

Decision Maker: Executive

Date: For Pre-Decision Scrutiny by Environment PDS Committee on
23rd September 2014

Decision Type: Non-Urgent Executive Key

Title: STREET LIGHTING - INVEST TO SAVE

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Chief Officer: Nigel Davies, Executive Director of Environment & Community Services

Ward: Borough Wide

1. Reason for report

The report seeks authority to amend the outputs of the street lighting Invest to Save scheme to provide a greater efficiency saving.

The report also provides an opportunity for the Environment PDS Committee to review the implementation of the street lighting Invest to Save project.

2. RECOMMENDATION

- 2.1 That the Executive approves the proposed amendment to the street lighting Invest to Save project, to replace fewer lamp columns and instead convert more lanterns as set out in paragraphs 3.18 to 3.20.

Corporate Policy

1. Policy Status: Existing Policy
 2. BBB Priority: Quality Environment; Safer Bromley
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Financial

1. Cost of proposal: Estimated Cost: £1.2m and additional savings of £46k per annum
 2. Ongoing costs: Additional savings of £46k per annum
 3. Budget head/performance centre: Street Lighting
 4. Total current budget for this head: £8.507m and £4m
 5. Source of funding: Invest to Save fund and existing revenue budget
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Staff

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

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

1. Estimated number of users/beneficiaries (current and projected): All residents of and visitors to the Borough.
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Ward Councillor Views

1. Have Ward Councillors been asked for comments? Not applicable.
2. Summary of Ward Councillors comments:

3. COMMENTARY

Background

- 3.1 The Council, as Highway Authority, has a statutory duty under the Highways Act 1980 to ensure the safety of the highway. This includes any lighting installations on the highway.
- 3.2 Investment in the Council's street lighting stock had not previously allowed for the routine replacement of lamp columns identified as nearing the end of their service life. An estimated 7,902 lamp columns had been identified for replacement. These comprised concrete columns and an estimated number of older steel columns. The Environment PDS Committee, at its meeting held on 18th January 2012, supported the report to the Executive recommending an 'Invest to Save' programme to clear the backlog (Report ES 12015).
- 3.3 A business case for the 'Invest to Save' programme was finalised following the receipt of tenders for the street lighting maintenance and improvement contract. Tender evaluation demonstrated that the 'Invest to Save' proposals were viable, and the recommendation to proceed with the programme was supported by the Environment PDS Committee at its meeting held on 20th November 2012 (Report ES 12114).
- 3.4 Subsequently, the Executive approved a sum of £8.507m from the Invest to Save Fund to meet the costs of the following: -
- The replacement of 7,902 columns (including LED lanterns) that were nearing the end of their service life (£6.987m);
 - The replacement of 4,000 inefficient street lighting lanterns with LED lanterns, (£1.0m); and
 - The implementation of a Central Management System (CMS) that facilitates remote control of lighting levels and reduced night time inspections, at an estimated cost of £520k.
- 3.5 In summary, a total of 7,902 columns and 11,902 lanterns were intended to be replaced together with introduction of CMS.
- 3.6 From the business plan it was expected that the sum of £8.507m plus 3.5% interest would be repaid within 8 years.

Original Project

- 3.7 The investment programme began in June 2013. An LED lantern was selected by the Street Lighting Investment Project Board following trials of alternative equipment.
- 3.8 Orders to the value of £5,259,722 have been issued for the replacement of 5,502 columns, including LED lanterns and 1,297 lantern conversions of older energy inefficient units (where the existing columns are structurally sound steel). The next phase of the original project will see 1,246 of the oldest at risk steel columns replaced (£1,144,812) and the remaining 2,703 lanterns converted (£897,477).
- 3.9 The Central Management System (CMS) is being rolled out alongside the main column and lantern replacement works. Lanterns are CMS-enabled and these are registered on the system via nodes which are placed at intermittent locations in the borough. The CMS operates wirelessly, allowing remote control of lighting levels and management reporting of system data through tablet or pc/laptop.

- 3.10 Given the current rate of progress and available level of resources, it is envisaged the original approved project (to replace all the concrete and older at risk steel columns, 4,000 lantern conversions and implementation of CMS) could be delivered within the agreed budget allocation and by the planned completion date of 31st March 2015. However, structural testing of steel columns has currently identified that a lower number of at risk steel columns require replacement than originally estimated, reducing the projected total column replacement required for the project to 6,748.
- 3.11 The table below summarises the current position with regard to the progress of the replacement of the columns and lanterns (including CMS), in terms of numbers and costs: -

Progress	Replacement Lantern Numbers	Replacement Column Numbers	Cost £'000
Actual completed replacements to date	5,760	4,463	4,354
In progress replacements to date	1,039	1,039	906
Future replacements	3,949	1,246	2,042
	10,748	6,748	7,302

- 3.12 As the number of columns that need to be replaced has been reduced to 6,748 following recent structural testing, this would mean that there would be 1,154 fewer lanterns replaced than originally planned. This would impact on the level of revenue savings that would be achieved and may affect the length of time taken to payback the Invest to Save monies. It is therefore proposed to revise the original scheme, utilising the remaining balance of £1.2m to replace additional lanterns in order to maximise the amount of energy savings that could be achieved.
- 3.13 Energy savings are being monitored and so far the Council has reduced energy consumption by over 480,000 Kwh. If the unit price of energy is assumed to average 10 pence (the current energy contract relies on spot pricing, hence energy purchase rates vary), the current financial saving due to reduced energy consumption would have been over £48k to date.
- 3.14 Where possible, work to the power supply (either disconnections or re-connections) has been undertaken using an independent connection provider (ICP). Where the ICP is unable to work on the electricity supply infrastructure ('uncontestable work'), connections and related work must be undertaken by UK Power Networks (UKPN). UKPN are responsible for undertaking uncontestable work and this has led to delays in completing connections in some areas. This has resulted in increased contact with residents to explain the reasons for delays.
- 3.15 Officers have escalated these issues with UKPN and measures have been put in place by them to clear the backlog. UKPN envisage this should be completed by the end of September 2014
- 3.16 The project communications plan is being implemented. Residents receive a post card approximately six weeks in advance of work beginning on site, with a follow up letter two weeks prior to the start date. There is also a page on the Council's website with FAQs and a schedule of programmed works. Post-completion survey questionnaires are distributed to a sample of residents where lighting has been changed. This is also available online. Returns from mailed customer feedback questionnaires indicate that 60% of respondents think the new lighting is about right, 6% think the new lighting is too bright, and 34% think the new lighting is not bright enough. The Council is taking measures to reduce the impact of trees (both street and private) on lighting by appropriate trimming (enforcement may be needed in the case of some private trees). This will help to reduce the proportion of residents who believe the new lighting is not bright enough. In the spring residents in all roads that had previously received a questionnaire will be resurveyed. This will help to assess customer satisfaction once a full winter has been experienced with the new lighting. Representations from Alexandra Residents Association and

Downe Residents Association for heritage style lighting equipment have been received, and officers are working with these groups to seek to identify a way forward within current Council policy guidelines.

- 3.17 There are currently no equipment supply problems or unresolved issues in respect of power supply connections.

Proposed Amended Project

- 3.18 A proposal was endorsed at the 2nd September 2014 meeting of the Street Lighting Investment Project Board to recommend a change in the outputs of the 'Invest to Save' programme by altering the balance of work performed. The new proposal would limit the total number of replacement columns to 6,748, together with 4,000 lantern replacements with an estimated projected cost to complete these works of £7.3m, allowing the remaining funds of £1.2m to be redirected to lantern conversions.
- 3.19 The proposed amendment would be to use the remaining £1.2m to replace 1,039 lanterns to meet the original planned lantern replacements target of 11,902 (7,902 plus 4,000) and to replace a further 2,475 lanterns. This would increase the number of lantern replacements to 14,377 and provide additional energy savings of £46k per annum.
- 3.20 The above proposal would be undertaken within the agreed investment draw-down budget of £8.507m, but would bring improved benefits to the 'Invest to Save' programme through enhanced reductions in energy usage (and carbon emissions) and associated reduced energy costs. There would be additional energy savings of £46,000 p.a. and carbon allowance savings of £5,000 p.a. Given current progress and the available level of resources it is envisaged the proposed amended project would still be delivered within the original budget allocation, and by the planned completion date of 31st March 2014.

4. POLICY IMPLICATIONS

- 4.1 The Environment Portfolio Plan 2014-17 includes the commitments: "Complete the major 'Invest to Save' project to replace 8,000 lamp columns, and 12,000 street lanterns, in residential roads by April 2015"; and "As part of the 'Invest to Save' project, introduce variable dimming of street lights by means of a Central Management System, facilitating remote monitoring and control of the new units".

5. FINANCIAL IMPLICATIONS

- 5.1 On 28th November 2012, Executive agreed that £8.507m could be drawn down from the Invest to Save Fund. This would allow the replacement of 7,902 lamp columns and 11,902 LED lanterns, including the installation of CMS.
- 5.2 The installation was to be completed within two years and the project was expected to generate savings that would enable the sum of £8.507m plus 3.5% interest, to be repaid over 8 years. In addition, from 2020/21, the project was expected to deliver annual savings of £558k.
- 5.3 This report indicates that the replacement of columns and LED lanterns is on target to be delivered by 31.3.15. £4.354m has been spent to date and a further £2.948m is expected to be spent replacing 10,748 lanterns and 6,748 columns.
- 5.4 Energy savings of approximately £48k have been achieved to date and an amount of £1.717m has been repaid to the Invest To Save Fund, with a further £1.066m projected to be repaid

during the current year. The total amount repaid by the end of 2014/15 is therefore expected to be £2.783m, which is on target.

- 5.5 The estimated savings relating to reduced carbon tax payments due to the expected carbon reductions will no longer be realisable as the Council is below the threshold that requires it to participate in the scheme. This will not affect the payback period of the Invest to Save monies, but will reduce the annual savings by £42k from 2020/21 to £516k.
- 5.6 It should be noted that should the criteria of the Carbon Tax Scheme change in the future, the Council may be required to participate again. The carbon saved from this project would then reduce the amount of tax payable by the Council.
- 5.6 Following the recent structural testing results, it is only necessary to replace 6,748 columns. This means that 1,154 fewer LED lanterns would be replaced than originally expected. Although this would result in the return of £1.2m to the Invest to Save Fund, it would also reduce the level of savings available to repay the £7.3m and it would also reduce the amount of annual savings from 2020/21 by £21k.
- 5.7 This report is therefore proposing to use the remaining £1.2m to replace the 1,154 lanterns, to enable the original target of 11,902 lanterns to be installed and to replace an additional 2,475 lanterns. This would generate a further £46k energy savings per annum which would allow the Invest to Save monies to be repaid earlier and to increase the annual savings from 2020/21 to £562k after allowing for the non-availability of savings from the carbon tax..
- 5.8 After the 'Invest to Save' monies have been paid back, consideration will need to be given to the funding strategy required to replace the next group of lamp columns which will be over 30 years old by that time.

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 has systems and programmes of work in place to ensure the adequacy and safety of all highway lighting installations.

7. PERSONNEL IMPLICATIONS

- 7.1 An additional temporary resource has been sourced through the Council's partnership with Adecco to support the management of the project.

Non-Applicable Sections:	None
Background Documents: (Access via Contact Officer)	ES 12015 Street Lighting Invest to Save – report to Environment PDS meeting held on 18 th January 2012. ES 12114 Street Lighting Maintenance and Improvements Contract and Street Lighting Invest to Save Initiative - Part 2 report to Executive held on 20 th November 2012.