Rotherham Metropolitan Borough Council

Public Report
Cabinet and Commissioners' Decision Making Meeting

Summary Sheet

Council Report
Cabinet and Commissioners' Decision Making Meeting – 12 December 2016

Title:
Upgrading of Fluorescent Street Lighting to LED.

Is this a Key Decision and has it been included on the Forward Plan?
Yes

Strategic Director Approving Submission of the Report:
Damien Wilson, Strategic Director of Regeneration & Environment

Report Author(s):
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Ward(s) Affected:
All Wards

Executive Summary:
To seek approval to replace 15,000 fluorescent street lighting units with LED lighting technology. There are two options available:-

1. Replace the 'internal workings' of existing lighting units with LED technology

   or

2. Replace the complete lantern.

Recommendations:

1. That the remaining 15,000 fluorescent street lighting units across the Rotherham Borough be replaced with LED lanterns in accordance with Option Two of this report.

2. **That Council be recommended to approve inclusion of the scheme in the Council's Capital Programme at a cost of £1.65m, to be funded by prudential borrowing, as an invest to save scheme.**

3. That it be noted that the previously estimated savings of £138,000 to be achieved from this project (EDS24c & EDS 24e) will not be achieved in full and the shortfall will be found from within Directorate budgets.

List of Appendices Included:
None

Background Papers:
Strategic Outline Case

Consideration by any other Council Committee, Scrutiny or Advisory Panel:
Yes – Strategic Capital Investment Group (SCIG) presented on 6/9/16.

Council Approval Required:
Yes

Exempt from the Press and Public:
No

Upgrading of Fluorescent Street Lighting to LED

1. Recommendations

1.1. That the remaining 15,000 fluorescent street lighting units across the Rotherham Borough be replaced with LED lanterns in accordance with Option Two of this report.

1.2. **That Council be recommended to approve inclusion of the scheme in the Council's Capital Programme at a cost of £1.65m, to be funded by prudential borrowing, as an invest to save scheme.**

1.3. That it be noted that the previously estimated savings of £138,000 to be achieved from this project (EDS24c & EDS 24e) will not be achieved in full and the shortfall will be found from within Directorate budgets.

2. Background

2.1 An existing successful programme to replace 21,000 of the 36,000 street lighting units in Rotherham with LED technology is nearing completion and the current street lighting asset arrangement is as follows:-

- Main Routes – 6,500 units have been replaced with LED technology between 2012 and 2015.
- Residential Areas – 14,500 high energy consumption units are in the process of being replaced with LED units and will be complete by December 2016.
- The remaining 15,000 units are compact fluorescent lighting units, also on residential routes. These existing units have been in place for over 5 years and as the Council operates a 'burn to extinction' policy on lamps (which means these are replaced when they fail rather than planned replacement), these are starting to show signs of failure, which puts pressure on the street lighting maintenance revenue budget. Fluorescent lighting, which whilst more energy efficient than sodium lighting, could be changed to LED units to offer further energy and revenue budget savings. The service has been monitoring LED technology developments, which has seen cost reductions per unit. The market improvement means that this is now a viable option.

2.2 There are a number of benefits to be gained by upgrading the fluorescent lighting to new LED technology:

- Reduction in street lighting energy consumption
- Reduction in carbon emissions
- Reduction in maintenance requirements
- Supports the corporate priority of a clean, safe environment
- Reduction in street lighting faults will improve customer satisfaction

2.3 The programme will be an invest to save initiative. Replacement of fluorescent units will reduce the street lighting energy consumption. At current energy costs an overall saving of £185,000 per annum upon completion of the installation would be achieved.

3. Key Issues

3.1 The delivery of the programme of works will be managed within existing service arrangements which will be consistent with the two previous successful programmes of work.

3.2 Manufacturers offer guarantee periods of between 6 and 15 years and this will ensure revenue costs for street lighting maintenance will reduce. Lower energy costs will be achieved as a result of a drop in consumption and this will help offset any future increases in the energy market.

3.3 The success of this scheme would be measured in terms of:-

- Improvement in the condition of the Council's Street Lighting assets
- Reduction in the amount of faults and associated response times
- Improvement in customer satisfaction

4. Options considered and recommended proposal

4.1 There are two options available to provide LED replacements for this project.

4.2 Option One – Replace the existing fluorescent lamps and gear tray of the lantern with an LED insert. This reduces the cost of replacement whilst utilising the existing lantern 'housing', internal wiring and photo electric control unit – i.e.- change the 'inner workings' and the bulb. Manufacturers are currently offering between a six and twelve year guarantee period on this technology.

<u>Benefits of Option One</u>

- Lower Capital Cost than Option Two
- Faster installation times

<u>Disadvantages of Option One</u>

- Relatively new technology which the Council has only recently trialled
- Guarantee periods are shorter than for Option Two (between 6 and 12 years), therefore requiring potential earlier replacement with a significant cost implication.

4.3 Option Two – Replace the complete fittings with new lanterns. This option has a higher initial capital cost. However, public perception and the change in aesthetics of the lantern may result in a more positive reaction from stakeholders. The previous two successful programmes have used this type of replacement, so this will ensure consistency throughout the Borough.

<u>Benefits of Option Two</u>

- Technology has a proven track record both locally and nationally
- Longer guarantee periods compared to Option One (minimum of 15 years), which would lower the whole life cost
- Consistent with other neighbouring authorities' installation programmes
- Aesthetically superior

<u>Disadvantages of Option Two</u>

- Higher initial Capital Cost than Option One

4.4 The recommendation is to proceed with Option Two; full lantern replacement. Whilst the initial capital cost will be higher, guarantee periods will mean that the whole life costs will be broadly comparable and technology with a proven nationwide track record would be preferable.

5. Consultation

5.1 Consultation has been undertaken with other councils to review their programmes of LED upgrading works.

5.2 The appropriate Cabinet Member has been fully consulted on this paper.

6. Timetable and Accountability for Implementing this Decision

6.1 Upon receipt of approval, a procurement exercise would commence immediately. Delivery of the programme would commence in the financial year 2017/18 and installation carried out over two and a half years.

7. Financial and Procurement Implications

7.1 As there are two options for delivery of the project, there are two indicative capital costs based upon previous experience and knowledge of the industry. For comparative purposes, following discussions with the Corporate Procurement team, Option One costs have been adjusted to reflect the fifteen year guarantee assumed in Option Two. This capital investment is required in order to meet existing revenue savings targets, in relation to energy savings and electricians posts.

7.2 Option One – will provide a useful life of twelve years, based on the guarantee period being offered. Costs have been adjusted to reflect the whole life costing over a fifteen year period for consistent comparative purposes. The total cost of the borrowing required in Option One equals £1,555,134 over fifteen years, with an annual payment of £103,676. Under this option the full year effect of energy savings will be achieved in 2019/20 based on a two year installation programme.

7.3 Option Two – will provide a useful life of forty years for the lanterns and fifteen years for the LED lamps based on the guarantee period available. The total cost of the borrowing required in Option Two equals £1,244,107 over fifteen years for the LED lamps, with an annual payment of £82,940 and an additional £1,595,543 over forty years, with an annual payment of £39,889 for the lanterns. Therefore, a total annual payment of £122,829. Under this option the full year effect of energy savings will be achieved in 2020/21, based on a two and a half year installation programme.

7.4 In 2015 indicative savings proposals of £138,000 per year were put forward for this project based on assumptions of future energy and replacement LED lanterns costs. Unfortunately, the realisation of these savings will not be achievable in full. However, the shortfall will be found from within Directorate budgets.

7.5 Part of these budget savings proposals included a saving of £38,000 (EDS 24c) which is required to come from the service budget from 2017 onwards. This relates to two electricians posts. However, to enable the installation of the LED units it will be necessary to retain these two posts and defer the saving until the project is completed.

7.6 In addition, a further saving of £100,000 (EDS 24e) relating to potential energy and LED lantern costs was based on indicative energy information available at that time. Unfortunately, the realisation of these savings will not be achievable in full due to market conditions. Details of this are outlined in the table below.

Table 7.6.1 Proposed Savings Proposals

Finance	Description	Option 1 LED Insert	Option 2 LED Lantern
Revised Proposed Savings	Estimated savings from energy consumption & reduction in Street Lighting electricians	£223,000	£223,000
Costs	Annual Borrowing Costs	£103,676	£122,829
Total Net Savings	**Proposed savings minus borrowing costs**	**£119,324**	**£100,171**
Previous Estimated Savings proposal EDS 24c & EDS 24e	Two electricians posts and energy savings	£138,000	£138,000
	Saving Shortfall from previous ASR (24c & 24e)	**-£18,676**	**-£37,829**

7.7 Based on estimated savings from energy consumption neither option fully meets the indicative savings targets proposed in 2015. However, undertaking the project the Council will protect itself from the full impact of future energy tariff increases by investing in the scheme. For comparative purposes energy savings have been calculated using current energy prices, so do not take account of energy cost inflation assumptions in the Council's Medium Term Financial Strategy.

7.8 EU legislation states that supply contracts with a value of over £164,176 must be advertised in the Official Journal of the European Union.

7.9 The procurement exercise will be carried out in accordance with the Public Contracts Regulations 2015. The envisaged timescale to complete the procurement process is 3-6 months.

8. Legal Implications

8.1 None

9. Human Resources Implications

9.1 As with previous projects, the Council's Street Lighting team will manage and deliver this project.

10. Implications for Children and Young People and Vulnerable Adults

10.1 The tender documentation will notify potential bidders that all suppliers and sub-contractors have an obligation to report any concerns about the treatment of vulnerable adults and children that they may witness in the course of their work. Any concerns must be reported to the Rotherham Multi Agency Safeguarding Hub (MASH).

10.2 The tender will be assessed for the appropriate safeguarding standard as agreed with the Corporate Safeguarding Board. All tenders will then be evaluated accordingly for the relevant level to ensure that organisations have the appropriate awareness, knowledge, policies and procedures in place.

11. Equalities and Human Rights Implications

11.1 As part of the tender process potential bidders will be required to self-certify that they meet their obligations in the field of social and labour law.

12. Implications for Partners and Other Directorates

12.1 This project contributes towards safety on the highway and supports corporate priority 3 - A strong community in a Clean, safe environment.

13. Risks and Mitigation

13.1 The main project risks would be:

- Future technological improvements may see further energy reductions in products available to the market and a potential reduced cost of units.

14. Accountable Officer(s)

Allan Lewis, Principal Lighting Engineer, Regeneration and Environment.

Approvals Obtained from:-

Strategic Director of Finance and Customer Services:- 12/10/2016
Jonathan Baggaley (Finance Manager on behalf of the Strategic Director).

Assistant Director of Legal Services: - 12/10/2016
Ian Gledhill (Solicitor and Commercial Team Manager on behalf of the Director).

Head of Procurement: - 13/10/2016
Lorna Byne (Senior Procurement Category Manager on behalf of the Head of Procurement).

Head of Human Resources: - 12/10/2016
John Crutchley (Senior HR Consultant on behalf of the Head of Human Resources).

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