	2.02 days	91%

- 5.2. Mostly, the monthly targets are met with no concerns or issues. Kier MG demonstrate a positive approach to health and safety and have good systems in place to deal with any specific issues; so far it has not been necessary to issue any Corrective Action Notices for any breach of health & safety law or policy.
- 5.3 Their general level of response is good, although there have been occasions where the contractor has failed to respond to specific issues within the required timescales. However, since the contract covers 2 hour emergency call outs and repairs to all of the Councils 16,300 items of illuminated street furniture, this would be expected. To put this into context, there are approximately 180 emergency call outs and 4,300 lighting faults reported annually.
- 5.4 Kier MG have also been instrumental in generating savings and service improvements – such as those listed in 2.13 above – and through their experience and knowledge have provided advice and information on product development and best practise. They also host regular best practise forums for their clients.

## 6 CUSTOMER SATISFACTION

- 6.1. The 2014/15 Residents Survey identified that 71% were satisfied with Street Lighting in the borough, which is 8% higher than when the current contract started in October 2009.

Street Lighting was ranked the fourth highest rated service in the borough behind Public Transport, Parks & Open Spaces and Recycling and is also above the London average.

## 7 CONTRACT RE-PROCUREMENT

- 7.1 The current Street Lighting Maintenance and Improvement Contract expires on 30 September 2016 and, since the option to extend has already been exercised, it cannot be extended any further.
- 7.2 We are currently writing an Options Appraisal Report that will outline the various options available for re-procurement, which will include:
- Tender a new Contract under the OJEU Open Restricted Tendering procedure, which will require the appointment of an external consultant;
  - Use LoHAC (London Highways Alliance Contract), which will require the completion of, and agreement to a Call-Off Contract and a robust evaluation of the cost and quality benefits and dis-benefits to Merton; and
  - Joint procurement and collaboration. There have been initial discussions with Sutton who are very keen to pursue this as all procurement costs, including those of an external consultant, will be shared. Discussions are currently on-going with Sutton, who is the only neighbouring borough where joint procurement and collaboration is a realistic option due contract set-ups in the other boroughs.

## **8 CONSULTATION UNDERTAKEN OR PROPOSED**

- 8.1 Although formal consultation is not required as part of this report, we will be informing Members and Stakeholders of any future developments and opportunities that may arise.
- 8.2 Ward Members and residents are also informed of impending new lighting works in their roads two weeks before work commences.

## **9 FINANCIAL, RESOURCE AND PROPERTY IMPLICATIONS**

### Financial

- 9.1 There are significant revenue savings that can be made by continuing to introduce LED lighting into the borough and this is currently being rolled-out under the capital relighting programme. We will also be investing £400,000 early next financial year to retro-fit LED lanterns onto existing steel columns as outlined in 2.14 above, with a projected energy and maintenance saving of £148,000 per annum and a payback period of less than three years.
- 9.2 An additional £2.2m capital allocation is required to supply and fit new LED lanterns to 4,000 existing steel columns to deliver additional energy savings. However, as outlined in 3.1 above the payback period for this is projected to be 15 years.
- 9.3 There are no Resource or Property implications.

## **10 LEGAL AND STATUTORY IMPLICATIONS**

- 10.1 There is no legal requirement for Highway Authorities to provide street lighting. However S 97 of the Highways Act 1980 states:
- 1.) "... every local highway authority may provide lighting for the purposes of any highway or proposed highway for which they are or will be the highway authority, and may for that purpose -*
- (a) contract with any persons for the supply of gas, electricity or other means of lighting; and*
- (b) construct and maintain such lamps, posts and other works as they consider necessary*
- 10.2 The Council has a statutory responsibility to provide a safe and efficient highway network for the benefit and safety of all road users.

## **11 HUMAN RIGHTS, EQUALITIES AND COMMUNITY COHESION IMPLICATIONS**

- 11.1 New LED lighting will enhance the night-time environment encouraging people to walk, cycle & use public transport and will promote the economy and vibrancy within the borough's district centres. In addition it will enhance the quality of the public realm and maintain residents' satisfaction with Merton as a place to live and work.

The provision and effective maintenance of street lighting plays an essential role in providing safe access on Merton's Highway, particularly for those disadvantaged groups such as those with mobility difficulties and the elderly.

## **12 CRIME AND DISORDER IMPLICATIONS**

- 12.1 Section 17 of the Crime and Disorder Act 1998 requires all Local Authorities to consider crime and disorder while exercising their duties. The provision of LED lighting will reduce crime and the fear of crime, thereby assisting the council in discharging this duty.

## **13 RISK MANAGEMENT AND HEALTH AND SAFETY IMPLICATIONS**

- 13.1 Effective maintenance and improvement of street lighting will minimise insurance or injury risks to the Council by ensuring that the public highway is safe and serviceable, particularly during the hours of darkness.

## **14 BACKGROUND PAPERS**

None.

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