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London Borough of Bromley

PART ONE - PUBLIC

Decision Maker: Environment Portfolio Holder

Date: 17th March 2020

Decision Type: Non-Urgent Non-Executive Non-Key

Title: **STREET LIGHTING - CAPITAL SPEND REPORT AND REVISED DIMMING POLICY**

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Chief Officer: Colin Brand , Director of Environment and Public Protection

Ward: Borough Wide

1. Reason for report

Following completion of the street lighting invest to save project this report considers the outcome of the project and a revised dimming policy for for future installations.

2. **RECOMMENDATION(S)**

The Environment Portfolio Holder approves:-

- 2.1 That the 2020/21 revenue budget for street lighting improvements is utilised to replace those corroded steel lamp columns identified to be of the highest priority;
- 2.2 That the revised dimming strategy be adopted for future street lighting installations on traffic routes and residential roads.

Impact on Vulnerable Adults and Children

1. Summary of Impact: None
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Corporate Policy

1. Policy Status: Existing Policy:
 2. BBB Priority: Excellent Council Quality Environment Safe Bromley:
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Financial

1. Cost of proposal: £388k to replace lamp columns
 2. Ongoing costs: Recurring Cost:
Savings from the Street Lighting Invest to Save Initiative £175k p.a. (i.e. reduced costs)
Future savings from the revised dimming strategy TBD
 3. Budget head/performance centre: Street Lighting Invest to Save Initiative capital programme and Highways Street Lighting revenue budget
 4. Total current budget for this head: Capital Programme £8.5m; Revenue Budget 2020/21 £3.7m
 5. Source of funding: LBB capital budget for the invest to save project and existing revenue budgets for improvement and maintenance tasks
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Personnel

1. Number of staff (current and additional): 3 fte
 2. If from existing staff resources, number of staff hours: 3 fte
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Legal

1. Legal Requirement: Statutory Requirement:
 2. Call-in: Applicable:
-

Procurement

1. Summary of Procurement Implications: None – existing contract
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Customer Impact

1. Estimated number of users/beneficiaries (current and projected): Boroughwide
-

Ward Councillor Views

1. Have Ward Councillors been asked for comments? No
2. Summary of Ward Councillors comments: n/a

3. COMMENTARY

Background

- 3.1 The Council is responsible for maintaining 27,784 street lights across the borough. In March 2012 (report no ES12020) the Executive approved a business case for the street lighting invest to save programme, to replace of the Council's oldest concrete and steel lamp columns. Following the award of a new contract in 2013 the Executive approved an extension to the capital project to allow a total of 14,000 low energy LED lanterns to be installed.
- 3.2 The business case for the project predicted a repayment period of ten years, based on savings from existing revenue budgets. As the capital investment is due to be fully repaid during 2020/21, elements of the revenue budgets will be available for further street lighting works.
- 3.3 In 2008 the Environment Portfolio Holder approved a street lighting dimming strategy for residential roads. As this has been successful in reducing electricity consumption it is proposed that the strategy is extended to traffic routes.

Future Street Lighting Projects

- 3.3 The street lighting invest to save budget of £8.5m has allowed 7,902 concrete and older steel lamp columns to be replaced with new galvanised steel columns and energy efficient LED lanterns, and a further 6,000 sodium lanterns to be replaced with LED units on the existing lamp columns.
- 3.4 Repayments to the capital fund have been financed during the last nine years from existing revenue budgets for street lighting improvements, reduced maintenance tasks, electricity and staff costs.
- 3.5 A final payment of £532k is due to be funded from existing 2020/21 revenue budgets. This will leave a remaining amount of £388k from the annual budget budget allowance for repayments to be utilised for further street lighting tasks in 2020/21.
- 3.6 As part of the Council's asset management plans, all steel lamp columns are tested for structural integrity every six years. Those columns identified in 2013 as requiring replacement were included in the capital project. A contingency sum was retained within the capital budget, and used to fund defective units identified as dangerous in subsequent surveys.
- 3.7 While the Council has ambitions to convert the remaining street lights to LED's, recent structural tests have identified a further 649 lamp columns with a service life of less than five years. It is therefore proposed that the residual 2020/21 street lighting improvement budget of £388k is used to replace those columns with the highest priority; the lanterns would also be converted to LED units as current practice.

Dimming of Street Lighting

- 3.8 When developing lighting schemes local authorities can draw on guidance provided in the British Standard Codes of Practice and equivalent European Standards. While these provide advice on good lighting practice they are not mandatory, although as local authorities do have a duty of care it is advisable to have a lighting policy based on the standards.
- 3.9 The standards recognise the need for lighting authorities to develop schemes with designs that are appropriate for the application, and should assist in the avoidance of over-lighting and excessive energy consumption; providing "right light in the right place at the right time". Street lighting in Bromley should therefore match the varying needs of traffic and pedestrian flows, on

different road types, while minimising the use of energy and maintaining road safety and security.

- 3.10 Street lighting designs are based on the peak hourly traffic flow during the hours of darkness, which are usually the early morning and evening peaks during the winter months. The current standards include the provision of variable lighting based on road category, traffic type and traffic flows, with a suggestion that lighting levels could be reduced when traffic flows reduce.
- 3.11 In 2008 the Environment Portfolio Holder approved a street lighting dimming strategy for residential roads, where all lamp columns would be dimmed by 30% between mid-night and 6am when roads are footways are used less. This profile was originally integrated into the new lanterns, but subsequently managed by the Central Management System (CMS) for all new lanterns installed as part of the invest to save project.
- 3.12 On 18th September 2019 (report ES19056) the Executive approved a programme to replace 3,870 street light lanterns on the borough's traffic routes with more efficient LED units at a cost of £1.124m, funded from the Carbon Management Fund of £500k and an additional interest-free SEELS loan of £624k.
- 3.13 Traffic data has been used to allow suitable lighting levels to be designed for the varying traffic flows on Bromley's traffic routes while meeting the requirement of the current standards. It is therefore proposed that street lighting designs on traffic routes are based on a suitable lighting class, with lighting levels being reduced by one lighting class between 10pm and 6am, and a further lighting class between 1am and 5am.
- 3.14 Street lighting on traffic routes consumes more electricity than residential roads due to the increased lighting levels. A comparison of annual electricity costs for the existing SON lantern and proposed LED lanterns for each option are shown below;

Lamp Type	Burning hours	Annual Energy Cost
250w son	Normal hours	£185.39
AXIA 3.2 32 LED	Normal hours - dusk till dawn	£42.50
	Dimmed 25% from 12pm - 6am	£36.83
	Dimmed 25% from 10pm - 6am	£34.94
	Dimmed 25% from 10pm - 6am, and 50% from 1am - 5am	£31.16

- 3.15 Following consultation with the Environment Portfolio Holder a trial commenced in January 2020 to extend the periods of dimming of 353 lamp columns in residential roads using the CMS. Where street lighting is currently dimmed by 30% between mid-night and 6am, this has been bought forward to 10pm, with lighting levels being further reduced to 50% between 1am – 5am.
- 3.16 No feedback has been received to date from residents or visitors to these areas, and it is proposed that this revised dimming strategy is used for all residential roads controlled by the CMS and for future projects in residential roads.

4. POLICY IMPLICATIONS

- 4.1 The Council's vision for Bromley is that it remains a place where people choose to live and do business. Modern, safe, reliable and efficient street lighting has an important part to play in realising this vision particularly in terms of improving public perception of the street scene, enhancing community safety and security and promoting the accessibility of public transport and other local services during the hours of darkness. These align well with the policy priorities in Building a Better a Bromley.

5. FINANCIAL IMPLICATIONS

- 5.1 Final capital expenditure on the invest to save project is estimated at £8.5m. This investment will have been fully repaid during 2020/21. A recurring annual revenue saving of £175k in energy costs has been achieved.
- 5.2 The 2020/21 revenue budget for Street Lighting is £3.7m. This takes account of the £175k savings in energy costs and includes provision for street lighting maintenance and improvements as shown in the table below: -

	£'000
Energy	1,416
Maintenance	781
Minor Improvements	126
Replacements	588
LTCS	480
Staffing	173
Other Budgets	107
Total	3,671

- 5.2 It had been assumed that a total of £920k would be required in 2020/21 from within these budgets to repay the capital investment. However, the final payment now due is £532k and leaves a balance of £388k available for lamp column replacements.
- 5.2 The use of street lighting revenue budgets in later years will be subject to a future report.

6. LEGAL IMPLICATIONS

- 6.1 The Highways Act 1980 empowers the Council as Highway Authority to provide lighting. The Council has a duty of care to the highway user and must ensure it can demonstrate it has systems and programmes in place to ensure the safety of all highway lighting equipment.

Non-Applicable Sections:	IMPACT ON VULNERABLE ADULTS AND CHILDREN PERSONNEL IMPLICATIONS PROCUREMENT IMPLICATIONS
Background Documents: (Access via Contact Officer)	[Title of document and date]